

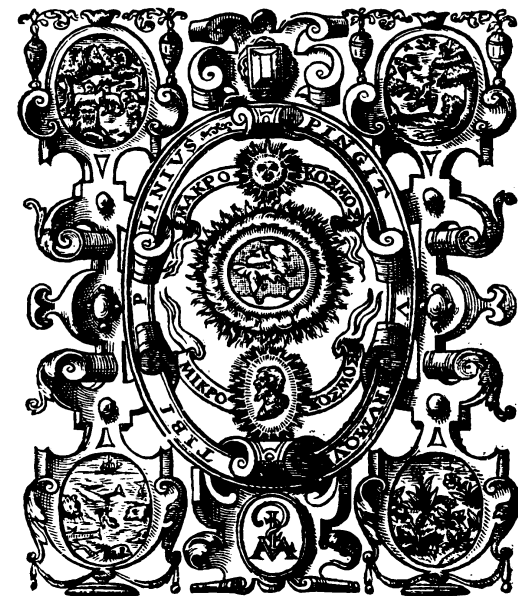
W. Stanford
THE HISTORIE
OF THE WORLD:

Commonly called,
THE NATVRALL HISTORIE OF
C. PLINIVS SECVNDVS.

Translated into English by PHILIMON HOLLAND
Doctor of Physicke.

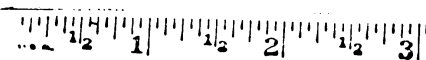
The first Tome:

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LONDON,
 Printed by Adam Islip.

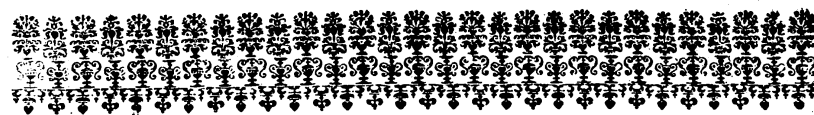
1634.



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*This Book belongs to the Library in the Church
School Chamber in Nottingham given by
William Stetinfest*



*The copie of the said Letter, written as touching the
Translation of Plinie.*

MI beloued, in twentie yeeres and better, so many tokens of our mutuall
loue passing betweene vs, I need not now to professe my affection to
your selfe; and my daily conuersing with you, hath yeelded my approba-
tion of your tedious labor in translating Plinie. These few lines there-
fore shall onely serue to witnesse vnto others the deserved account
which for your learning I haue alwaies made of you, and my conceit of
this your trauaile in opening to your countrymen the treasure of Nature: therein to see
and to admire the wisdom, power, and the goodnesse of the onely true God, the Fram-
er of Nature. I am not of their minds, who desire that all humane learning in Arts and
Naturall Philosophie should be reserved vnder locke and key of strange language, with-
out the which no other man should haue access vnto it: For as such knowledge is a branch
of that excellencie wherein man was formed, so the repaire thereof (though it bee not the
chiefe) is yet a thing unworthily neglected, as well in regard of our owne comfort therein
gained, as for the glory of God thereby promoted. And it was the wisdom and provid-
ent hand of the All-sufficient, so to guide the wise heathen in Arts and Nature, that they
should publish such their skill vnto their countrymen in mother tongue: partly to correct
the rudenesse which is in ignorance, and in part to leaue them the more inexcusable: In
which regard, they may in some sort be called, The Prophets and Teachers of the heathen.
And though Plinie and the rest were not able by Natures light to search so far as to find
out the God of Nature, who sitteth in the glorie of light which none attaineth, but contra-
rily in the vanitie of their imagination bewrayed the ignorance of foolish hearts, some
doting vpon Nature her selfe, and others vpon speciall creatures as their God: yet feare
we not that Christians in so cleare light should be so farre bewitched by such blind teachers;
as to fall before those heathen Idols. Yea, though some of them (as namely Plinie) haue
spoken dishonourably of the onely true God and of his providence, because they knew him
not; which speeches (if it might stand with the lawes of Translation) I could wish were
utterly omitted; yet may we hope that Christian men so long taught by the light of grace
out of the holy word of God, will no lesse therefore giue him his deserved honour, than
when they doe in like sort heare the blasphemie of Sanncherib king of Asbur, who sent to
raile vpon the liuing God. I feare not the corrupting of vnsstable minds any thing so much
by these foolish Gentiles which are without, as by the deceitfull spirit of error speaking in
the mouth of men within: such I meane as are within the bosome of the Church. These are
the foxes by whom we feare the spoile of the Lords vines when as the grapes first begin to
cluster; for whose taking I desire that all Gods husbandmen would be more carefull. As
for the speeches of these blind heathen, the true Christian may well thereby be provoked to
extoll the mercie of God, who sitteth in so glorious a light as hath dashed the sharpest sight
of Nature; but for our comfort hath put a vaile vpon his glorie, and by his grace hath so
cleared

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cleared the eye of our understanding, that we might see his face in his beloved, and know him to be the onely true God, and his blessed providence upon all his creatures. And when they shall perceiue that the wisest cleark in naturall skill could not learne by the booke of heauen and earth to know their Maker, whose glorie they declare, and handworkes see out; nor who it was that framed Nature, when by his word he first created them in such excellencie, and then, by his blessing gaue, and by his providence working all in all, doth yet maintaine such an operative power, as by the which they are still continued in their kindes: nor how it came to passe that Nature lost her excellencie in all creatures, and her power vnto good was not onely weakened (whence we see her faile in many of her purposes) but also peruerued vnto euill; then (I say) they will the more be stirred up by Gods grace to make reuerent account of the holy Scriptures, which God in rich mercie hath giuen to them to be a light in all things for to direct them through the errors in Natures blindnesse, and to bring them to the heauenly Jerusalem and happie world of all the holie where he dwelleth, whom they worship in vnitie and trinitie. Proceed then my beloved friend to bring vnto the birth your second labour; whereof I pray that God may haue honour in the praise of his works throughout nature, and wish you comfort in good acceptance with the reader, and your countrie vse and pleasure in the skill thereof. Vnto him which onely hath immortalitie and dwelleth in that light which none attaineth, to God onely wise be all honour and glorie. Iunij xij. 1601.

Your louing friend in the Lord,

H. F.



TO THE RIGHT HONOURABLE
SIR ROBERT CECIL KNIGHT, PRINCIPALL
SECRETARIE TO THE QUEENS MAIESTIE,
MASTER OF COVRT OF THE WARDS AND LIVERIES,
Chancellor of the Vniuersitie of Cambridge, and one of her
Most Excellent Majesties Privie Counsaile.



He friendly acceptance which T. Livius of Padua, hath found in this Realme, since time hee showed himselfe in English weed vnto her sacred Majestie, hath trained over vnto him his neighbour Plinius Secundus, from Verona. Whome, being now arraid in the same habit, yet fearefull to set foot forward in the forreine ground, without the countenance of some worthie personage, who might both giue him his hand at his first entrance, in token of welcome, and also grace him afterwards with a favourable regard to win acquaintance, I humbly present vnto your Honour. For considering the qualitie of the man, a Philosopher discoursing so deeply in all Learning, where may hee looke for better acceptance than of him, who is most iustly styled, Patron of Learning? Which dignitie conferred of late vpon your H. by the generall suffrages of a Noble Vniuersitie (and that for your singular insight in all literature) as a complement to those high places whereunto the fauour of a most prudent and judicious Princeesse hath advanced you, and the same correspondent to the same wisdom, justice, and eloquence, which concurre in your person, like the seuerall beauties of the Rubie, Amethyst, and Emerald meeting in one faire Opal, giue a lovely lustre to your other titles, no lesse, than if the nine Muses and Apollo, represented naturally in that rich Agat of K. Pyrrhus, were inserted therein. Now if, as wee read of * Alexander * Magnus: and * Demetrius, two mightie monarchs, who amid their desseines and making conquests and besieging cities, beheld otherwhiles Apelles and Protogenes how they handled their pencils; it may please your Honour betweene the managing of State-affaires vnder her Majestie, to cast your eye eftsometimes vpon Plinie for your recreation, and see how liuely hee depeincteth, nor Venus Anadyomene, drawne haply to the patterne of Campaspe a courtizan; nor Ialysus with his dog, in which picture, fecit Fortuna naturam; but euen Nature her selfe, the immediat mother and nource of all things vnder the Almighty; I shall not onely thinke him patronized thereby and sufficiently commended to the world, but also acknowledge my selfe much deuoted to your H. and bound for euer to pray for the increase thereof, with long life and true happinesse.

Your Honours most readie at command,

Philemon Holland.



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HAppie were they in times past reputed (and not vnworthily) who had that gracious and heauenly gift, *aut facere scribenda, aut scribere legenda*: that is to say, either to do such things as deserued to bee written, or to write that which was worth the reading. Those that could not attaine to these two branches of felicitie, and yet vtterly misliked idlenes, contented themselues in a third degree, namely to take in hand the old workes of their ancients, and by new labours to immortalize their memorie. Thus *Nicophanes* (a famous painter in his time) gaue his mind wholly to antique pictures, partly to exemplifie and take out their patternes after that in long continuance of time they were decayed; and in part to repaire and reforme the same, if haply by some iniurious accident they were defaced. The ingenious mind of this artizan thus deuoted to antiquitie, as I doe highly commend; so I cannot chuse but embrace his policie, seeking hereby to auoid the enuie and reproofe of others. In this number I must range those learned men in seuerall ages, who to illustrate the monuments left by former writers, haue annexed vnto them their Commentaries; to saue them entire and vncorrupt, haue set thereto iudiciall obseruations; and to publish them for a generall benefit of posteritie, haue translated the same into their mother language. As for my selfe, since it is neither my hap nor hope to attaine to such perfection, as to bring forth somewhat of mine owne which may quit the paines of a reader; and much lesse to performe any action that might minister matter to a writer; and yet so farre bound vnto my natie countrey and the blessed state wherein I haue liued, as to render an account of my yeeres passed and studies employed, during this long time of peace and tranquillitie, wherein (vnder the most gracious and happy gouernement of a peerelesse Princessse, assisted with so prudent, politique, and learned Counsell) all good literature hath had free progresse and flourished, in no age so much: mee thought I owed this dutie, to leaue for my part also (after many others) some small memoriall, that might giue testimonie another day what fruits generally this peaceable age of ours hath produced. Endeauoured I haue therefore to stand in this third ranke, and bestowed those houres which might be spared from the practise of my profession, and the necessarie cares of this life, to satisfie my countrimen now liuing, and to gratifie the age ensuing, in this kinde. Like as therefore I haue trauelled alreadie in *Titus Livius* a renowned Historiographer, so I haue proceeded to deale with *Plinius Secundus* the elder, as famous a Philosopher. Now albeic my intention and only scope was, to doe a pleasure vnto them that could not read these authours in the original: yet needs I must confesse that euen my selfe haue not only gained thereby encrease of the Latine tongue (wherein these workes were written) but also growne to further knowledge of the matter and argument therein contained. For this benefit wee reape by studying the bookes of such ancient authours,

That

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That the oftner we read them ouer, the more still we find and learne in them: as beeing so judiciously and pithily penned, that, as the Poet said very well, *decies repetita placent*. Well may the newest songs and last deuised plaies delight our ears at the first, and for the present rauish our senses: like as horarie and carely Summer fruits content our tast and please the appetite: but surely it is antiquitie that hath giuen grace, vigor, and strength to writings; euen as age commendeth the most generous and best wines. In which regard, and vpon this experience of mine owne, I nothing doubt but they also whom I might iustly feare as hard censours of these my labours, will not onely pitie mee for my paines, but also in some measure yeeld mee thanks in the end, when either by the light of the English (if they be young students) they shall bee able more readily to goe away with the darke phrase and obscure constructions of the Latine; or (being great schollers and taking themselues for deepe Critickes) by conferring the one with the other, haply to espie wherein I haue tripped, they shall by that meanes peruse once againe, and consequently gather new profit out of that authour whom peraduenture they had laid by for many yeers as sufficiently vnderstood. When some benefit (I say) shall accrew vnto them likewise by this occasion, I lesse dread their fearefull doome, to which so wilfully I haue exposed my selfe. Well I wist, that among the Athenians, order was taken by law, That an enterlude newly acted should be heard with silence and applause: which custome, as it was respectiue and fauourable to the first endeauours of the actours, so it implied an ineuitable danger of hissing out an vtter disgrace, if afterwards they chanced to misse and faile in their parts. Hauing shewed my selfe once before vpon the stage, presuming vpon this priuiledge and the curesie of the theatre, I might haue now sitten still and so rested: In mounting vp thus soon againe, I may seeme either in the assured confidence of mine owne worthinesse, to proclaime a challenge to all mens censures; or else vpon a deepe conceit of some generall conuiniencie make reckoning of an extraordinarie and wonderfull fauor. But as the choise that I haue made to publish the monuments of other men, without fathering any thing of mine owne, doth excuse and acquit mee for the one; so the froward disposition of carpers in these daies wherein wee liue, will checke the other. Howbeit considering such paines vndergone by me one man, for the pleasure of so many; so much time spent of mine, for gaining time to others; and some opportunities of privat lucre ouerslpt and lost, to win profit vnto all; I feare not but these regards may deserue a friendly acceptance, & counterweigh all defects and faults escaped, whatsoeuer. The persuation hereof, but principally the priuitie of my affectionat loue vnto my countrey (which assured me of a safe-conduct to passe peaceably through their hands who are of the better sort and well affected) induced mee to a resolution not onely to enter vpon this new taske, but also to breake through all difficulties, vntill I had brought the same, if not to a full and absolute perfection, yet to an end and finall conclusion. Besides this naturall inclination and hope which carried mee this way, other motiues there were that made faile and set mee forward. I saw how diuerse men before me had dealt with this authour, whiles some laboured to reforme whatsoeuer by iniurie of time was growne out of frame: others did their best to translate him into their own tongue, and namely, the Italian and French: moreouer, the Title prefixed thereto so vniuersall as it is, to wit, *The Historie of the World*,

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or *Reports of Nature*, imported (no doubt) that hee first penned it for the generall good of mankind.ouer and besides, the Argument ensuing full of varietie, furnished with discourses of all matters, not appropriate to the learned only, but accommodat to the rude peisant of the countrey; fitted for the painefull artizan in towne and citie: pertinent to the bodily health of man, woman, and child; and in one word, suiting with all sorts of people living in a societie and commonweale. To say nothing of the precedent giuen by the authour himselfe who endited the same, not with any affected phrase, but sorting well with the capacitie euen of the meanest and most vnlettered: who also translated a good part thereof out of the Greeke. What should I alledge the example of former times, wherein the like hath euermore been approued and practised? Why should any man therefore take offence hereat, and enuie this good to his naturall countrey, which was first meant for the whole world? and yet some there be so grosse as to giue out, That these and suchlike bookes ought not to bee published in the vulgar tongue. It is a shame (quoth one) that *Linie* speaketh English as hee doth: Latinitis onely are to bee acquainted with him: as Who would say, the fouldiour were to haue recourse vnto the vniuersitie for militarie skill and knowledge: or the scholler to put on armes and pitch a campe. What should *Plinie* (saith another) bee read in English, and the mysteries couched in his bookes divulged: as if the husbandman, the mason, carpenter, goldsmith, painter, lapidarie, and engrauer, with other artificers, were bound to seeke vnto great clearkes or linguists for instructions in their seuerall arts. Certes, such *Momi* as these, besides their blind and erronious opinion, thinke not so honourably of their native countrey and mother tongue as they ought: who if they were so well affected that way as they should be, would with rather, and endeauiour by all meanes to triumph now ouer the Romans in subduing their literature vnder the dent of the English pen, in requittall to the conquest sometime ouer this Island, atchieued by the edge of their sword. As for our speech, was not Latine as common and naturall in Italie, as English here with vs. And if *Plinie* faulted not but deserued well of the Romane name, in laying abroad the riches and hidden treasures of Nature, in that Dialect or Idiome which was familiar to the basest clowne: why should any man be blamed for enterprising the semblable, to the commoditie of that countrey in which and for which he was borne. Are wee the onely nation vnder heauen vnworthie to tast of such knowledge? or is our language so barbarous, that it will not admit in proper tearmes a forreine phrase? I honor them in my heart, who hauing of late daies troden the way before mee in *Plutarch*, *Tacitus*, and others, haue made good prooffe, that as the tongue in an Englishmans head is framed so flexible and obsequent, that it can pronounce naturally any other language; so a pen in his hand is able sufficiently to expresse Greeke, Latine, and Hebrew. And my hope is, that after mee there will arise some industrious *Flarvij* who may at length *cornicum oculos configere*. For if my selfe, a man by profession otherwise carried away, for gifts farre inferiour to many, and wanting such helps as others bee furnished with, haue in some sort taught those to speake English who were supposed very vntoward to bee brought vnto it; what may be expected at their hands, who for leisure may attend better; in wit are more pregnant; and being graced with the opinion of men and fauour of the time, may attempt what they will, and effect whatsoeuer

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ver they attempt with greater felicitie? A painfull and tedious trauaile I confesse it is; neither make I doubt but many doe note mee for much follie in spending time herein, and neglecting some compendious course of gathering good, and pursuing vp pence. But when I looke backe to the example of *Plinie*, I must of necessity condemne both mine owne sloth, and also reprove the supine negligence of these daies. A courtiour he was, and great fauourit of the *Vespasians* both father and sonne: an oratour besides, and pleaded many causes at the barre: a martiall man withall, and serued often times a leader and commander in the field: within the citie of Rome hee mannaged civile affaires, and bare honourable offices of State. Who would not thinke but each one of these places would require a whole man? and yet amid these occasions wherewith he was possessed, he penned Chronicles, wrote Commentaries, compiled Grammaticall treatises, and many other volumes which at this day are vtterly lost. As for the Historie of Nature now in hand, which sheweth him to be an excellent Philosopher and a man accomplished in all kinds of literature (the onely monument of his that hath escaped all dangers, and as another *Palladium* beene reserued entire vnto our time) wherein hee hath discoursed of all things euen from the starrie heauen to the centre of the earth; a man would marveile how hee could possibly either write or doe any thing else. But considering the agilitie of mans spirit alwaies in motion: an ardent desire to benefit posteritie, which in these volumes hee hath so often protested; his indefatigable studie both day and night, euen to the iniurie of nature, and the same continued in euerie place, as well abroad as within-house; in his iourney vpon the high way, where his manner was to read and to indite; in his ordinarie passage through the streets betwene court and home, where he gaue himselfe no rest, but either read, or else found his notarie worke to write; and for that purpose rode vsually in an easie litter, with the said Notarie close by his side: lesse wonder it is, that hee performed his service to Prince and state according to his calling; and withall deliuered vnto posteritie so many fruits of wit and learning. For what is not the head of man able to compasse? especially making faile with a seruent desire and resolution to see an end, and besides taking the vantage of all moments, and losing no time, whereof hee was *unus omnium parcissimus*. Touching his affection to search into the secrets of Nature, it was that and nothing else that shortened his daies, and hastened his vntimely death: for hauing liued not much about the middle age of man, desirous he was to know the reason, Why the hill *Nesuvius* burned as it did? and approached so neare, that with the strong vapours and smoake issuing from thence, his breath was suddenly stopped, and himselfe found dead in the place: a man worthie to haue liued for euer. What remaineth now, but onely to recommend vnto my countrimen this worke of his (which for mine owne part I wish to bee immortal) were it not for one scruple to bee cleared, which at the first troubled my selfe a little, and might peraduenture otherwise offend some readers. In attributing so much vnto Nature, *Plinie* seemeth to derogat from the Almighty God, to him *Asymptotus*; and therefore dangerous (saith one) to bee divulged. Farre be it from mee, that I should publish any thing to corrupt mens manners, and much lesse to preiudice Christian religion. After conference therefore with sundrie diuines about this point, whom for their authoritie I reuerence; whose learning I honor and embrace; and in whom for iudgement & synceritie of religion I rest,

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I rest, confirmed I was in my first purpose, and resolved to finish that which I had begun, namely, not to defraud the world of so rich a gem, for one small blemish appearing therein. And that it may appeare how I did not abound in mine owne sence, but had regard as well to satisfie the conscience of others as mine owne, I haue thought good to annex immediately hereunto, in manner of a Corollarie, the opinion of one graue and learned preacher concerning this doubt, as it was deliuered vnto mee in writing; which for that it is grounded vpon sufficient reasons, and according with the iudgement of the rest, the lesse I respect the rash projects of some fantastickall spirits: nothing doubting but the same will settle the minds of the weake, and free my labours from the taint of irreligion.



THE FIRST BOOKE OF THE
HISTORIE OF NATURE, WRITTEN
BY C. PLINIUS SECVNDVS.

*The Preface or Epistle Dedicatorie to * Prince Vespasian, his [friend]
C. Plinius Secundus sendeth greeting.*

* Titus



Hese bookes containing the Historie of Nature, which a few daies since I brought to light (a new worke in Latine, and namely among the Romanes your Citizens and Countrymen) I purpose by this Epistle of mine to present and consecrate vnto you, most sweet and gentle Prince [for * this title accordeth fittest vnto you, seeing that the name of [* Most mighty] sorteth well with the age of the Emperor your father:] which haply might seeme boldnesse and presumption in me, but that I know how at other times * you were wont to haue some good opinion of my toies and fooleries. Where, by the way, you must giue me leaue to mollifie a little the verses which I borrow of my countryman Catullus. (See also how I light vpon * a word vsed among souldiers, which you are acquainted with, since time we serued both together in the campe:) For he as you wot full well, changing the former syllables of his verses one for another, made himselfe somewhat more harth than he would seeme to be vnto the fine eares of his familiar friends, the Veranioli & Fabullit. And withall, I would be thought by this my malapert writing vnto you, to satisfie one point, which, as you complained in your answer of late to another rude & audacious letter of mine, I had not performed, to wit, That all the world might see (as it were vpon record) how the Empire is managed by you and your father equally: and notwithstanding this imperial majestie wherunto you are called, yet is your affability and maner of conuersing with your old friends, fellow-like, & the same that alwaies heretofore it had been. For albeit you haue triumphed with him for your noble victories, bin Cenfor in your time, and Confull * six times, executed the sacred authoritie of the Tribunes, Patrones, and protectors of the Commons of Rome, together with him: albeit I say you haue otherwise shewed your noble heart in honouring and gracing both the court of the Emperor your father, and also the whole state of Knights and Gentlemen of Rome, whiles you were captaine of the guard, and grand-master of his house and roiall pallace (in which places all, you carried your selfe respectiue to the good of the Commonweale) yet to all your friends, and especially to my selfe, you haue borne the same countenance as in times past within the campe, when wee serued vnder the same colours, and lodged together in one pauilion. So as in all this greatnesse and high estate wherunto you are mounted, there is no other change and alteration seene in your person but this, That your power is now answerable to your will, & able you are to doe and performe that good which you euer meant, and still intend.

* Suauissimum

* Maximum

* Namque in
fictis, ut
officiis, ut
ut, ut, ut
ut, ut, ut
ut, ut, ut

* Comenandum

It seemes that
Pliny read thus
in Catullus, I
p-tare namque
Nugas est ali-
quid meae sole-
vas, which being
ded was but
an ha d come-
position and
couthing of
the words.

* Six times, or rather
Septies, out of
nism.

And

Plinies Epistle to T. Vespasian.

And howsoever this great maiestie, resplendent in you on euery side, in regard of those high dignities about rehearsed, may induce the whole world besides to reuerence your person in all obeisance; yet I for my part am armed onely with a kinde of audacitie and confidence to shew my dutie and deuoir vnto you, after a more familiar manner than others: and therefore, this my aduenturous rashnes, whatsoeuer, you must impute vnto your own courtesie: and if I chaunce to fault therein, thanke your selfe therefore, and seeke pardon at your own hands. Well, bashfulnesse I haue laid aside, and put on a bold face, and all to no purpose. For why? although your gentlenesse and humanitie be one way attractiue, and induceth me to draw neare vnto your presence, yet another way you appeare in great maiestie: the sublimitie I say of your mind, your deepe reach, high conceit, and rare perfections, set me as far back: no lictors & huishers marching before you, so much, that I dare not approach. In the first place: was there euer any man, whose words passed from him more powerfull, & who more truly might be said to flash forth as lightning the force of eloquence? What Tribune was there known at any time to persuaide & moue the people with good language, more effectually? How admirable was your utterance in those publicke Orations, wherein you thundred out the praise-worthy acts of the Emperour your father, that all the grand-place rung therewith? what a singular testimonie shewed you of rare kindnesse & affection to your brother, in setting out his praises to the full? As for your skill in Poetrie, how excellent, how accomplished is it. Oh the bounty of your mind! Oh the fertility of your pregnant spirit! that you should find means to imitate, yea, and to match your * brother in that kind. But who is able boldly to giue an estimate of these gifts to their worth? How may a man enter into the due consideration thereof, without feare of exquisit censure, and exact iudgement of your wit, especially being prouoked and challenged thereunto as you are. For to say a truth, the case of them who publish a worke in generall tearmes, is farre vnlike to theirs that will seem to dedicat it particularly, and by name, to a Prince so iudicious as your selfe. For had I set forth this my booke simply, and staid there without any personal dedication, the I might haue come vpon you & said, Sir, what should a mightie Commander and Generall of the field, as you are, busie himselfe to read such matters? written these treatises were to the capacitie of the vulgar people, for base commons, rude husbandmen, and peasants of the countrey, for poore artisans; and in one word, to gratifie them who had no other means of great emploiment, nor time & leisure but to studie vpon such points and nothing else: What should you make your selfe a censor of this worke? and verily, when I made first shew of this enterprise of mine, I never reckned you in the number of those iudges that should passe their sentence vpon these writings; I wist full well, that you were a greater person far, & I supposed that you would neuer abase your selfe nor stoupe so low as to read this booke of mine.ouer and besides, a common case it is, and incident to men of deepe learning and great conceit, that otherwhiles exception may be taken against them, and their iudgement reiected in this behalfe. Euen *M. Tullius* that renowned Orator, and who for wit and learning had not his fellow, taking the vantage of that libertie, weth the benefit thereof: and (whereat wee may well maruell) maintaineth the action by an aduocate, and taketh example (for his defence) from *Lucilius*: for in one part of his workes thus hee saith, *I would not haue learned Persius to read these bookes of mine, lest I am that hee should censure mee.*

As

Plinies Epistle to T. Vespasian.

As for *Laelius Decimus*, I am content to submit them to his opinion. Now if such an one as *Lucilius*, who was the first that durst controule the writing of others, and tooke vpon him to scosse at their imperfections, had rather thus to say; if *Cicero* tooke occasion to borrow the said speech of him for to serue his owne turne, and namely in his Treatise of Politiques, where he wrote of a Common-weal; how much greater cause haue I to distrust my self, and to decline and auoid the censure of some iudge of deepe vnderstanding? But cut I am from this refuge and meanes of detence, in that I expressly make choise of you in this dedication of my worke: for one thing it is to haue a iudge, either pricked by pluralitie of voices, or cast vpon a man by drawing lots; and a farre other thing to chuse and nominate him from all others: and great difference there is between that cheare and prouision which we make for a ghest solemnely bidden and invited, and the suddaine fare and intertainment which is ready for a stranger who commeth to our house vnlooked for. *Cato*, that professed enemy of ambition, vaine-glory, and indirect suit for offices, who took as great contentment in those estates and dignities which he refused and reiected, as in them which he enioied, attained to this good name of vprightnesse and sinceritie, that when in the hottest broile about election of Magistrates that euer was in his time, they that stood therefore, put into his hands their mony vpon trust, as a cautionary pawne and assurance of their integritie and fidelitie that way; they professed that they did it in testimony of their conceit of his equitie and innocence, the chiefe and onely thing that a man is to regard in this life: whereupon ensued the noble and memorable exclamation of *M. Cicero*, who speaking of the said *Cato*, brake out into these words: Oh gentle *M. Portius*, how happy and blessed art thou, whom no man was euer so hardie as to sollicite to any leaud thing, or contrary to right and honestie! *L. Scipio*, surnamed *Afiaticus*, at what time as hee appealed vnto the Tribunes of the Commons, and besought their lawfull fauour (among whom, *C. Gracchus* was one, a man whom hee tooke for his mortall enemy) presuming vpon the goodnesse of his cause, gaue out and said, That his very enemies, if they were his iudges, could not chuse but quit him, and giue sentence on his side. Thus wee see how euerie man maketh him peremptorily the supreme and highest iudge of his cause, whom himselfe chuseth and appealeth vnto: which manner of choise the Latines call *Prouocatio*. As for your selfe verily, who are set in the most eminent & chiefe place among men, and otherwise endued with singular eloquence and profound knowledge, no maruell is it, if those that doe their dutie vnto you, salute you, kisse your hand, and come with great respect and reuerence: In which regard, exceeding care about all things would be had, that whatsoeuer is said or dedicated vnto you, may be seem your person, and be worth acceptation. And yet the gods reiect not the humble prayers of poore countrey peasants, yea, and of manie nations, who offer nothing but milke vnto them: and such as haue no Incense, find grace and fauour many times with the oblation of a plaine cake made onely of Meale and salt; and neuer was any man blamed yet for his deuotion to the gods, so he offered according to his abilitie, were the thing neuer so simple.

For mine owne part, challenged I may be more still for this my importune and inconsiderat boldnesse, in that I would seeme to present these bookes vnto you, comprised of so slender stuffe and matter as they be: for therein can be touched no

*For Domitian Vespasian was reputed an excellent Poet.

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great wit (which otherwise in me was euer meane and simple) neither admit they any digressions, orations, speeches, and discourses, ne yet admirable cases and variable changes, or any other occurrent, either pleasant to rehearse, or delectable to heare. The truth is this, the nature of all things in this world, that is to say, matters concerning our daily and ordinarie life, are here deciphered and declared, and that in barren terms, without any goodly shew of gay and glorious phrases: and whatsoever I haue put downe, concerne it doth the basest points thereof, inso-much as for the most part I am to deliver the thing in hand, either in rusticall speech, or else in forraine, nay, in barbarous language, such also as may not well be vttered, but with reseruing honour to the hearers, and reuerence to the readers.

Moreouer, the way that I haue entred into, hath not bin troden beforetime by other writers, being indeed so strange and vncouth, as a mans mind would not willingly trauell therein. No Latin author among vs hath hitherto once ventured vpon the same argument, no one Grecian whatsoever hath gone through it and handled all: and no maruell, for many of vs loue not to take any paines, but study rather to pen matters of delight and pleasure. True it is, I must needs say, that others haue made profession hereof, but they haue done it with such subtiltie and deepenesse, that all their trauels and writings by that means, lie as it were dead and buried in darkenesse. Now come I, and take vpon me to speak of euery thing, and to gather as it were a compleat hody of arts and sciences (which the Greeks call *ἐπιστήμη*) that are either altogether vknowne, or become doubtfull, through the ouermuch curiositie of fine wits: again, other matters are deciphered in such long discourses, that they are tedious to the readers, inso-much as they loath and abhor them. A difficult enterprize it is therefore to make old stufte new, to giue authoritie & credit to nouelties, to polish and smooth that which is worne and out of vse, to set a glosse and lustre vpon that which is dim and darke, to grace & countenance things disdained, to procure beleefe to matters doubtful; & in one word, to reduce nature to all, and al to their own nature. And verily to giue the attempt only and shew a desire to effect such a desseigne as this, although the same be not brought about and compassed, were a braue and magnificent enterprize. Certes of this spirit am I, that those learned men and great students, who making no stay, but breaking through all difficulties, haue preferred the profit of posteritie before the tickling and pleasure of itching eares in these daies; which I may protest that I haue aimed at, not in this worke only, but also in other of my bookes already: and I professe, that I wonder much at *T. Livius*, otherwise a most renowned & famous writer, who in a preface to one of his books of the Roman history which hee compiled from the foundation of Rome, thus protested, That hee had gotten glorie ynough by his former writing, and might sit still now & take his ease, but that his mind was so restless, and so ill could abide repose, that contrariwise it was fed and nourished with trauel, & nothing else. But surely me thinks, in finishing those Chronicles, he should in dutie haue respected the glory of that people which had conquered the World, and advanced the honour of the Romane name, rather than displayed his owne praise and commendation: Ywis, his demerit had bene the greater, to haue continued his story as he did, for loue of the subiect matter, and not for his priuat pleasure; to haue I say performed that peece of worke more to gratifie the state of Rome, than to content his owne minde and affection. As touching my selfe (so far as *Domitius Piso* saith, That bookes ought to be

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treasuries & store houses indeed, and not bare and simple writings) I may be bold to say and averre, That in 36 bookes I haue comprised 20000 things, all worthie of regard & consideration, which I haue recollected out of 2000 volumes or thereabout, that I haue diligently read (and yet very few of them there be that, men learned otherwise, and studious, dare meddle withall, for the deepe matter and hidden secrets therein contained) and those written by 100 seuerall elect and approved authors: besides a world of other matters, which either were vknowne to our forefathers and former writers, or else afterward inuented by their posteritie. And yet I nothing doubt that many things there be, which either surpasse our knowledge, or else our memorie hath ouerslipped: for men we are, and men employed in many affaires. Moreouer, considered it would be, that these studies wee follow at vacant times and stolne houres, that is to say by night season onely; to the end that you may know, how wee to accomplish this haue neglected no time which was due vnto your seruice: The daies we wholly employ and spend in attendance about your person; we sleepe onely to satisfie nature, euen as much as our health requireth, and no more; contenting our selves with this reward, That whiles wee study and muse (as *Varro* saith) vpon these things in our closet, we gaine so many houres to our life; for surely we liue then only, when we watch and be awake. Considering now those occasions, those lets and hinderances aboue-named, I had no reason to presume or promise much; but in that you haue emboldened me to dedicate my bookes vnto you, your selfe performeth whatsoever in me is wanting: not that I trust vpon the goodnesse and worth of the worke, so much, as that by this means it will be better esteemed and shew more vendible: for many things there be that seeme right deare and be holden for precious, only because they are consecrate to some sacred temples.

As for vs verily, we haue written of you all, your father *Vespasian*, your selfe, and your brother *Domitian*, in a large volume which wee compiled touching the historie of our times, beginning there where *Ausidius Bassus* ended. Now if you demand and aske me, Where that historie is? I answer, that finished it was long since, and by this time is iustified and approved true by your deeds: otherwise I was determined to leaue it vnto my heire, and giue order that it should be published after my death, lest in my life time I might haue bin thought to haue curried fauour of those, whose acts I seemed to pen with flatterie, & beyond all truth. And therefore in this action I do both them a great fauour who haply were minded before me to put forth the like Chronicle, and the posteritie also which shall come after; who, I make reckning and know, will enter into the lists with vs, like as we haue done with our predecessors. A sufficient argument of this my good mind & frank hart that way you shal haue by this, That in the front of these books now in hand, I haue set down the very names of those writers, whose help I haue vsed in the compiling of the: for I haue euer bin of this opinion, That it is the part of an honest minded man, & one that is full of grace & modesty, to confesse frankly by whom he hath profited & gotten any good: not as many of those vnthankful persons haue done, whom I haue alledged for my authors. For to tell you a plain truth, know thus much from me, that in conferring the together about this worke of mine, I haue met with some of our moderne writers, who word for word haue exemplified & copied out whole books of old authors, and neuer vouchsafed so much as the naming of them, but haue taken their labors & trauels to themselves.

And

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And this they haue not done in that courage and spirit to imitate, yea & to match them, as *Virgil* did *Homer*: much lesse haue they shewed that simplicitie and apert proceeding of *Cicero*, who in his bookes of Policie and Common-weale professeth himselfe to hold with *Plato*; in his Consolatorie Epistle written to his daughter, confesseth and saith plainly thus, I follow *Crantor*, and *Panætius* likewise in his Treatise concerning Offices. Which worthy monuments of his (as you know well) deserue not onely to be seene, handled, and read daily, but also to be learned by heart euery word. Certes, I hold it for a point of a base and seruile mind, and wherein there is no goodnesse at all, to chuse rather to be surprisid and taken in theft, than to bring home borrowed good, or to repay a due debt, especially when the occupying, vse, and interest thereof, hath gained a man as much as the principall.

Now as touching the titles and inscriptions of Bookes, the Greekes therein haue a wonderfull grace and great felicitie: some haue intituled them *Καμιν*, whereby they would giue vs to vnderstand of A sweet hony-combe: others *Κρη Αποδεσκα*, that is to say, The horne of plenty and store: in such sort, that whosoever readeth these goodly titles, must needs hope for some great matters in such bookes, and as the proverb goeth, looke to drinke there or else no where, a good draught of hens milke. You shall haue moreouer their bookes set out with these glorious inscriptions, The Muses, The * Pandects, * Enchiridion, * *Αμυν*, * *Παραδιδω*: Goodly names all, and such, as who would not make default of appearance in court, and forfeit a recognisance or obligation, to vnclaspe such bookes and turne over the leafe? But let a man enter into them and reade forward, Lord! how little or no substance at all shall he find within the verie mids, answerable to that braue shew in the front or outside thereof? As for our countrey men (Latines I meane, and Romans) they be nothing so fine and curious as the Greekes, grosse are they in comparison of them in giuing titles to their bookes: they come with their Antiquities, Examples and Arts, and those also be such authors as are of the most pleasant and finest inuention amongst them all. *Valerius* who (as I take it) was named *Antias*, both for that hee was a Citizen of Antium, and also because the ancestors of his house were so called, vvas the first that gaue to a booke of his owne making, the title of *Lucubratio*, as a man would say, Candleworke or Night-studie. *Varro*, he tearmeth some of his Satyres *Sesquialyxes* and *Flexibula*. *Diodorus* among the Greekes was the first that laied aside roiysh titles, and because he would giue some braue name to his Chronicles, entituled it *Bibliotheca*, i. a Librarie. *Apion* the famous Grammarian, euen hee whom *Tiberius Cæsar* called the Cymball of the world (whereas indeed hee deserued to be named a Timbrill or Drum rather, for ringing and sounding publique fame) was so vain-glorious, that he supposed all those immortalized, vnto whom hee wrote or composed any pamphlet whatsoever. For mine owne part, although I nothing repent mee that I haue deuised no pretier Title for my Booke than plaine *Naturalis Historia*, i. The reports of Nature, without more ceremonie; yet because I would not be thought altogether to cource and rate the Greekes, I can be content, nay I am willing to bee thought in this behalfe like vnto those excellent grand masters in Greeke, for Painting and Imagerie, whom you shall finde in these Reports of mine, to haue entituled those rare and absolute peeces of worke (vvhich the more wee view and looke vpon, the more wee admire and wonder

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wonder at for their perfection) with halfe titles and vnperfect inscriptions, in this manner, *Apelles* * *went in hand with this Picture*: or, *Polycletus was a making this Image*: as if they were but begun, neuer finished and laid out of their hands: which was done (no doubt) to this end, that for all the varietie and diuersitie of mens iudgements scanning of their workmanship, yet the Artificer thereby had recourse to make excuse; had meanes (I say) to craue and haue pardon for any faults and imperfections that could be found, as if hee meant to haue amended any thing therein amisse or wanting, in case hee had not bene cut off and preuented by death. These noble workemen therefore herein shewed right great modestie, that they set superscriptions vpon all their painted tables, portraictures and personages, as if they had bene the last peeces of their workmanship, and themselues disabled by vnexpected death that they could not make a finall end of any one of them: for there were not knowne (as I take it) aboue three in all, which had their absolute titles written vpon them in this forme, *Ille fecit*, i. This *Apelles* wrought: and those pictures will I write of in place conuenient: By which it appeared euidently, that the said three tables were fully finished, and that the workeman was so highly contented with their perfection, that he feared the censure of no man: No maruaile then, if all three were so much enuied and admired throughout the world, no marueile if euerie man desired to be master of them.

Now For my selfe, I know full well and confesse freely, that many more things may be added, not to this story alone, but to all my bookes that I haue put forth alreadie: which I speake by the way, because I would preuent and auoid those faule-finders abroad those correctors and * scourgers of *Homer*, (for surely that is their very name (because I hear say there be certaine Stoike Philosophers, professed Logicians, yea, and Epicurians also (for at Grammarians hands and Criticks I neuer looked for other) who are with child full and trauaile vntill they be deliuered of somewhat against my bookes which I haue set forth as touching Grammer: and for this ten yeares space, nothing is come to light, but euermore the fruit miscarieth belike before the full time, as the slip of an vnperfect birth; whereas in lesse space than so, the verie Elephant bringeth forth her calfe, be it neuer so big. But this troubleth me neuer a whit, for I am not ignorant that a silly woman, euen an harlot, and no better, durst encounter *Theophrastus*, and write a booke against him, notwithstanding hee was a man of such incomparable eloquence that thereupon hee came by his diuine name *Theophrastus*: from whence arose this prouerbe and by-word, * *Marie then go chuse a tree to hang thy selfe*. And surely I cannot containe and hold my tongue, but I must needs set downe the verie words of *Cato Censorius*, so pertinent to this purpose; whereby it may appeare, that euen *Cato* himselfe a most worthy personage, who wrote of militarie Discipline, who had bene brought vp and trained to feats of warre vnder Great *Scipio Africanus*, or rather indeed vnder *Anniball*, who in the end could not endure *Africanus* himselfe, but was able to controll him in martiall affaires: and who besides hauing the conduct as L. Generall of the Romane armie, atchieued the better hand ouer his enemies in the field, and returned with victorie: this *Cato* (I say) could not auoid such backbiters and slanderers, but knowing that there would be many of them readie to purchase themselues some name and reputation by reprouing the knowledge and skill of others, brake out into a cer-

* *Apelles* *facie* *bati*.

* Containing all languages Tyre Tables did.
* A maual to be carried at waies in hand.
* *Μανω*.
* A Table or Index.

* *Homotomias* *est*.

* If women may be allowed to controll mens writings, we may be wearie of our liues and goe hang our selues well enough.

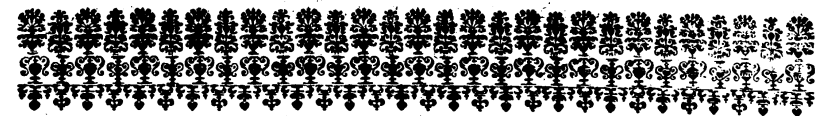
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a certaine speech against them: And what was it? I know right well (quoth hee, in that booke aforesaid) that if these writings of mine come abroad once and be published to the view of the world, there will be many step forth to quarrell and caull therewith; such fellows soonest and most of all who are quite void of vertue and honestie, and know not what belongeth to true honour. But surely say what they will, I let their words runne by, like raine water. It was a prettie speech also and a pleasant apothegme, that *Plancus* uttered in the semblable case: for being informed that *Asinius Pollio* was deuising and framing certaine inuestiue Orations against him, which should be set forth either by himselfe or his children, after the decease of *Plancus* and not before, to the end that they might not bee answered by him; hee said readily by way of a scoffe, That none but vaine bugs and hobgoblins vse to fight with the dead: with which word hee gaue those orations such a counterbuffe, that (by the iudgement of the learned) none were accounted afterward more impudent and shamelesse than they. For mine owne part, being sure that these busie bodies shall neuer be able to bite me (and verily *Cato* hath giuen such fellows a proper name, and called them *Vitiligatores*, by a tearme elegantly compounded of vices and quarrels: for to say a truth, what did they else but picke quarrels and make brawls?) I will proceed and go one still in my intended purpose.

Now to conclude and knit vp mine Epistle: knowing as I doe, that for the good of the Commonweale, you should be spared and not impeached by any priuat businesse of your owne, and namely in perusing these long volumes of mine; to preuent this trouble therefore, I haue adioyned immediatly io this Epistle, and prefixed before these books, the Summarie or Contents of euery one: and very carefully haue I endeauoured, that you should not need to read them throughout, whereby all others also after your example, may ease themselves of the like labour: and as any man is desirous to know this or that, he may seeke and readily find in what place to meet with the same. This learned I of *Valerius Sorranus* one of our owne Latine writers, who hath done the

like before me and set an Index to these Bookes which
he entituled *Index*.



THE INVENTORIE OR INDEX
CONTAINING THE CONTENTS OF XXXVII
BOOKS, TOVCHING THE HISTORIE OF NA-
TURE, WRITTEN BY C. PLINIVS SECVNDVS, WHICH IS RECEI-
VED FOR THE FIRST BOOKE OF THEM.

¶ *The Summarie of euery Booke.*



He first Booke containeth the Dedicatorie Epistle or Preface of the whole worke, addressed to *Titus Vespasian* the Emperour. Also the names of the Authors out of which hee gathered the Historie, which he prosecuted in 36 Bookes: together with the Summarie of euery Chapter: and beginneth, *The Books, &c.*

The second, treateth of the World, Elements, and Starres: and beginneth thus, *The World, &c.*

The third, describeth the first and second gulse, which the Mediterranean sea maketh in Europe: and beginneth in this manner, *Hitherto, &c.*

The fourth, compriseth the third gulse of Europe, beginning, *The third, &c.*

The fifth, containeth the description of Affricke, and beginneth thus, *Africke, &c.*

The sixt, handleth the Cosmographie of Asia, beginning thus, *The sea called, &c.*

The seuenth treateth of man, and his inuentions, beginning, *Thus as you see, &c.*

The eighth sheweth vnto vs, land creatures and their kindes, and beginneth after this manner, *Passé we now, &c.*

The ninth, laieth before vs all fishes, and creatures of the water, beginning in this wise, *I haue thus shewed, &c.*

The tenth speakes of flying foules and birds, and beginneth thus, *It followeth, &c.*

The eleuenth telleth vs of Insects, and beginneth thus, *It remaineth now, &c.*

The twelfth treateth of drugs and odoriferous plants, beginning, *Thus you, &c.*

The thirteenth describeth strange and forreine trees: beginning with these words, *Thus farre forth, &c.*

The fourteenth sheweth of vine-plants, &c. beginning thus, *Thus far forth, &c.*

The fifteenth comprehendeth all fruitfull trees, thus beginning, *There were, &c.*

The sixteenth describeth vnto vs all wild trees, beginning with, *Hitherto, &c.*

The seuenteenth containeth tame trees within hortyards, and beginneth with these words, *As touching the nature, &c.*

The eighteenth booke treateth of the nature of corne, and all sorts thereof, together with the protection of husbandmen, and agriculture, beginning after this manner, *Now followeth, &c.*

The

The first Booke of

The nineteenth discourseth of Flax, Spart, and Gardenage, beginning after this manner, *In the former booke, &c.*
 The twentieth sheweth of garden herbs, good to serue both the kitchin for meat, and the Apothecaries shop for medicine, & beginneth thus, *Now will we, &c.*
 The one and twentieth treateth of flours and garlands, & beginneth, *In Cato, &c.*
 The two and twenty containeth the chaplets and medicines made of hearbes, with this beginning, *Such is the perfection, &c.*
 The three and twentie sheweth the medicinable vertues of wine, and tame trees growing in hortyards, beginning thus, *Thus haue we, &c.*
 The foure and twentie declareth the properties of wild trees seruing in Physick, beginning thus, *Nature, &c.*
 The fife and twentie treateth of the herbes in the field comming vp of their own accord, and thus beginneth, *The excellencie, &c.*
 The six and twentie sheweth of many new and strange maladies, the medicinable vertues also of certaine herbes, according to sundry diseases, beginning thus, *The very face, &c.*
 The seuen and twenty goeth forward to certaine other hearbes and their medicines, and thus beginneth. *Certes, &c.*
 The eight and twentie setteth downe certaine receits of remedies in Physicke, drawne from out of man and other bigger creatures, and it beginneth in this manner, *Heretofore, &c.*
 The nine and twentie treateth of the first authours and inuentors of Physicke, also of medicines taken from other creatures, and beginneth, *The nature, &c.*
 The thirtieth booke speaketh of Magicke, and certaine medicines appropriat to the parts and members of mans bodie, beginning thus, *The vanitie, &c.*
 The one and thirtie containeth the medicinable vertues of fishes and water creatures, with this beginning, *Now follow, &c.*
 The two and thirtie sheweth other properties of fishes, &c. and beginneth in this manner, *Now are we come, &c.*
 The three and thirtie treateth of gold and siluer mines, and hath this beginning, *Time it is, &c.*
 The foure and thirtie speaketh of copper and brasse mines, also of lead, also of excellent brasse-founders and workemen in copper, beginning after this manner, *In the next place, &c.*
 The fife and thirtie discourseth of painting, colour, and painters, beginning in this sort, *The discourse, &c.*
 The six and thirtie treateth of marble and stone for building, and hath this beginning, *It remaineth, &c.*
 The seuen and thirtie concludeth with pretious stones, and beginneth at these words, *To the end that, &c.*

¶ IN

Plinies Naturall History.



¶ IN THE SECOND BOOKE IS CONTAINED
 the discourse of the World, of coelestiall impressions and meteors,
as also of them that appeare in the Aire, and upon Earth.

- | | |
|--|---|
| <p><i>Chap.</i>
 1. Whether the World be finite and limited within certaine dimensions or no? whether there be many, or but one?
 2. The forme and figure of Heauen and the world.
 3. The motion of Heauen.
 4. Why the world is called Mundus?
 5. Of the Elements.
 6. Of the seuen Planets.
 7. Concerning God.
 8. The nature of the fixed starres and Planets: their course and reuolution.
 9. The nature of the Moone.
 10. The eclipse of Sun and Moone: also of the night.
 11. The bignesse of starres.
 12. Diuerse inuentions of men, and their obseruations touching the coelestiall bodies.
 13. Of Eclipses.
 14. The motion of the Moone.
 15. Generall rules or canons touching planets or lights.
 16. The reason why the same planets seeme higher or lower at sundry times.
 17. Generall rules concerning the planets or wandring stars.
 18. What is the cause that planets change their colours?
 19. The course of the Sunne: his motion: and from whence proceedeth the inequalitye of daies.
 20. Why lightnings be assigned to <i>Iupiter</i>.
 21. The distances betweene the planets.
 22. The harmonie of stars and planets.
 23. The geometrie and dimensions of the world.
 24. Of stars appearing sodainly.
 25. Of comets or blasing stars, and other prodigious appearances in the skie: their nature, situation, and sundry kinds.
 26. The opinion of <i>Hipparchus</i> the Philosopher as touching the stars, fire-lights, lamps, pillars or beames of fire, burning darts, gapings</p> | <p><i>Chap.</i>
 of the skie, and other such impressions, by way of example.
 27. Strange colours appearing in the firmament.
 28. Flames and leams seene in the skie.
 29. Circles of guirlands (shewing aboue).
 30. Of coelestiall circles and guirlands that continue not, but soone passe.
 31. Of many Suns.
 32. Of many Moones.
 33. Of nights as light as day.
 34. Of meteors resembling fierie targuets.
 35. A strange and wonderfull apparition in the skie.
 36. The extraordinarie shooting and motion of stars.
 37. Of the stars named <i>Castor</i> and <i>Pollux</i>.
 38. Of the Aire.
 39. Of certaine set times and seasons.
 40. The power of the Dog-star.
 41. The sundrie influences of stars according to the seasons and degrees of the signes.
 42. The causes of raine, wind, and clouds.
 43. Of thunder and lightning.
 44. Whereupon cometh the redoubling of the voice, called <i>Echo</i>.
 45. Of winds againe.
 46. Diuerse considerations obserued in the nature of winds.
 47. Many sorts of winds.
 48. Of sodaine blasts and whirle-puffs.
 49. Other strange kinds of tempests & storms.
 50. In what regions there fall thunderbolts.
 51. Diuers sorts of lightnings, and wonderous accidents by them occasioned.
 52. The obseruations [of the <i>Tuscans</i> in old time] as touching lightening.
 53. Conjuring for to raise lightning.
 54. Generall rules concerning leames and flashes of lightning.
 55. What things be exempt and secured from lightning and thunderbolts.
 56. Of monstrous and prodigious showres of raine,</p> |
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The first Booke of

Chap.

1. raine, namely of milke, bloud, flesh, yron, wooll, bricke, and tyle.
2. The rattling of harnesse and armour: the sound also of trumpets heard from heauen.
3. Of stones falling from heauen.
4. Of the Rain-bow.
5. Of Haile, Snow, frost, Mists, and Dew.
6. Of diuers formes and shapes represented in clouds.
7. The particular propertie of the skie in certaine places.
8. The nature of the Earth.
9. The forme and figure of the earth.
10. Of the Antipodes: and whether there bee any such. Also, as touching the roundnesse of the water.
11. How the water resteth vpon the Earth.
12. Of Seas and riuers nauigable.
13. What parts of the earth be habitable.
14. That the earth is in the mids of the world.
15. From whence proceedeth the inequality obserued in the rising and eleuation of the stars. Of the eclipse: where it is, & wherefore.
16. The reason of the day-light vpon earth.
17. A discourse thereof according to the Gnomon: also of the first Sun-diall.
18. In what places and at what times there are no shadows cast.
19. Where the shadows fall opposite and contrary twice in the yeare.
20. Where the dayes bee longest, and where shortest.
21. Likewise of Dyals and Quadrants.
22. The diuers obseruations and acceptations of the day.
23. The diuersities of regions, and the reason thereof.
24. Of Earthquakes.
25. Of the chinks and openists of the earth.
26. Signes of earthquake toward.
27. Remedies and helps againg earthquakes comming.
28. Strange and prodigious wonders seen one time in the earth.
29. Miraculous accidents as touching earthquake.

In sum, there are in this booke of histories, notable matters, and worthy obseruations, foure hundred and eightene in number.

Latine Authours cited.

M. Varro, Sulpitius Gallus, Tiberius Caesar Emperour, Q. Tubero, Tullius Tiro, L. Piso, T. Livius, Cornelius Nepos, Statius Sebosus, Cassius Antipater, Fabianus, Antias, Mutianus, Cecina, (who wrote of the Tuscan learning) Targitius, L. Aquila, and Sergius Paulus.

Forreine

Chap.

1. In what parts the seas went backe.
2. Islands appearing new out of the sea.
3. What Islands haue thus shewed, and at what times.
4. Into what lands the seas haue broken perforce.
5. What Islands haue bin ioyned to the continent.
6. What lands haue perished by water and become all sea.
7. Of lands that haue settled and bene swallowed vp of themselves.
8. What cities haue bene overflowed and drowned by the sea.
9. Wonderful strange things as touching some lands.
10. Of certaine lands that alwaies suffer earthquake.
11. Of Islands that flete continually.
12. In what countries of the world it never raineth: also of many miracles as well of the earth as other elements hudled vp pell mell together.
13. The reason of the Sea-tides, as well ebbing as flowing, and where the sea floweth extraordinarily.
14. Wonderful things obserued in the sea.
15. The power of the Moone ouer Sea and land.
16. The power of the Sun: and the reason why the sea is salt.
17. Moreouer, as touching the nature of the Moone.
18. Where the sea is deepest.
19. Admirable obseruations in fresh waters, as well of fountaines as riuers.
20. Admirable things as touching fire and water ioyned together: also of Maltha.
21. Of Naphtha.
22. Of certaine places that burne continually.
23. Wonders of fire alone.
24. The dimension of the earth as well in length as in breadth.
25. The harmonick circuit and circumference of the world.

Plinies Naturall Historie

Forreine Authours cited.

Plato, Hipparchus, Timaeus, Sostigenes, Petosirus, Necepsus, the Pythagoreans, Posidonius, Anaximander, Epigenes, Gnomonius, Euclides, Ceranus the Philosopher, Eudoxus, Democritus, Crisodemus, Thraßillus, Serapion, Dicearchus, Archimedes, Onesicritus, Eratosthenes, Pytheas, Herodorus, Aristotle, Ctesius, Artemidorus the Ephesian, Isidorus Characenus, and Theopompus.

IN THE THIRD BOOKE ARE COMPREHENDED the Regions, Nations, Seas, Townes, Hauens, Mountains, Riuers, with their measures, and people, either at this day known, or in times past, as followeth:

Chap.

1. Of Europe.
2. The length and breadth of Boetia, a part of Spaine, containing Andalusia, and the realme of Grenado.
3. That hither part of Spaine called of the Romans Hispania Citerior.
4. The Prouince Nerbonensis, wherein is Dauphine, Languedoc, and Provançe.
5. Italie, Tiberis, Rome, and Campaine.
6. The Island Corsica.
7. Sardinia.
8. Sicilie.
9. Lipara.
10. Of Locri and the frontiers of Italie.
11. The second gulf of Europe.
12. The fourth region of Italie.

Chap.

13. The fifth region.
14. The sixth region.
15. The eighth region.
16. Of the riuer Po.
17. Of Italie beyond the Po, counted the eleuenth region.
18. Venice, the tenth region.
19. Of Ithria.
20. Of the Alps, and the nations there inhabiting.
21. Illyricum.
22. Liburnia.
23. Macedonie.
24. Noricum.
25. Pannonie, and Dalmatia.
26. Moesia.

In this book are described 26 Islands within the Adriatick and Ionian seas: their principall cities, townes and nations. Also the chiefe and famous riuers: the highest hills: speciall Islands besides: townes and countries that be perished. In summe, here are comprised notable things, histories, matters memorable, and obseruations to the number of 326.

Latine Writers brought in for testimonie:

Turannius Graculus, Cor. Nepos, T. Livius, Cato Censorius, M. Agrippa, M. Varro, Divus Augustus the Emperour, Varro Attacinus, Antias, Hyginus, L. Velus, Mela Pomponius, Curio the father, Calpurnius Aruntius, Sebosus, Licinius Mutianus, Fabricius Thufens, L. Atteius Capito, Verrinus Flaccus, L. Piso, C. Alianus, and Valerianus.

Forreine Authours.

Artemidorus, Alexander Polyhistor, Thucydides, Theophrastus, Isidorus, Theopompus, Metrodorus, Scepsius, Callistrates, Xenophon, Lampisatus, Diodorus Syracusanus, Nymphodorus, Calliphanes, and Timagenes.

IN THE FOVRTH BOOKE ARE COMPRISED Regions, Nations, Seas, Townes, Hills, Hauens, Riuers, with their dimensions and people, either now or in times past knowne: viz.

Chap.

1. Epirus.
2. Aetolia.
3. Locri.

Chap.

4. Peloponnesus.
5. Achaia.
6. Arcadia.

a 5

7. Greece;

The first Booke of

Chap.

7. Greece and Attica.
8. Theſſalie.
9. Magneſia.
10. Macedonia.
11. Thracia.
12. The Iſlands lying between thoſe countries: among which, Creta, Eubœa, the Cyclads, Sporades alſo the Iſles within Hellespont neare the ſea Pontus, within Mœotis, Dacia, Sarmatia, and Scythia.
13. The Iſlands of Pontus, called Mer Major.

Chap.

14. The Iſlands of Germanie.
15. Iſlands in the French Ocean.
16. Britaine and Ireland.
17. Gaule or France.
18. Of Galia Lugdunenſis.
19. Of Aquitaine.
20. Of high Spaine, named Citerior.
21. Of Portugall.
22. Iſlands in the Ocean.
23. The diſſenſion and meaſure of all Europe.

Herein are contained many principall townes and countries, famous riuers; Iſlands alſo, beſides cities or nations that be periſhed: in ſum, diuerſe things, hiſtories, and obſeruati- ons.

Latine Authours cited.

M. Varro, Cato Censorius, M. Agrippa, Diuus Auguſtus, Varro Atacinus, Cor. Nepos, Hyginus, L. Vetus, Pomponius Mela, Licinius Muſianus, Fabricius Thuſcus, Atticus Capito, and Aſteius Philologus.

Of forreine Writers.

Polybius, Hecataus, Hellanicus, Damastes, Eudoxus, Dicaarchus, Timotheus, Ephorus, Crater, Grammaticus, Serapion of Antioch, Callimachus, Artemidorus, Apollodorus, Agathocles, Eumachus Siculus the Muſitian, Alexander Polyhiſtor, Thucydides, Dociades, Anaximander, Philſtides, Mallores, Dionyſius, Ariſtides, Callidemus, Menachmus, Adasſthenes, Amielides, Heraclides, Philemon, Mene- phon, Pythias, Iſidorus, Philonides, Xenagoras, Aſtyonomus, Staphilus, Ariſtocritus, Metrodorus, Cleobulus, and Poſidonius.

IN THE FIFTH BOOKE ARE CONTAINED

Regions, Nations, Seas, Townes, Hills, Riuers, with their mea- ſures, and people, either at this day being, or in times paſt: that is to ſay,

Chap.

1. Mauritania.
2. The Prouince Tingitana.
3. Numidia.
4. Affricke.
5. Cyrene.
6. Lybia Maræotis.
7. Iſlands lying about Affricke, & ouer-againſt Affricke.
8. The Æthiopians.
9. Aſia.
10. Alexandria.
11. Arabia.
12. Syria, Palæſtina, Phœnice.
13. Idumæa, Syria, Palæſtina, Samaria.
14. Iudæa, Galilea.
15. Iordan the riuer.
16. The lake Asphaltites.
17. The Eſſenes.
18. The countrey Decapolis.

Chap.

19. Tyrus and Sidon.
20. The mount Libanus.
21. Syria Antiochena.
22. The mountaine Caſius.
23. Coele-Syria.
24. The riuer Euphrates.
25. The region Palmyra.
26. Hierapolis the countrey.
27. Cilicia and the nations adioyning: Pam- philia, Iſauria, Homonades, Piſidia, Lycæ- nia, the mountaine Taurus and Lycia.
28. The riuer Indus.
29. Laodicea, Apamia, Ionia, and Ephe- ſus.
30. Æolis, Troas Pergamus.
31. Iſlands affront Aſia, the Pamphilian Sea, Rhodus, Samus, and Chius.
32. Hellespont, Myſia, Phrygia, Galatia, Ni- cea, Bithynia, Boſphorus.

Herein

Plinies Naturall Hiſtory.

Herein you find townes and nations, Principall Riuers, Famous Hills, Iſlands, 117 Townes. Alſo that are loſt and periſhed. In ſumme, many things, hiſtories and obſeruati- ons memorabell.

Latine Authours alledged.

Agrippa, Suetonius Paulinus, Varro Atacinus, Cornelius Nepos, Hyginus, L. Vetus, Mela, Domitius Corbulo, Licinius Muſianus, Claudius Caſar, Aruntius, Livius the ſon, Sebeſus, the Acts and Records of the Triumphs.

Forreine Writers.

King Iuba, Hecataus, Hellanicus, Damastes, Dicaarchus, Bion, Timotheus, Philonides, Xenagoras, Aſtyonomus, Staphilus, Ariſtotele, Dionyſius Ariſtocritus, Ephorus, Eratoſthenes, Hipparchus, Panatius, Serapion Antiochenus, Callimachus, Agathocles, Polybius, Timæus the Mathematician, Herodotus, My- lus, Alexander Polyhiſtor, Metrodorus, Poſidonius who wrote Periplus or Periegeſis, Sotades, Perander, Ariſtarchus Sicyonius, Eudoxus, Antigenis, Callicratas, Xenophon Lampſacenus, Diodorus Sym- cuſanus, Hanno, Himilco, Nymphodorus, Calliphon, Artemidorus, Megasthenes, Iſidorus, Cleobulus, Ariſtocrcon.

IN THE SIXTH BOOKE ARE CONTAINED

Regions, Nations, Seas, Cities, Hauens, Riuers, with their dimen- ſions, People alſo that be or haue been, to wit:

Chap.

1. The ſea called Pontus Euxinus, beforetime Axenus.
2. The nations of the Paphlagonies and Cap- padocians.
3. Cappadocia.
4. The nations of the countrey Themifcyra.
5. The Region Colchica. The Achæi, and the reſt in that tract.
6. Boſphorus Cimmerius, and Mœotis.
7. The people about Mœotis.
8. The Armenia both.
9. Armenia the greater.
10. Albania, Iberia.
11. The Seluſes and gates Caucaſia.
12. Iſlands in Pontus.
13. Nations about the Scythian Ocean.
14. Media and the gates or ſtreights Caſpia.
15. Nations about the Hircane ſea.
16. Alſo other nations conſining vpon that Countrey.
17. People of Scythia.
18. The riuer Ganges.
19. The nations of India.

Chap.

20. The riuer Indus.
21. The Arians and the nations bordering vpon them.
22. The Iſland Taprobane.
23. Capifſene, Carmania.
24. The Perſian and Arabian gulſes.
25. The Iſland Caſſandrus, and kingdomes of the Parthians.
26. Media, Meſopotamia, Babylon, Seleu- cia.
27. The riuer Tigris.
28. Arabia Nomades, Nabathæi, Omani, Ty- los and Ogyris two Iſlands.
29. The gulſes of the red ſea, the Troglodite and Æthiopian ſeas.
30. Diuerſe nations of ſtrange and wonderfull ſhapes.
31. Iſlands of the Æthiopian ſea.
32. Of the fortunat Iſlands.
33. The diuiſion of the earth calculated by meaſures.
34. A diuiſion of the earth by climates, lines parallele, and equall ſhadowes.

Townes of name. 195. Nations of account. 566. Famous riuers. 180. Notable hills. 38. Principall Iſlands. 108. Cities and Nations periſhed. 195. In ſumme, there are rehearſed in this booke of other things, hiſtories and obſeruati- ons. 2214.

Latine Authours alledged.

M. Agrippa, Varro Atacinus, Cornelius Nepos, Hyginus, L. Vetus, Mela Pomponius, Domitius Corbulo, Licinius Muſianus, Claudius Caſar, Aruntius Sebeſus, Fabricius Thuſcus, T. Livius, Seneca, Nigidius.

Forreine

The first Booke of

Forreine writers.

King Inba, Polybius, Hecataus, Hellanicus, Damastes, Eudoxus, Dicaearchus, Beto, Timosthenes, Patrocles, Demodamas, Clearchus, Eratosthenes, Alexander Magnus, Ephorus, Hipparchus, Panatius, Callimachus, Artemidorus, Apollodorus, Agathocles, Polybius, Eumachus Siculus, Alexander Polyhistor, Ammonius, Metrodorus, Posidonius, Onesicritus, Nearchus, Megasthenes, Diogenes, Aristocreon, Bion, Diodorus, Simonides the younger, Basilides, and Xenophon Lampiscenus.

¶ IN THE SEVENTH BOOKE ARE CONTAINED the wonderfull shapes of men in diuerse countries.

Chap.

1. The strange formes of many nations.
2. Of the Scythians, and other people of diuerse countries.
3. Of monstrous and prodigious births.
4. The transmutation of one sex into another. Also of twins.
5. Of the generation of man. The time of a womans child-bearing, from seuen moneths to eleuen, proued by notable examples out of histories.
6. Of conceptions, and children within the wombe. The signes how to know whether a woman goe with a sonne or a daughter, before she is deliuered.
7. Of the conception and generation of man.
8. Of Agrippa, i. those who are borne with the feet forward.
9. Of strange births, namely, by meanes of incision, when children are cut out of their mothers wombe.
10. Of Vopisci, i. such as being twins were borne aliue, notwithstanding the one of them was dead before.
11. Histories of many children borne at one burden.
12. Examples of those that were like one to another.
13. The cause and manner of generation.
14. More of the same matter and argument.
15. Of womens monethly teares.
16. The manner of sundry births.
17. The proportion of the parts of mans body and notable things therein obserued.
18. Examples of extraordinary shapes.
19. Strange natures of men.
20. Of bodily strength and swiftnesse.
21. Of excellent sight.
22. Who excelled in hearing.
23. Examples of patience.
24. Who were singular for good memorie.
25. The praise of C. Iulius Caesar.

Chap.

26. The commendation of Pompey the Great.
27. The praise of Cato, the first of that name.
28. Of valour and fortitude.
29. Of notable wits, or the praises of some for their singular wit.
30. Of Plato, Ennius, Virgil, M. Varro, and M. Cicero.
31. Of such as carried a maiestie in their behaviour.
32. Of men of great authority and reputation.
33. Of certaine diuine and heauenly persons.
34. Of Scipio Nasica.
35. Of Chastitie.
36. Of Pietie, and naturall kindnesse.
37. Of excellent men in diuerse sciences, and namely, in Astrologie, Grammer, and Geometrie, &c.
38. Item, Rare peeces of worke made by sundry artificers.
39. Of seruants and slaues.
40. The excellencie of diuerse nations.
41. Of perfect contentment and felicitie.
42. Examples of the varietie and mutabilitie of fortune.
43. Of those that were twice outlawed and banished: of L. Sylla and Q. Metellus.
44. Of another Metellus.
45. Of the Emperour Augustus.
46. Of men deemed most happy about all others by the Oracles of the gods.
47. Who was canonized a god whilke hee liued vpon the earth.
48. Of those that liued longer than others.
49. Of diuerse natiuities of men.
50. Many examples of strange accidents in maladies.
51. Of the signes of death.
52. Of those that reuiued when they were carried forth to be buried.
53. Of suddaine death.
54. Of sepulchres and burials.

55. Of

Plinies Naturall Historie.

Chap.

55. Of the foule: of ghosts and spirits.
56. The first inuentors of many things.
57. Wherein all nations first agreed.

Chap.

58. Of antique letters.
59. The beginning of Barbers first at Rome.
60. The first deuifiers of Dials and Clockes.

In summe, there be in this booke of stories strange accidents and matters memorable 747.

Lazine Authors alledged.

Varrius, Flaccus, Cn. Gellius, Licinius Mutianus, Mutius, Massurius, Agrippina wife of Claudius, M. Cicero, Asinius Pollio, Messala, Rufus, Cornelius Nepos, Virgil, Livie, Cordus, Melissus, Sebosus, Cernelius Celsus, Maximus Valerius Trogus, Nigidius Figulus, Pomponius Atticus, Pedianus, Asconius, Sabinus, Cato Censorius, Fabius Vestalis.

Forreine Writers.

Herodotus, Aristus, Beto, Isgonus, Crates, Agatharcides, Calliphantes, Aristotle, Nymphodorus, Apollonides, Philarchus, Damon, Megasthenes, Cresias, Tauron, Eudoxus, Onesicritus, Clearchus, Duris, Artemidorus, Hippocrates the Physitian, Asclepiades the Physitian, Hesiodus, Anacreon, Theopompus, Hellanicus, Damasthes, Ephorus, Epigenes, Berosus, Pefiris, Ncepsus, Alexander Polyhistor, Xenophon, Callimachus, Democritus, Duilius, Polyhistor the Historian, Strato, who wrate against the Propositions, and Theoremes of Ephorus, Heraclides Ponticus, Asclepiades who wrate Tragodamena, Philostephanus, Hegesias, Archimachus, Thucydides, Mnesigiton, Xenagoras, Metrodorus Scepsus, Anticlidus, and Critodemus.

¶ IN THE EIGHT BOOKE ARE CONTAINED the natures of land beafts that goe on foot.

Chap.

1. Of land creatures: The good and commendable parts in Elephants: their capacitie and vnderstanding.
2. When Elephants were first yoked and put to draw.
3. The docilitie of Elephants, and their aptnesse to learne.
4. The clemency of Elephants: that they know their owne dangers. Also of the felnesse of the Tigre.
5. The perceiuaunce and memory of Elephants.
6. When Elephants were first seene in Italie.
7. The combats performed by Elephants.
8. The manner of taking Elephants.
9. The manner how Elephants be tamed.
10. How long an Elephant goeth with young: and of their nature.
11. The countries where Elephants breed: the discord and warre betweene Elephants and Dragons.
12. The industrie and subtrill wit of Dragons and Elephants.
13. Of Dragons.
14. Serpents of prodigious bignesse: of Serpents named Boæ.
15. Of beafts engendred in Scythia, and the

Chap.

- North countries.
16. Of Lions.
17. Of Panthers.
18. The nature of the Tygre: of Camels and the Pard-Cammell: when it was first seene at Rome.
19. Of the Stag-Wolfe named Chaus: and the Cephus.
20. Of Rhinoceros.
21. Of Onces, Marmosets called Sphinges, of the Crocutes, of common Marmosets, of Indian Boeufes, of Leucrocutes, of Eale, of the Æthiopian Bulls, of the best Manticora, of the Sicorne or Vnicorne, of the Catoblepa, and the Basiliske.
22. Of Wolues.
23. Of Serpents.
24. Of the rat of India called Ichneumon.
25. Of the Crocodiles and Skinke, and the Riuier-horse.
26. Who shewed first at Rome the Water-horse and the Crocodiles. Diuerse reasons in Physicke found out by dumb creatures.
27. Of beafts and other such creatures which haue taught vs certaine herbes, to wit, the red Deere, Lizards, Swallowes, Tortoises, the

The first Booke of

- Chap.*
 the Weasell, the Stork, the Bore, the Snake,
 the Panther, the Elephant, Beares, Stocke-
 Doves, House-Doves, Cranes, and Ra-
 uens.
 28. Prognostications of things to come, taken
 from beasts.
 29. What cities and nations haue bin destroy-
 ed by small creatures.
 30. Of the Hiæna, the Crocuta and Manti-
 chora: of Bieuers and Otters.
 31. Of Frogs, sea or sea-Calues, and Stelli-
 ons.
 32. Of Deere both red and Fallow.
 33. Of the Tragelaphis: of the Chamæleon,
 and other beasts that change colour.
 34. Of the Tarand, the Lycæon, and the Wolfe
 called Thoës.
 35. Of the Porc-espines.
 36. Of Beares, and how they bring forth their
 whelpes.
 37. The rats and mice of Pontus, and the Alps:
 also of Hedgehogs.
 38. Of the Leontophones, the Onces, Graies,

- Chap.*
 Badgers and Squirrels;
 39. Of Vipers, Snailles in shels, and Lizards.
 40. Of Dogs.
 41. Against the biting of a mad dog.
 42. The nature of Horses.
 43. Of Asses.
 44. Of Mules.
 45. Of Kine, Bulls, and Oxen.
 46. Of the Bœufe named Apis.
 47. The nature of sheepe, their breeding and
 generation.
 48. Sundry kinds of wooll and cloths.
 49. Of sheepe called Musmones.
 50. Of Goats and their generation.
 51. Of Swine and their nature.
 52. Of Parkes and Warrens for beasts.
 53. Of beasts halfe tame and wild.
 54. Of Apes and Monkeys.
 55. Of Hares and Connies.
 56. Of beasts halfe sauage.
 57. Of Rats and Mice: of Dormice.
 58. Of beasts that liue not in some places.
 59. Of beasts hurtfull to strangers.

In summe, there be in this Booke principall matters, stories, and obseruations worth the re-
 membrance 788.

Latine Authors alledged.

Mutianus, Procilius, Verrius Flaccus, L. Piso, Cornelius Valerianus, Cato Censorius, Fenestella, Trogus,
 Aëtius, Columella, Virgil, Varro, Lu. Metellus Scipio, Cornelius Celsus, Nigidius, Trebius Niger, Pompo-
 nius Mela, Manlius Sura.

Forreine writers.

King Inba, Polybius, Onesicritus, Isidorus, Antipater, Aristotle, Demetrius the naturall Philoso-
 pher, Democritus, Theophrastus, Euanthes, Agrippa who wrote of the Olympionica, Hiero, King Atta-
 lus, King Philometer, Ctesias, Durius, Philistus, Archytus, Philarchus, Amphilocus the Athenian,
 Anaxipolis the Thasian, Apollodorus of Lemnos, Aristophanes the Milesian, Antigonus, the Cymæan,
 Agathocles of Chyos, Apollonius of Pergamus, Aristander of Athens, Bacchus the Milesian, Bion
 of Soli, Chæreas the Athenian, Diodorus of Pyreæum, Dio the Colophonian, Epigenes of Rhodes,
 Evagor of Thassus, Euphranius, the Athenian, Hegesias, of Maronea, Menander of Pyreæum, Me-
 nander also of Heraclea, Menecrates the Poet, Androcion who wrote of Agriculture or Husbandry,
 Eschiron who likewise wrote of that argument, Dionysius who translated Mago, Diophanes who
 collected an Epitome or Breuiarie out of Dionysius, King Archelaus, and Nicander.

IN THE NINTH BOOKE ARE CONTAI-
 ned the Stories and Natures of Fishes
 and water-creatures.

- Chap.*
 1. The nature of water-creatures.
 2. The reason why the creatures of the sea are
 of all other biggest.
 3. The monstrous beasts of the Indian sea.

- Chap.*
 4. The greatest fishes and beasts in euery part
 of the Ocean.
 5. Of Tritones, Nereides, and sea Elephants:
 their shapes and formes;

6. Of

Plinies Naturall Historie.

- Chap.*
 6. Of great Whales, called Balæna and Or-
 ca.
 7. Whether fishes doe take and deliuer their
 breath: whether they sleepe or no?
 8. Of Dolphins and their wonderfull proper-
 ties.
 9. Of the Turfiones.
 10. Of the sea Tortoises, and how they bee ta-
 ken.
 11. Who first deuised to slue the Tortoise
 shels into leaues.
 12. The skins and shels of the sea creatures:
 the diuision of them into their feuerall
 kinds.
 13. Of the Seale or sea-Calf.
 14. Of fishes smooth and without haire: how
 they spawn and breed: and how many sorts
 there be of them.
 15. The names and natures of many fishes.
 16. The prefaces by fishes, and their variety.
 17. Of the Mullet and other fishes. That the
 same fishes are not in request in all places.
 18. Of the Barble, the sea Rauē Coracinus: of
 Stock fish and Salmon.
 19. Of the Exæcetus, Calamaris, Lampreies,
 &c.
 20. The diuision of fishes by the shapes of
 their bodies.
 21. Of Eeles.
 22. The manner of taking them in the lake Be-
 nacus.
 23. The nature of the Lamprey.
 24. Of flat and broad fishes.
 25. Of the stay-ship Echeneis, and his wonder-
 full nature.
 26. The changeable nature of fishes.
 27. Of the fish called the Lanterne, and the sea
 Dragon.
 28. Of fishes wanting blood.
 29. Of the Pourcuttle, the Cuttle fish, the Ca-
 lamarie, and the fish called the Sayler or
 Mariner.
 30. The fish Ozæna, and Nauplius: also of
 Lobsters.
 31. Of Crabs, Sea Porke spines: and of the grea-
 ter sort named Echinometra.
 32. Of Wilkes, Cockles, and shell fishes.
 33. Of Scallops, Porcellanes, of the shell fish
 Murex, and other such.
 34. The riches and treasures of the sea.

- Chap.*
 35. Of Pearles, how they be engendred, and
 where: also how they be found.
 36. The nature of the Purple fish and the Bur-
 rets or Murices.
 37. How many kinds there be of purple fishes.
 38. How the purple fishes be taken.
 39. When purple was first worne in the city of
 Rome.
 40. The price of purple clothes at Rome.
 41. The dying of the Amethyst colour, of the
 Skarlet in grain, and the light Skarlet Hyf-
 ginus.
 42. Of the fish called the Nacre, and his guide
 or keeper Pinnoteris: also the intelligence
 of fishes and water creatures.
 43. Of Scolopendres, sea Foxes, and the fishes
 Glani.
 44. Of the fish called the sea Ram.
 45. Of those things which haue a third na-
 ture, beeing neither liuing creatures, ne-
 yet plants, to wit, of sea Nettles and Spun-
 ges.
 46. Of Hound fishes or sea dogs.
 47. Of sea fishes that haue stony shels: of those
 that haue no fence at all: of other nastie and
 filthie creatures.
 48. Of sea fishes venomous.
 49. The diseases incident to fishes.
 50. The admirall generation of Fishes.
 51. *Item*, Another discourse of their generati-
 on; and what fishes they bee which doe lay
 egges.
 52. The matrices or wombes of fishes.
 53. What fishes liue longest.
 54. Of Oyfter pits, and who did first deuise
 them.
 55. Who first inuented stewes and ponds to
 feed Lampreies in.
 56. The stewes and ponds for other shell Fi-
 shes, and who brought them vp first to be
 vsed.
 57. Of fishes that haunt the land.
 58. The rats of Nilus.
 59. Of the fish called Anthias, and how hee is
 taken.
 60. Of the sea starres.
 61. Of the fishes Da&tyli, and their admirable
 properties.
 62. What fishes do entertaine amitie one with
 another, and which be euer at warre.

In summe, this Booke containeth stories, notable things, and obseruations, to the number of
 650, collected

Out of

The first Booke of

Out of Latine Authors.

Turanus Gracula, Trognus, Mecenas, Alfius Flavus, Cornelius Nepos, Laberius, the writer of merry Epigrams, Fabianus, Feneftella, Mutianus, Alium Stilo, Statius Sebofus, Meliffus, Seneca, Cicero, Macer Amylius, Meffana Corvinius, Trebins Niger, and Nigidius.

Out of Forreine Writers.

Aristotle, king Archelaus, Callimachus, Democritus, Theophrastus, Thraffylus, Hegesidemus, of Cythnos, and Alexander Polybiftor.

¶ IN THE TENTH BOOKE ARE CONTAINED the natures and ftories of Foules and flying creatures.

Chap.

1. The nature of Foules.
2. Of the Phoenix.
3. Of Egles.
4. When the Romane legions vfed the Egles standard, and other enfignes. Also with what creatures Egles maintaine fight.
5. A strange and wonderfull cafe as touching an Egles.
6. Of the Vultures or Geires.
7. Of the foule Sangualis.
8. Of Faulcons and Hawkes.
9. Of the Cuckow, which is killed by birds of her owne kind.
10. Of Kites or Puttockes.
11. A diuifion of birds into generall kinds.
12. Of unluckie and ominous birds, the Crow, the Raven, and the Like-owle.
13. Of the foule that carieth fire in her mouth.
14. Of the bird Clivina.
15. Of many birds vnknowne.
16. Of foules that flie by night.
17. Of Howlets.
18. Of the Wood-pecker.
19. Of birds which haue clawes and crooked tallons.
20. Of Peacockes: and who killed them first for to be ferued at the table.
21. Of Cockes: how they be cut: of a dunghill cocke that fpake.
22. Of Geese: who first deuifed to make a daintie difh of the Goofe liuer: the graue or fat of Geefe, called Comagenum.
23. Of Cranes, Storkes, Swans, strange foules of outlandifh countries, of Quailles, and the bird Glotis.
24. Of Swallowes and Martins, of Blackbirds, Thrufhes and Merles, of Sterlings, Turtle-doues, and Quoifts or Ring-doues.
25. Of birds that tarie with vs all the yere long

Chap.

- of birds that be for halfe a yere onely, and others that remaine but three moneths.
26. Marvellous ftories of birds.
 27. Of birds called Seleucides.
 28. Of the foule Ibis.
 29. What birds will not abide in all places: which they be that change both hew and voice: alfo of Nightingales.
 30. Of Merles or Oufels.
 31. The time wherein birds breed, lay, and fit.
 32. Of the birds Halciones, the nauigable daies that they doe fheue: of the Sea-gulls and Cormorants.
 33. The induftry and subtilty of birds in building their nefts: of the ordinary Swallow, the riuier Swallow Argatilis: the bird Cinnamonologie that fteale Cinnamon, and of Partridges.
 34. Of Houfe-doues.
 35. Of Stock-doues.
 36. Of Sparrowes.
 37. Of the Kestrell or Stannell.
 38. Of the flight and gate of birds.
 39. Of certaine footleffe Martinets, called Apodes.
 40. Of certain Gulls that milk and fuck Goats vdders, and be named Caprimulgi: alfo of Pelicanes named Plateæ.
 41. The perceiuance and naturall wit of birds.
 42. Of the Linner, Popinjay, or Parret, and fuch birds that will learne to fpake.
 43. The intelligence and vnderftanding that Rauens haue.
 44. Of Diomedes his birds.
 45. Of dull witted birds that will be taught nothing.
 46. The manner how birds drinke.
 47. Of foules called Himantipodes, and Onacrotali, and of other fuch strange birds.

48. The

Plinies Naturall Hiftory.

Chap.

48. The names of many birds, & their natures.
49. Of ftrange and new birds, fuch alfo as bee holden for fabulouſ.
50. Who deuifed firſt to cram hens & capons, of bartons, mewes, and coupes to keepe and feed foules: and the firſt inuentor thereof.
51. Of *Aſſopes* platter.
52. The generation of birds, and what four-footed beaſts do lay eggs as well as birds.
53. The knitting of eggs within the body, the laying, couuing and fitting of them, the maner and time of birds engendering.
54. The accidents that befall to broodie birds whiles they fit, and the remedies thereof.
55. Auguries and preſages by egges.
56. What Hens be of the beſt kind.
57. The diſeaſes incident to Hens & the cure.
58. The maner how birds conceiue: what number of eggs they lay, & how many they hatch
59. Of Peacockes and Geefe.
60. Of Herons and Bitters. The way to preſerue and keepe egges.
61. The only bird that bringeth forth her yong aliue, & feeds the ſame at the pap with milk

Chap.

62. The conception of the Viper, and how ſhe is deliuered of her young, alſo, what land creatures lay egges.
63. The ordinary generation of land creatures.
64. The diuerſitie of liuing creatures in the maner of their engendering.
65. The yong ones that mice and rats do breed
66. Whether of the marrow of a mans backe bone a ſerpent will engender.
67. Of the Salamander.
68. What things bee engendered of thoſe that were neuer engendered, and contrariwiſe, what creatures they be, which being engendered themſelues, breed not.
69. The fences of liuing creatures.
70. That fiſhes doe both heare and ſmell.
71. That the ſence of feeling is common to all liuing creatures.
72. What creatures liue of poyſons, and eat earth.
73. Of the meat and drink of diuers creatures.
74. What creatures evermore diſagree: and which they be that agree well together.
75. Of the ſleepe of liuing creatures.

This booke hath in it of notable matters, hiftories and obſeruations 904, gathered out of

Latine Authors and records.

Manilius, Cornelius Valerianus, the publike records and registers, Vmbritius ſurnamed Melior, Maſſurius Sabinus, Antiſtius Labeo, Trognus Cremutius, M. Varro, Macer Amylius, Meliſſes, Mutianus, Nepos, Fabius Piclor, T. Lucretius, Cornelius Celſus, Horatius, Deſulo, Hyſſignus, Sarſenna, both father and ſonne, Nigidius and Manlius Sura.

Forreine Writers.

Homer, Phamones, Philemon, Boethius who wrote a treatiſe called Ornithagonia, Hylas who made a diſcourſe of Auguries, Aristotle, Theophrastus, Callimachus, Aſchylus, Hiero, Philometor, Archytas, Amphilocheus the Athenian, Anaxipolis the Thafian, Apollodorus of Lemnos, Ariſtophanes the Mileſian, Antigonus the Cymæan, Agathocles of Chios, Apollonius of Pergamus, Ariſtander the Athenian, Bacchius the Mileſian, Bion of Soli, Chereas the Athenian, Diodorus of Pryæne, Dion the Colophonian, Democritus, Diophanes of Nicæa, Epigenes of Rhodes, Evagoras of Thafos, Euphoniſ of Athens, king Iuba, Androcion who wrote of Huſbandrie, and Aſcrion likewiſe who wrote thereof, Dionyſius who tranſlated Mago, and Diophanes, who reduced his worke into an Epitome, Nicander, Oneſicritus, Philarchus, and Heſiodus.

¶ IN THE ELEVENTH BOOKE ARE CONTAINED the ſtories and natures of ſmall creatures and ſuch as creepe on the ground.

Chap.

1. Of Inſects in generall.
2. The naturall induſtrie of thoſe Inſects.
3. Whether Inſects doe breath, and whether they haue bloudor no.

Chap.

4. The matter & ſubſtance of the Inſects body.
5. Of Bees.
6. The government and order which Bees keep by inſtinct of Nature.

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7. Diuers

The first Booke of

Chap.

7. Diuers operations of the Bees, & the tearmes thereto belonging.
8. Of what floures Bees do make their cellars, combs, and other workes.
9. What persons tooke a great loue to Bees, and delighted to nourish them.
10. The manner of Bees when they be at their businesse.
11. Of Drones.
12. The nature of Honey.
13. Which is the best Honey.
14. The seuerall and particular kinds of Hony in diuerse places.
15. The markes and tokens of good Honey.
16. Of a third kind of Honey, and how a man should know good Bees.
17. The regiment and policie that Bees obserue.
18. Diuerse sorts of Bees, and what things be hurtfull to Bees.
19. The diseases incident to Bees.
20. How to keepe the cast of Bees when they swarme, that they flie not away, also how to recover Bees, in case their breed and race be lost.
21. Of Wespes and Hornets.
22. Of silke flies, their wormes and Iackes called Bombylis and Necydalus, and who first deuised silke-cloth.
23. Of the silke-worme in the Island Choos.
24. Of the Spiders and their generation.
25. Of Scorpions.
26. Of Stellions and Grashoppers.
27. In what countries there bee no Grashoppers, and where they sing not.
28. The wings of Insects, of Beetles and their kinds.
29. Of Locusts.
30. Of Ants or Pismires in Italie.
31. Of Indian Ants or Emmets.
32. The diuerse sorts of Insects.
33. Of certaine creatures breeding of wood, and liuing of wood.

Chap.

34. Of a certain creature that hath no passage to void excrements.
35. Of Moths and Gnats.
36. Of flies liuing in the fire, named Pyrales or Pyrausta.
37. A discourse Anatomical of all parts and members of the bodie.
38. Of Blood, also in what creatures blood will soonest clutter and congeale, and whose will not at all. What creatures haue the grossest and heauiest blood, and which the finest and thinnest: and lastly who haue no blood at all.
39. Whether the soveraignetic, and excellencie of sence consisteth in blood. Of the skin and hide, of the haire and dugs of liuing creatures.
40. What creatures haue notable dugs or teats aboue the rest.
41. Of Milke, and what milke will make no cheefe.
42. Diuerse kinds of Cheefe.
43. How the lims and members of mans body differeth from other creatures.
44. The resemblance that Apes haue to vs.
45. Of Nails.
46. Of Houfes.
47. Of birds feet and their clawes.
48. Of Insects feet from two to an hundred.
49. Of Dwarfes in each kind, and the genitall parts.
50. Of Tails.
51. Of Voices.
52. Of superfluous members of the bodie. The sayings of Aristotle as touching long life.
53. Of the wind & breath that liuing creatures take. What things if they be tasted be venomous and deadly. The food of man, as well for meat as drinke. What causes they be that hinder digestion.
54. How to encrease or diminish the corpulencie of the bodie, and what things with fast onely, will allay hunger and quench thirst.

In summe, this Booke containeth notable things, stories, and obseruations, 2270.

Latine Authours cited.

M. Varro, Hyginus, Scrophia, Sarcena, Celsus Cornelius, Emilius Macer, Virgil, Columella, Iulius Aquila, who wrote of the Tuscan discipline, Tarquilius, who likewise wrote of the same, and Vmbritius that trauelled in that argument, Cato Censorius, Domitius Caluinus, Troguus, Melissus, Fabianus, Mutianus, Nigidius, Manilius, and Opus.

Forreine Writers.

*Aristotle, Democritus, Neoptolemus, who wrote * Militurgia, Aristomachus, who likewise made a Treatise*

* As touching the work of Bees.

Plinies Naturall Historie

Treatise of the same, and Philistus also that did the like, Nicander, Menecrates, Diomysius, that translated Mago, Empedocles, Callimachus, K. Attalus, Apollodorus, who wrote of venomous beasts, Hippocrates, Eriphilus, Erasistratus, Asclepius, Themiso, Posidonius the Stoicke, the two Menanders, one of Priene, and the other of Heraclea, Euphronius of Athens, Theophrastus, Hesiodus, and K. Philometor.

IN THE TWELFTH BOOKE ARE CONTAINED discourses of Trees

Chap.

1. The honor done to trees, of the Plane-trees: when they were first brought into Italy, and of their nature.
2. Of the dwarfe Planes growing low, and who was the first that cut and shred trees into arbours.
3. Of strange trees, and principally of the Citron tree in Assyria.
4. Of India trees, and when Ebene was first seen at Rome.
5. Of a certaine Thorn and Fig-tree of India.
6. Of a tree named Pala: also of other Indian trees that are namelesse, and of those that beare wooll and cotton.
7. Of Pepper trees and Clove trees, and many others.
8. Of Macir or Sugar, and the trees growing in the region Ariana.
9. Of Bdellium, and of trees along the Persian gulfe.
10. Of trees growing in the Island within the Persian gulfe, and those that beare Cotton.
11. Of Gossampine trees, and those which serue to make cloth, and wherein consisteth the fruit of certaine trees.
12. Of Costus, Spiknard, & diuers sorts of Nard
13. Of Asarabacca, Amomum, Amonius, and Cardamomum.

Chap.

14. Of Frankincense, & trees that yeeld Incense
15. Of Myrrhe and Myrrhe trees.
16. Of sundry sorts of Myrrh, the nature thereof, and the price.
17. Of Masticke, Ladanum, and Bruta, of Enhamum, Strobos, and Styra.
18. Of the felicity and happinesse of Arabia.
19. Of Cinnamon, and the wood thereof called Xylocinnamum, and of Casia.
20. Of Ilocinnamon or Canel, of Caucamum and Tarum.
21. Of Serichatum, Gabalium, and Ben, otherwise called Myrobalanus.
22. Of Dates called Phoenicobalanus, & sweet Calamus.
23. Of Ammoniacum, and the sweet Mosse called Sphagdu, or Vinea.
24. Of Cyprus, Aspalathus and Marum.
25. Of Baulme, as well the liquor called Opobalsamum, as the wood Xylobalsamum, of Storax and Galbanum.
26. Of Panace, Spondylium, and Malobathrum or Folium Indicum.
27. Of the oile of green Oliues called Omphacium, and of Verjuice.
28. Of Bryon, and the wild Vine Oenanthe, of the Firre Elate, of Cinnamon, and the oyle of Nuts called Caryopus.

In summe, this booke containeth in it of notable matters, histories, and obseruations, 974.

Latine Authours alledged.

M. Varro, Mutianus, Virgil, Fabian, Sebosus, Pomponius Mela, Flavius Proculus, Troguus, Hyginus, Claudius Caesar, Cornelius Nepos, Sextius Niger, who wrote in Greeke of Physicke, Cassius Hemina, L. Piso, Tudianus, and Antias.

Forreine Writers.

Theophrastus, Herodotus, Callisthenes, Isidorus, Clitarchus, Anaximenes, Diaris, Nearchus, Onesicritus, Polycritus, Olympiodorus, Diognetus, Nicobulus, Anticlidus, Charax of Mitylene, Menecmus, Dorotheus, Xenias the Athenian, Lycus, Antaus, Ephippus, Chareas, Democles, Ptolomeus, Lagus, Marsyas the Macedonian, Zoilus likewise of Macedonie, Democritus, Amphilocus, Aristomachus, Alexander Polyhistor, king Iuba, Apollodorus the authour of the treatise concerning sweet odours, Heraclides the Physitian, Archidemus likewise the Physitian, Dionysius, Democles, Euphron, Obseudes, Diagoras, Iolka (all six Physitians) Heraclides of Tarentum, Xenocritus of Ephesus, and Eratosthenes.

The first Booke of

¶ IN THE THIRTEENTH BOOKE ARE CONTAINED Treatises of Ointments and of Trees
by the sea side.

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| <p><i>Chap.</i>
1. Of sweet ointments & perfumes: when they came to bee first knowne at Rome, and of their composition.
2. What ointment was that which they called Roiall: which bee Diapasmate or drie perfumes, and how they be kept.
3. The ryorous and superfluous expences that the Romanes were at for such ointments: and when they were first taken vp and vsed in Rome.
4. Of Palmes or Date trees, their nature and sundry sorts.
5. The trees of Syria.
6. Of the Terebinth tree.
7. Of the Egyptian Figtree or Sycomore, and that of Cypresse.
8. Of the fruit which is called Ceraunia Siliqua.
9. Of the Peach-tree or Persica of Egypt: and the Egyptian Thorn, whereof commeth Acacia.
10. Of the Plum tree and others about Memphis.
11. Sundry sorts of gums, and of the Papyr reed.
12. Diuers kinds of Paper, how Paper is made,</p> | <p><i>Chap.</i>
the triall of good Paper, the faults of Paper, and the paste that goeth to the making of Paper.
13. The bookes of king Numa.
14. The tree of Æthyopia.
15. The trees of Atlas, Citron trees, what points are commendable or otherwise faultie therein.
16. Of the tree Thya.
17. Of the tree Lotus.
18. Of the body and roots of Lotus.
19. Of Patyurus, of the Pomgranat, and the floure of the Pomgranat.
20. Of plants and shrubs in Asia and Greece.
21. Of Thymelæa, Chamelæa, Tragacanth, Tragium or Scorpio, of Tamariske, Brya, and Galla.
22. Of Euonymus or Spyndle tree, of Adrachne Congygria, and Thapfia.
23. Of Capparis or Cynosbatos, or Opheostaphyle, and of Sari.
24. Of the royall thorne of Babylon, and Cytisus or tree Trifolie.
25. Of shrubs and trees growing vpon our Mediterranean seas, the red sea and the Indian sea.</p> |
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In summe, there be comprised in this booke of notable things, stories, and obseruations, foure hundred fiftie and eight.

Latine Authours cited.

Marcus Varro, Mutianus, Virgil, Fabianus, Sebosus, Pomponius Mela, Flavius Proculus, Troguus, Hyginus, Clandius Caesar, Cornelius Nepos, Sextius Niger, who wrote in Greeke of Physicke, Cassius Hemina, L. Piso, Tudianus, and Antias.

Forreine Writers.

Theophrastus, Herodotus, Callisthenes, Isidorus, Clitarchus, Anaximenes, Duris, Nearchus, Onesicritus, Policritus, Olympiodorus, Diognetus, Cleobulus, Anticlidus, Charax the Mitylenæan, Menæchmus, Dorotheus, Xenias the Athenian, Lycus, Antaus, Ephippus, Dio, Adimantus, Ptolomæus Lagus, Marfyas and Zoilus, both Macedonians, Democritus, Amphilocheus, Alexander Polyhistor, Aristomachus, king Iuba, Apollodorus who wrote of Odours, Heraclides the Physician, Botrys, Archidemus, Dionysius, Democlidus, Euphron, Mnesicles, Diagoras and Iolla Physicians all, Heraclides of Tarentum, and Xenocritus the Ephesian.

¶ IN

Plinies Naturall Historie

¶ IN THE FOVRTEENTH BOOKE ARE contained Treatises of Vine-trees and Vine-yards.

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| <p><i>Chap.</i>
1. Of Vines and their nature, the manner how they beare grapes.
2. Sundry kinds of Vines in generall.
3. More kinds of Vines according to the properties of countries where they grow.
4. Notable considerations as touching the planting and ordering of Vines.
5. The nature of wine.
6. The best and most kindly wines.
7. Vines outlandish and beyond sea.
8. Of the wine called Bizion, seuen kinds thereof.
9. Of sweet wines fourteene sorts.
10. Of second wines or household wines.
11. What good wines began of late to bee in request at Rome.
12. Obseruations of wine, set downe by king Romulus.</p> | <p><i>Chap.</i>
13. The ancient vsage of wine, and the wines of old time.
14. Of cellars for wine, and the wine Optimianum.
15. Cæsars liberalitie in wine, and when first there were foure sorts of wine set downe.
16. Of artificiall or set wines.
17. Of Hydromell and Oxymell.
18. Prodigious and strange kinds of wine.
19. What wines might not be vsed in sacrifices, and with what sorts new wines are sophisticated.
20. Sundry sorts of Pitch and Rosin: of the manner of sophisticating new wines: of vinegre and wine lees.
21. Of wine cellars.
22. Of auoiding drunkenesse.</p> |
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In summe, it containeth notable matters, histories and obseruations 510, gathered out of

Latine Authours.

Cornelius Valerius, Virgil, Celsus, Cato Censorius, Sarsennas both father and sonne, Scropha, Varro, Decimus Syllanus, Fabius Piccor, Troguus Hyginus, Flaccus Verrinus, Gracinus Iulius, Accius, Columella, Massurius Sabinus, Fenestella, Terigilla, M. Atilius Plautus, Fabius, Dorsemnus, Scævola, Atilius, Ateius Capito, Cotta Messalinus, L. Piso, Pompeius Lenaxus, Fabianus, Sextius Niger, and Vibius Rufus.

Forreine Authours.

Hesiodus, Theophrastus, Aristotle, Democritus, king Attalus, K. Philometer, Architas, Xenophon, Amphilocheus the Athenian, Anaxipolis the Thasian, Apollodorus the Lemnian, Aristophanes the Milesian, Antigonus the Cymæan, Agathocles the Chian, Apollonius of Pergamus, Aristander of Athens and likewise Batrys the Athenian, Bacchius the Milesian, Bion of Soli, Chereas the Athenian, and Cheristus likewise of Athens, Diodorus of Priene, Dio the Colophonian, Epigenes the Rhodian, Euagoras the Thasian, Euphron of Athens, Androcion, Æscron and Lysimachus, who wrote al three of Agriculture, Dionysius who translated Mago, Diophanes who brought Dionysius into an Epitome, Asclepiades the Physitian, Onesicritus and king Iuba.

¶ THE FIFTEENTH BOOKE TREATETH OF the nature of Trees fruitfull, and planted in Hort-yards.

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| <p><i>Chap.</i>
1. The nature of fruitfull trees.
2. Of the oyle of Olives.
3. The nature of the Olive & yong Olive trees.
4. The nature of the oyle Olive.
5. The manner of husbanding Olive rowes.
6. How to keepe Olives and make oyle thereof.</p> | <p><i>Chap.</i>
7. Of artificiall oile.
8. Of the dregs or Oliue cake, being pressed.
9. Of fruits of trees good to eat, their seuerall kinds and natures.
10. Of Pine nuts foure kinds.
11. Of the Quince.</p> |
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12. Of

The first Booke of

Chap.

12. Of Peaches foure sorts.
13. Of Plums eleuen kindes.
14. Sundry kindes of Apples, and namely, nine and twentie sorts.
15. Of Peares and Wardens: of fundrie strange deuises to graffe trees.
16. Of preferring and keeping Apples & such like fruits.
17. The manner how to keepe Quinces, Pomgranats, Peares, Wardens, Soruifes, and Grapes.
18. Of Figs nine and twentie sorts.
19. Of the wild Figtree: of caprification or the manner how to bring Figs to maturitie by the meanes of certaine flies.
20. Of Medlars, and three sorts of them.

Chap.

21. Foure kinds of Soruifes.
22. Of the Walnut.
23. Of Chestnuts eight kinds.
24. Of Charobs called Silique, of Apples, of Mulberies, of Graines, Pippins and Kernils within the fruits, also of berries.
25. Of Cherries eight sorts:
26. Of the Corneill fruit, and Lentisk.
27. Sundry sorts of juices, and odours.
28. Of the juices in fruits and trees: of colors, smells, and the natures of diuerse fruits, also the singularities and commendations of them.
29. Of the Myrtle eleuen kinds thereof.
30. Of the Lawrell or Bay-tree, thirteene sorts of it.

In summe, there be comprised in this booke of notable matters, stories, and obseruations 520, collected out of

Latine Authours.

Festus, Fabianus, Virgill, Cornelius, Valerianus, Celsus, Cato Censorius, Sarsenna (both father and sonne) *Scropha, Mar. Varro, D. Syllanus, Fabius Pictor, Trogus, Hyginus, Flaccus Verrinus, Gracinus, Atticus, Iulius Sabinus, Terilla, Cotta Messalinus, Columella, L. Piso, Pompeius Lenaxus, M. Accius Plantius, Fabius Dorstenus, Scaenola, Aelius, Ateius Capito, Sextus Niger, and Vibius Rufus.*

Forreine writers.

Hesiodus, Aristotle, Democritus, king Hiero, Architas, king Philometor, king Attalus, Xenophon, Amphilocheus the Athenian, *Anaxipolis* the Thasian, *Apollodorus* of Lemnos, *Aristophanes* the Milesian, *Antigonus* the Cymæan, *Agathocles* of Chios, *Apollodorus* of Pergamus, *Aristander* the Athenian, *Bacchus* the Milesian, *Bion* of Soli, *Chereas* of Athens, and *Charistus* likewise the Athenian, *Diodorus* of Priene, *Dion* the Colophonian, *Epigenes* the Rhodian, *Evagoras* the Thasian, *Euphronius*, the Athenian, *Androcion* and *Eschion* (who writ both of Husbandry) *Dionysius*, that translated the books of *Mago*, and *Dionysius* the Epitomist, who brought them all into a Breuiarie. *Alepiades* and *Erasistratus*, both Physitians, *Comiades*, who wrote as touching the confitures of wine, *Aristomachus, Hicetius*, who both treated of the same matter, *Themison* the Physitian, *Onesicritus*, and king *Iuba*.

¶ IN THE SIXTEENTH BOOKE ARE CONTAINED the natures of wild trees.

Chap.

1. Countries wherein no trees doe grow: miraculous wonders of trees in the North countries.
2. Of the great Forrest Hircynia.
3. Trees that beare mast.
4. Of the Ciuick guirland, and who in old time were adorned and honoured with chaplets of tree leaues.
5. Of Mast thirteene kinds.
6. Of Beech Mast, and other sorts of Mast: of

Chap.

- Coale, and the feeding of Hogs.
7. Of Gals, and how many things besides Mast and Acornes Mast trees doe beare.
8. Of Cachrys, and of the Skarlet graine: also of Agaricke and Corke.
9. Of what trees the barke is in vsage.
10. Of shindles to couer houses, of the Pine-tree and the wild Pine, of the Fir & Pitch-tree, of the Larch-tree, of the Torch-tree Teeda, and the Eugh-tree.

11. The

Plinies Naturall Historie:

Chap.

11. The manner of making fundrie sorts of Pitch and Tar: how the virgin pitch called Cedrium is made: of the thicke stone pitch how it is made: and the waies to boile rosin.
12. Of the ship pitch called Zopissa: of Sapinum: and those trees that yeeld timber good for building.
13. Of the Ash tree, foure kinds.
14. Of the Teil or Linden tree, two seuerall sorts thereof.
15. Ten diuerse sorts of Maples.
16. Of the knot in Maple called Bruscus and Molluscum: of a kind of Fisticke tree called Staphylodendron: of Box tree three sorts.
17. Of the Elme, foure kinds.
18. The nature of trees according to their situation and places where they grow.
19. A generall diuision of trees.
20. What trees neuer shed their leaues quite: of the Oleander tree called Rhododendron.
21. Againe what trees lose not their leaues, but shew alwaies greene, which be they that shed their leaues in part. In what countries no trees at all doe lose their leaues.
22. The nature of those trees which let fall their leaues, and which haue leaues of sundry colours.
23. Three sorts of Asps or Poplers: & of what trees the leaues do alter their forme and fashion.
24. What leaues vse to turne euery yeere: the manner how to order the leaues of Date trees and to vse them. Also strange and admirable things as touching leaues.
25. The order and course that Nature holdeth in plants: the blossomes of trees: their manner of conception, blouming, budding, and bearing fruit: and in what order they put out floures.
26. Of the Corneil tree: the right season when in euery tree beareth fruit: what trees be fruitlesse, and therefore are supposed vnhappy: which they be that soone lose their fruit: and last of all what trees shew fruit before they be put forth.

In summe, this booke comprehendeth of notable things, histories, and obseruations, an hundred and thirtie.

Latine Authors alledged.

M. Varro, Facialis, Nigidius, Cornelius Nepos, Hyginus, Massurius, Cato, Mutianus, Lucius Piso, Trogus, Calpurnius, Bassus, Crematius, Sextus Niger, Cornelius Boichus, Vitruuius, and Gracimus.

Forreine

Chap.

27. Of trees that beare fruit twice and thrice in one yeere: what trees sodainly wax old: the age of trees.
28. Of the Mulberrie tree.
29. Of trees growing wild.
30. Of the Box tree, and the great Beane tree or Lotus.
31. Of the boughs, branches, barke, rinde, and root of trees.
32. Of prodigious trees that presage somewhat to come: of trees that spring and grow of themselves. Also a discourse, that all trees grow not in euery place: and what trees will not liue but in this or that one place.
33. Of the Cyprus tree. Also, that the ground will bring forth some new plants that neuer were set, sowne, or growing there before.
34. Of Yvie.
35. Of the Ivie called Smilax.
36. Of Reeds, Canes, and shrubs growing in water.
37. Of the osier or willow, eight sorts thereof: also what twigs besides osiers and willowes are good for winding and to bind withall: of bushes and grieues.
38. The juice and liquor of trees: the nature of their wood and timber: also of hewing downe and falling trees.
39. Of the Larch tree, the Fir and the Sapine: the time of cutting them downe, and such like.
40. Sundry sorts of wood: the extraordinarie bignesse of trees: what wood is not subiect to be worne-eaten nor to decay: other trees that be euerslasting.
41. Of Woodwormes.
42. Of timber fit for carpentrie and building: what timber is good for this or that vse, and namely, which is best and more firme and durable for rouses of houses.
43. The maner of glewing boards and planks: also of rent and clouen stuffe.
44. The age of trees: which be they that last not long: of Mistletoe, and of the Priests Druyde.

The first Booke of

Forreine Writers.

Alexander Polyhistor, Hesiodus, Theophrastus, Democritus, Homer, Timaeus the Mathematician.

¶ THE SEVENTEENTH BOOKE CONTAINETH the nature of trees planted, set, and well kept in Hort-yards.

Chap.

1. Trees of wonderfull price.
2. Of the nature of heauen and the skie respectiue vnto trees: and what part of the skie they ought to regard.
3. The societie and accord of the clymat and the soile requisit for trees.
4. The qualities of the grounds in diuers regions.
5. Sundry kinds of ground and earth.
6. Of a kind of earth or marle that they in Britaine and France set much store by.
7. What the Greekes haue taught, and what rules they haue giuen as touching this point.
8. Of more kinds of earth.
9. The vse of ashes, and of dung: what plants will enrich the ground and make it more battell: contrariwise, which they bee that burne out the heart thereof.
10. The planting or setting of trees: how to make a son or slip to take and grow againe that is plucked from the root of the stocke.
11. Of transplanting out of Seminaries, yong trees that came of pepins and seeds.
12. The spaces betwene, and distance to bee regarded in planting trees: the shadow and droppings, either from house eaves or other trees.
13. What trees grow apace, and which thrive but slowly: also of the Savine.
14. The setting and grafting imps and sons of trees in the stocke or cliffe.
15. Of the manner how to graffe a vine.
16. Of inoculation or grafting in the leafe or scutcheon with a plaster.

In summe, here bee contained notable matters, stories, and obseruations, to the number of five hundred eightie and one.

Latine Authors alledged.

Cornelius Nepos, Cato Censorius, M. Varro, Celsus, Virgil, Hyginus, Sarsenna both father and sonne, Scrophas, Calphurnius, Bassus, Trogus, Emilius Macer, Gracianus, Columella, Atticus, Iulius, Fabianus, Sura Manlius, Dorfenus Mundus, Caius Epidicus, and L. Piso.

Forreine Writers.

Isidorus, Theophrastus, Aristotle, Democritus, Theopompus, king Hiero, K. Attalus, K. Philometor, Archytas,

Chap.

17. An example or experiment of this kinde of grafting.
18. The order of planting and husbanding oliues: and which is the proper time for grafting.
19. What trees loue the companie and societie of others: the skill of baring the roots about trees, cutting off their superfluous spurns, and raising hills about the roots.
20. Of willow banks and rows of osiers: of places where reeds and canes are nourished: of other plants vsed to be cut, for poles, pearches, stakes, and forks.
21. The manner of planting vines: the skill of trimming them.
22. The furrow about vines: and the pruning of them.
23. The manner of planting trees to serue for vines to run vpon.
24. How to keepe and preferue grapes: the diseases incident to trees.
25. Of sundrie prodigious and monstrous sights shewed in trees: also of an olive yard which in old time remooued, and was transplanted from one side of a great high way to the other.
26. Remedies against the diseases and imperfections or faults in trees.
27. Of scarification and paring of trees: and the manner of dunging them.
28. Divers medicines against venomous beasts and pismires, and other creatures noisome and hurtfull to trees.

Plinies Naturall History.

Archytas, Xenophon, Amphilocheus the Arbenian, Anaxipolis the Thasian, Apollodorus of Lemnos, Aristophanes the Milesian, Antigonus the Cymæan, Agathocles the Chian, Apollonius of Pergamus, Bacchius the Milesian, Bion, Chærea the Athenian, also Charistius of Athens, Diodorus of Priene, Dion the Colophonian, Epigenes the Rhodian, Evagor the Thasian, Euphron the Athenian, Androcion, Asclepius, Lyfismachus, who all three wrote of Agriculture: Dionysius who translated the bookes of Mago, and Diophanes, who out of Dionysius collected a Breviary, and Aristander who made a treatise of Wonders and portentous tokens.

¶ THE EIGHTEENTH BOORE IS A TREATISE of Agriculture or Husbandrie.

Chap.

1. That our ancestors in old time were exceeding much giuen to husbandrie. Also, the singular care that men had to looke vnto hortyards and gardens.
2. Of the first chaplets and guirlands vsed at Rome.
3. Of the acre of ground and halfe acre, called at Rome *Iugeris* & *Alfus*. The ancient ordinances concerning cattell: in what time the market for victuals was exceeding cheap at Rome: and who were famous & renowned for husbandrie and tilling the ground.
4. The ancient manner of tilling the earth.
5. Where a ferme house is to bee seated and built conueniently: certain rules in old time concerning tillage.
6. A discourse as touching the praise of husbandmen: what rules are to be obserued to come by a good peece of land.
7. Diuers kinds of corne, and their nature.
8. That all sorts of graine will not grow euery where. Of other kinds of corne in the Levant or East countries.
9. Of baking and pastrie: of grinding and of meale.
10. Of the fine cocked flour: of the white flour of wheat, and of other sorts of floure: the manner of moulding and making dough, and baking.
11. The manner of making and laying leaven: also of making past & bread: and when Bakers were first knowne at Rome. Of sieves, serces, and bulsters; and of foddren wheat or frumentie.
12. Of pulfe.
13. Of Rapes and Navewes in the Amiternine tract.
14. Of Lupines.
15. Of Vetches and Ervile.
16. Of Fenigreeke: of Messelline or dredge-corne: of Mung-corne or Bollimong for provander: of Clauer or three-leaved grassie

Chap.

- called Medica, and of another Trefoile named Cytisus.
17. The faults and diseases in corne, graine, and pulfe, and their remedies: what corne or pulfe ought to be sowne with respect to the ground.
18. Of prodigious tokens obserued in corne. The skill of ploughing the ground: the diuers sorts of culcers & shares in the plough.
19. The seasons of the yere fit to till & plough the ground. The manner of putting oxen in the yoke for the plough.
20. Of breaking clods or harrowing: of another kinde of tilling: the earing or second tilth or stirring the ground. And cutting the corne.
21. The manner of tilling and husbanding land.
22. Examples of diuers grounds: of such as are wondrous fertile: of a vine that beareth grapes twice in the yere. The difference of waters.
23. The qualitie of the ground or soile: of compost or dunging lands.
24. The goodnesse of choise seeds: the manner of good sowing: how much seed of any corn an acre will take to be well sowne. The seasons of seednesse.
25. The obseruation of the stars for their apparition or occultation, their rising and setting, as well for day as night.
26. A recapitulation and brieffe summarie of all things belonging to husbandrie. What is to bee done in the field euery moneth of the yere.
27. That husbandmen should not so much regard the signe or the stars, as the fit season of the time for seednes. The rising or fall, the apparition or occultation of planetes obserued in some hearbes. Of the rising and setting of stars.
28. Of meadows: how they are to be repaired and

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Chap.

- and brought into hart: of sith-stones, hooks, sickles, and sithes: the time of sowing corne, and what fixed starres are of power about that time.
29. Of the seasons and times to be marked as well in summer as winter: what remedy for barraine and leane ground.
30. Of the haruest: of wheat, of chaffe: how to keepe corne.

Chap.

31. Of vintage, and autumn, and the constitution thereof.
32. What regard is to be had in the moon and her age, in husbandrie. (ture.)
33. The consideration of the winds for agricul
34. The bounds, limits, bawks, and waies, to be obserued in cornfields.
35. Signes whereby a man may prognosticate the disposition of the weather.

In summe, there be contained in this booke of notable matters, stories, and obseruations, two thousand and six hundred.

Latine Authors alledged in this booke.

Massurius Sabinus, Cassius Hemina, Verrius Flaccus, L. Piso, Cornelius Celsus, Turannius Graccula, D. Syllanus, M. Varro, Cato Censorius, Scrofa, Sarsenna both father and sonne, Domitius Calvinus, Hyginus, Virgil, Trogus, Ouid, Gracinus, Columella, Tubero, L. Aruntius who wrote in Greeke of Astronomie, and *Cesar Dictator* who likewise wrote of the same argument, *Sergius Paulus, Sabinus Fabianus, M. Cicero, Calphurnius Bassus, Atteius Capito, Manlius Sura*, and *Aetius* who compiled a booke called *Praxidica*.

Forreine Authors.

Hesiodus, Theophrastus, Aristotle, Democritus, K. Hiero, K. Philometor, K. Attalus, K. Archelaus, Archytas, Xenophon, Amphilocheus of Athens, Anaxipolis of Thafus, Aristophanes the Milesian, Apollodorus the Lemnian, Antigonus the Cymæan, Agathocles of Chios Apollonius of Pergamus, Aristander the Athenian, Bacchius the Milesian, Bion of Soli, Chærea of Athens, Charisius likewise the Athenian, Diodorus of Priene, Dion of Colophon, Epigenes of Rhodes, Evagoras the Thasian, Euphronius the Athenian, Andraton, Alchbrio, and Lyfimachus, who wrote all three of Husbandrie, *Dionysius* that translated the works of *Mago*, and *Diophanes* who drew the same into an Epitome, *Thales, Eudoxus, Philippus, Callippus, Dositheus, Permeniscus, Meliton, Criton, Oenopides, Zeno, Eudæmon, Harpalus, Hecæus, Anaximander, Sosigenes, Hipparchus, Aratus, Zoroa fides*, and *Archibius*.

THE NINETEENTH BOOKE CONTAINETH a discourse of the nature of Flax, and other wonderfull matters.

Chap.

1. The sowing of Line seed: diuers kinds of flax: how it is dressed: of naperie & napkins: of linnen that will not burne nor consume with fire: and when curtains were deuised at Rome about the theatres.
2. The nature of a kind of broom called Spart, when it came to be vsed first, how it is to be ordered & dressed, what plants both spring and also liue without roots.
3. Of Myfy, and of Mushrooms, of Tadstoles or Mushrooms that bee broad and without a taile called Pezici, of Laserpitium, and Magydaris, of Maddir, and the Fullers root *Radicula*, i. Sopeweed.
4. The manner of dressing and trimming gardens: also the ordering and due placing of other plants good for to be eaten; ouer and

Chap.

- besides corn, and the fruit of trees & shrubs.
5. The nature, the sundry sorts, and the stories of many plants that grow in gardens.
6. Of the roots, leaues, floures, and colours of garden hearbes.
7. How many daies it will be after the seeds of herbes be sowne, or their slips set, ere they come vp: the nature of seeds: how herbes are to be sown or set, and in what course and ranke: which herbes are but one of a kinde, and which they be that haue many kinds.
8. The nature of such garden herbes as are good for the pot, or to make fallads, and to season meat withal; their kinds to the number of 46, with their stories & descriptions.
9. Of Fennell, and Hempe.
10. The diseases and maladies that annoy gardens.

Plinies Naturall Historie

Chap.

- dens, the remedies against the same: as also how to kill ants, caterpillars, and gnats.
21. What seeds be more or lesse able to endure any hardnesse or injurie, and which they be that salt waters are good for.

Chap.

22. The manner of watering gardens: what herbes they be, which beeing transplanted and removed, prooue the better: and finally, the juice, the sweet saouours, and relishnes of garden herbes.

In summe, here are comprised memorable things, stories, and obseruations, a thousand one hundred fortie and three.

Latine Authours cited.

M. Aetius Plantus, M. Varro, D. Syllanus, Cato Censorius, Hyginus, Virgil, Mutianus, Celsus, Columella, Calphurnius Bassus, Manlius Sura, Sabinus Tyro, Licinius Macer, Q. Hirtius, Vibius Rufus, Censorinus who wrote *Seipura*, [i. a treatise of Gardening] *Castritius* likewise, and *Firminus*, (who both twaine made a worke of the same matter) and last of all *Petreus*.

Forreine Writers.

Herodotus, Theophrastus, Democritus, Aristomachus, Menander, (who wrote a booke intituled *Brochreita*, i. of things profitable for our life and diet) and *Anaxilaus*.

THE TWENTIETH BOOKE COMRISETH medicines out of those Simples which are set and sowed in Gardens.

Chap.

1. Of the wild Cucumber, and the juice therof *Elaeterium*.
2. Of the Cucumber as wel that which wande- reth & groweth abroad called *Anguinum*, as that of the garden: also of the *Pompon*.
3. Of the wild gourds, and the Rape or Naves.
4. Diuers sorts of Naves: of the wild Radish, of the garden Radish, and the Parsnep or Carot.
5. Of *Staphylinum* or the tame Parsnip. The herbe *Gingidium* or *Chervill*: of *Sefelis* or *Siler*: mountaine: of *Elecampane*, and of *Onyons*.
6. Of *Porret* or *Leekes* vsed to be cut, and of cabbage *Leeks* or headed, also of *Garlick*.
7. Of wild Lettuce or Hawke-weed, called also *La Stuca Caprina*, of another kinde named *Efopus*, of Wood, & tame garden Lettuce.
8. Diuerse kindes of Beets, of *Endive*, and *Cichorie*, of garden *Endiue*.
9. Of *Cawle* or *Coleworts*, of the wild *Coleworts* *Lapana*, of *Soldanella*, of *Squilla* or the Sea-onion, of *Scallions* or *Chibbols*, and of *Dog-leeks*.
10. Of *Sparage* both tame and wild, of *Libycum* and *Clarie*.
11. Of *Parsley*, of *Baulme*, *Smallage*, & mountaine *Parsley*.
12. Of *Alifanders*, and garden *Basill*.

Chap.

13. Of wild *Basill*, of *Rocket*, of *Cresses*, and *Rue*.
14. Of wild Mints, of garden Mints, of *Peniroyall*, of *Nep*, and *Cumin*.
15. Of *Ethiopian Cumin*, which staieth vrine, of *Capers*, of *Lovach*, of *Panace*, of wild *Origan* or *Majoram* savage.
16. More of wild *Origan* and *Heracleorica*, called also *Gallinacca Cunila*, i. Small *majoram*, *Saviorie* or *Orgament*, *Rosemarie*, sweet *Majoram* of the garden and of the mountaine.
17. Of *Cockweed*, *Pepperwort*, or *Dittander*, of garden *Origan*, of a kinde of *Orgament* called *Onitis* of *Prason*, of *Tragoriganum* or wild *Peniroyall*, the water *Lillie* or *Nenuphar*, of *Lepidium*, of *Gith* or *Nigella Romana*, and of *Anise*.
18. Of *Dill*, of *Sacopanium*, of *Sagapen*, of *Poppies* both white and blacke: the manner how to draw the juice of herbes: and of *Opium*.
19. Of the wild *Poppie*, of horned *Poppie*, of *Glaucium* or *Paralium*, of *Heracleum* or *Aphrum*, of the confection *Diacodium* made of *Poppie* heads, of *Tythimall*.
20. Of *Purcellane* or *Peplium*, of *Coriander* and *Orach*.
21. Of *Mallowes*, and *Malope*, of *Althæa* or *Marsh*.

The first Booke of

Chap.

1. Marshmallow, of Dockes, foure Docke or Sorell, the water Docke, the herbe Patience or Bulapathum.
2. Three kindes of Senvie, of Horehound, of running Thyme, of water Mints or Savorie, of Linseed and Bleets.

In summe, there be comprised in this booke of medicines, stories, and obseruations, one hundred sixtie and seven.

Out of Latine Authors.

Cato Censorius, Mar. Varro, Pompeius Lenax, Gallio, Hyginus, Sextius Niger who wrote in Greeke, and *Iulius Bassus* likewise, who wrote in the same language, *Celsus*, and *Antonius Casar*.

Forreine Authours.

Democritus, Theophrastus, Orpheus, Menander who made the booke *Biochresta*, *Pythagoras*, and *Nicander*.

Out of Physicians.

Nicander, Hippocrates, Chrysippus, Diocles, Ophion, Heraclides, Hicestus, Dionysius, Apollodorus of Tarentum, *Apollodorus* the Citien, *Praxagoras, Philistonicus, Medius, Diensch, Cleophrantus, Philistio, Asclepiades, Crateuas, Petronius, Diodorus, Iolla, Erasistratus, Diagoras, Andreas, Mnesicles, Epicharmus, Damion, Dalion, Sosimenes, Theopolemus, Metrodorus, Solon, Lycus, Olympiades* of Thebes, *Phyllinus, Petreius, Mithon, Glaucia* and *Xenocrates*.

* A woman who was a Midwife.

IN THE XXI. BOOKE ARE CONTAINED the natures of Floures and Hearbs to make Guirlands of.

Chap.

1. The nature of floures and herbes that serve for Chaplets, the wonderfull varietie of floures.
2. Of Chaplets and nosagaies of floures, Who first deuised to set floures in order one with another. When Coronets or Guirlands of floures were inuented and took their name, and vpon what occasion.
3. Who first gaue a present of a Chaplet garnished with siluer and gold foile. In what honor and estimation such Guirlands were in old time. The honour done of old to *Scipio*. Of Coronets or Chaplets platted, wrythed, and braided. Also of a notable act of queen *Cleopatra* in making of Chaplets.
4. Of Roses set in guirlands. Diuerse sorts of Roses, and where they be set and doe grow.
5. Three kinds of Lillies. The strange manner of setting them.
6. Of Violets, Marigolds, of Baccharis, Combretum, Asarabacca or Folefoot, and Saffron.
7. Of the floures vsed in antient time in Guir-

Chap.

23. Of Meu, of garden Fennell, of wild Fennell or Myrsineum, of Hempe, of Fennel-geant, of Thyfles, and Artichokes.
24. The confection called Triacle, the composition of *Antiochus*.

Chap.

- lands & Chaplets. The great diuersity that is in aromaticall and odoriferous simples: of Lavander, Spike, and Polium.
8. The colours of clothe resembling floures. Of floure-Gentle or Passee-velours: of Chrysome or Chrysites.
9. The honor done by Guirlands, and their excellencie: of Cyclaminum, of Melilot, of Claver or Trefoile, whereof there be three sorts.
10. Of Origan, Thyme, Honey of Athens, of Doniza or Fleabane, of Iupiters floure, of Helenium or Elecampane, of Sothernwood, and Camomile.
11. Of Majoran, of Nyctigretum and Melilote, the white Violet or stocke Gilloffe, of Codiaminum, also of wild bulbs or Rampions, of Heliochrysum, & Lychnis or Rose Campanion, and many other herbes growing on this side the sea.
12. The manner how to nourish and keepe Bees: of their maladies and remedies thereto.

13. Of

Plinies Naturall History.

Chap.

13. Of Honey that is venomous, remedies against such venomous Honey, as also against another kind thereof, which maketh folke to be mad that taste thereof.
14. Of a certain Hony that flies will not touch nor come neare to. Of Bee-hiues. The way how to keepe the Bees when they are at a fault for meat: and how their Wax is made.
15. Of herbes good to eat which come vp of their owne accord, and namely, those that are prickie.
16. Of Thyfles, of Parietarie of the wall, of Brambles and Orchanet.
17. The difference of many sorts of herbes in their lease. Which they be that doe floure all the yeere long, of the Daffodill, of Mustana, and of the Gladen or Sword-grasse.
18. Of diuers sorts of Reeds, and of Cyperus, of the medicinable vertues which they haue, of Cypirus, and Squinanth.
19. The medicinable vertues of Roses, of the Lillie, of Narcissus, of the Violet, and of Baccharis or Ladies gloues, of Combretum and Asarabacca.
20. Of Nard Celticke and Saffron, the vertues thereof and vse in Physicke, of the sweet ointment Crocomagma made of Saffron,

Chap.

- of Spike or Lauender, of Polium, and Flourelis, of Heliochrysum, Chrysome, and Melilot.
21. Of sweet Trifolie, of Thyme, the wild yellow Lillie Hemerocallis or the day-floure, of Elecampane and Sothernwood.
22. the medicinable vertues of Camomile and Marjoram.
23. The vertues of Corne Rose or Passee-flours Anemone.
24. The properties medicinable of Filipendula.
25. The vertues of Heliochrysum.
26. The medicines of Crowtoes.
27. The vertues of the Pycwinckle, Butchers broome, of Sampier, and wild Bassill.
28. The medicinable vertues of Colocasia, or the Egyptian Beane.
29. The properties of Anthalium.
30. The vertues of Fewerfue.
31. The vertues of Night-shade or Petie Morrell, and Alkakengi.
32. Of Corchorus, i. Chickweed, and of Cnicus, i. Carthamus or bastard Saffron.
33. Of the herbe Perfoluta.
34. Of the weights and measures vsed in old time.

In summe, there be in this booke to be found medicines, stories, and worthy obseruations, seuen hundred and thirtie.

Latine Authours alledged.

Cato Censorius, M. Varro, Massurius, Antias, C. Helius, Vestimus, Vibius, Ruffinus, Hyginus, Pomponius Mela, Pompeius Lenax, Cornelius Celsus, Calphurnius Bassus, P. Largius, Elicinius Macer, Sextius, and *Iulius Bassus*, who both wrote in Greeke, and *Antonius Casar*.

Forreine Writers.

Theophrastus, Democritus, Orpheus, Pythagoras, Mago, Menander who wrote the Treatise *Biochresta*, *Nicander, Homer, Hesiodus, Musaeus, Sophocles*, and *Anaxilax*.

Physicians.

Mnestheus and *Callimachus*, who wrote both of Guirlands made of floures, *Phanias* the naturall Philosopher or Physician, *Simus, Timaristius, Hippocrates, Chrysippus, Diocles, Ophion, Heraclides, Hicestus, Dionysius, Apollodorus* of Citia, *Apollodorus* of Tarentum, *Praxagoras, Plistonius* the Physician, *Diensch, Cleophrantus, Philistio, Asclepiades, Crateuas, Petronius, Diodorus, Iolla, Erasistratus, Diagoras, Andreas, Mnesicles, Epicharmus, Damion, Dalion, Sosimenes, Theopolemus, Metrodorus, Solon, Lycus, Olympias* the midwife of Thebes, *Phyllinus, Petreius, Mithon, Glaucia*, and *Xenocrates*.

A

IN

The first Booke of

IN THE XXII. BOOKE ARE CONTAINED discourses as touching the estima- tion of Herbes.

Chap.

1. Of certaine nations that vse herbes to beautifie their bodies.
2. Of clothes died with the juice of herbes.
3. Of the Chaplet made of the common meadow grasse.
4. How rare these Guirlands of grasse were.
5. Which were the only men that had the honour to be crowned with the said Chaplets.
6. The onely Centurion allowed to weare the said Guirlands.
7. Medicinable vertues obserued in the rest of herbes and floures that serue for Guirlands, and first of Eringe or sea Holly.
8. Of the Thistle or hearbe which they call Centum-capita.
9. Of Acanus and Liquerice.
10. Of Brambles or Thyfles called Tribuli, their kinds and vertues.
11. The vertues and properties of the hearbe Stoebe.
12. Of Hippophyes, and of Hippope, i. the Tazill, and their properties.
13. Of the Nettle and the medicinable vertues of it.
14. Of the white dead Nettle or Archangell Lamium, and the vertues of it.
15. Of the hearbe Scorpius or Caterpillers, the kinds and vertues thereof.
16. Of Leucacantha or our ladies Thistle, and the vertues of it.
17. Of Parietarie of the wall called Helxine or Perdicum, of Feuerfew or Motherwort, Par-

Chap.

- thenium, of Sideritis, i. wall Sauge or stone Sauge, and the vertues thereof good for Physicke.
18. Of Chamæleon, the sundry sorts and properties that it hath.
19. Of Coronopus, i. Crow-foot Plantaine or Buckhorn Plantain, and the vertues therof.
20. Of Orchanet, as well the right as the bastard, and the vertues of them both.
21. Another kind of Orchanet called Onoche-
lis, of Camomile, of the hearbe Lotus or
common Melilot, of Lotometra, which is a
kind of garden Lotus or fallade Clauer, of
Heliotropia, i. Turnfoll or Solcium, and
Tricocum, a kind thereof, of Maiden haire
called Adiantum and Callitricum.
22. Of bitter Lettuce or wild Cichorie, of
Thesium, of Daffodill, of Halimus, of Bran-
kurfine, of Buprestis, of Elaphoboscum or
Gratia Dei, of Scandix, i. wild Chervill or
shepheards needle, of the wild wort Iassone,
of bastard Persly, Caucalis, of Lauer, or Sil-
lybum, of Scolimus, i. the Artichoke or Li-
monia, of Sowthistle, of Chondrilla, and of
Mushromes.
23. Of Toad stools, of Silphium, & of Laserjuice
24. The nature of Hony, of Mead or Hydro-
mel: how it commeth that the fashions are
changed in certaine kinds of meat, of hony-
ed wine, of wax. A discourse against the
composition of many simples.
25. The medicinable vertues of corne.

In summe, here you shall find of medicines, stories, and obseruations, 906, gathered out of

The same Authours which were named in this booke before, and besides out of *Chrysfermus*,
Erastophenes, and *Alcaus*.

IN THE XXIII. BOOKE IS CONTAINED a Treatise of Hort-yard trees.

Chap.

1. The medicinable qualities of grapes fresh
and new gathered, of Vine cuttings and of
grape kernils, of the grape Theriace, or
Treacle Grape, of dried Grapes or Rai-
sins, of Aistaphus, of Strausacre, cal-

Chap.

- led also Pituitaria, of the wild Vine, of
the white Vine which is called Bryonie,
of the blacke Vine, of new wines, of di-
uerse and sundry sorts of wines, and also of
vinegre.

2. Of

Plinies Naturall Historie:

Chap.

2. Of the medicinable vertues of vinegre Sqi-
liticke, of Oxymell or honied vinegre, of
cuit, of the dregs or lees of wine, vinegre,
and cuit.
3. The vertue of Oliues, of the leaues of the O-
liue, of the floure and ashes of the Oliue, of
the white and blacke fruit of the Oliue: also
of the dregs or grounds of oile.
4. Medicinable properties obserued in the
leaues of the wild Oliue, of the oile made of
the wild vine floures, of the oile Cicinum,
the oiles of Almonds, Baies, and Myrtles,
the oile of Chamamyrsine or grand Myrtle,
also of Cypresse, of Cytrons, & walnuts, &c.
5. The Ægyptian Palmetree that beareth Ben,

Chap.

- also of the Date tree called Elate, and the
vertues of them.
6. The medicinable vertues of sundry plants,
namely, in their floure, leafe, fruit, boughs,
barke, wood, juice, root, and ashes.
7. Of pearces, and the obseruations to them be-
longing, of Figges both wild and sauage:
of Erineum, and other sorts of plants, with
their vertues.
8. Of Pine-nuts, and Almonds, of the Filbard
and Walnut, of Fiftickes and Chestnuts,
of Charobs, Corneiles, Strawberrie trees,
and Baies.
9. Of the Myrtle gentle, of Myrtidanum, and
the wild Myrtle.

In summe, there be noted in this booke medicines, stories, and obseruations, a thousand
four hundred and nineteene.

Latine Authours cited.

C. Volgius, *Pompeius Lenax*, *Sextius Niger*, and *Iulius Bassus*, who wrote both in Greeke, *Antonius*
Castor, *M. Varro*, *Cornelius Celsus*, and *Fabianus*.

Forreine Writers.

Theophrastus, *Democritus*, *Orpheus*, *Pythagoras*, *Mago*, *Menander* the author of the booke Bio-
chrestia, *Nicander*, *Homer*, *Hesiodus*, *Museus*, and *Anaxilaus*.

Physicians.

Mnestheus, *Callimachus*, *Phanias* the naturall Philosopher, *Simus*, *Tamaristus*, *Hippocrates*, *Chry-
sippus*, *Diocles*, *Ophion*, *Heracides*, *Hiccius*, *Dionysius*, *Apollodorus* of Cittia, *Apollodorus* the Taren-
tine, *Praxagoras*, *Plistonicus*, *Medius*, *Dieuches*, *Cleophantus*, *Philistio*, *Asclepiades*, *Cratævas*, *Petro-
nius*, *Diodotus*, *Iolla*, *Erasistratus*, *Diagoras*, *Andreas*, *Mnesicles*, *Epicharmus*, *Damion*, *Dalion*, *Sosimenes*,
Theopolemus, *Metrodorus*, *Solon*, *Lycus*, *Olympias* the midwife of Thebes, *Phyllinus*, *Petreius*, *Mission*,
Glaucis, and *Xenocrates*.

THE XXIII. BOOKE TREATETH OF Trees growing wilde.

Chap.

1. Medicinable vertues obserued in wild trees.
2. The Ægyptian Beane tree, Lotus.
3. Mast and Acornes.
4. The grain or berrie of the tree Ilex, of Gals,
of Mistleto, of little bals and mast of trees,
the root of Cirrus, and of Corke.
5. Of the Beech, the Cypresse tree, the tall
Cedar, the fruit or berry thereof, and of Gal-
banum.
6. Of Ammoniacum, Storax, Spondylium,
Spagnus, the Terebinth tree, of Chamæ-
pitys or Iva Muscata, of Esula or Pityusa,
of Rosins, of the Pitch-tree and the Len-
tiske.

Chap.

7. Of stiffe Pitch, of Tarre, of Pitch twice boy-
led, of Pissaspfalt, of Sopissa, of the Torch
tree and Lentiske.
8. The vertues of the Plane tree, the Ash, the
Maple, the Aspe, the Elme, the Linden tree
or Teil, the Elder, and Iuniper.
9. Of the Willow, the Sallow Amerina, and
such like, good for windings and bands, also
of Heath or Ling.
10. Of Virga Sanguinea, of the Oisier, of the
Priuet, the Aller, of Yvie, of Cistus or Cif-
sus, of Erythranum, of ground Yvie or Ale-
house, of Withwind, of Perwinke or Lesse-
ron.

A 2

11. Of

The first Booke of

Chap.

11. Of Reeds, of Paper cane, of Ebene, of Oleander, of Rhus or Sumach, of Madder, of Alyssum, of Sopeweed, of Apaynum, of Rosemarie and the feed thereof, of Selago, of Samulus, of Gums, and the medicinable vertues of them all.
12. Of the Arabian thorne or thistle, of Bedegnar, of Acanthium and Acacia.
13. Of the common and wild thistle, of Eryficeptum, of the thorne or thistle Appendix, of Pyxacanthum or the Barbaric tree: of Paliurus, of the Holly, of the Eugh tree and other bushes, with their vertues in Physicke.
14. Of the sweet Brier or Eglantine, of the Respice bush, of the white bramble Rhamnus, of Lycium, of Sarcocolla, of the composition named Oporice, and all their medicines.
15. Of Germander, of Perwinke or Lowrie, of Cham-lea or Oliuell, of Chamæfyce, of ground yvie, of Lauander Cotton, of Ampeloprasos or Vine Porret, of Stachys or wild Sauge, of Clinopodium or Horfe.

In summe, herein are comprised medicines, stories, and obseruations, a thousand foure hundred and eghtene: collected out of

Latine Authors.

C. Volgius, Pompeius Lenaus, Sextius Niger, and Iulius Bassus, who wrote both in Greeke; Antonius Castor, M. Varro, Cornelius Celsus, and Fabius.

Forreine Writers.

Theophrastus, Apollodorus, Democritus, Orpheus, Pythagoras, Mago, Menander the author of the booke Biochresta, Nicander, Homer, Hesiodus, Musæus, Sophocles, and Anaxilans.

Physicians.

Mnestheus, Callimachus, Phanius the naturall Philosopher, Simo, Timaristius, Hippocrates, Chrysippus, Diocles, Ophion, Heraclides, Hiccius, Dionysius, Apollodorus of Cittia, Apollodorus the Tarentine, Praxagoras, Plistonius, Medius, Dienechus, Cleophrantus, Philistio, Asclepiades, Cræteus, Petronius Diodorus, Iolla, Erasistratus, Diagoras, Andreas, Mnesicles, Epicharmus, Damion, Sofimenes, Theopolemus, Selon, Lycus, Metrodorus, Olympias the Midwife of Thebes, Phyllinus, Petreius, Mestion, Glauca, and Xenocrates.

¶ IN THE XXV. BOOKE ARE CONTAINED
the natures of hearbes and weeds that come vp of themselues.

The reputation that hearbes haue been of. When
they began first to be used.

Chap.

1. The properties and natures of wild herbes growing of their owne accord.
2. What Authours haue written in Latine of

Chap.

the nature and vse of hearbes. When the knowledge of simples began first to be practised at Rome. What Greeke Authours first

Plinies Naturall History.

Chap.

- first wrote of herbes, the inuention and finding out of sundry hearbes, the Physicke of old time. What is the cause that Simples are not so much in request and vse for Physicke as in old time. The medicinable vertues of the Eglantine and Serpentry or Dragon.
3. Of a certaine venomous fountaine in Almaine, the vertues and properties of the herbe Britannica, what diseases cause the greatest paines.
4. Of Moly, of Dodecatheos, of Præonium, named otherwise Pentorobus, and Glycyfide, of Panace or Asclepios, of Heraclium, of Panace Chironium, of Panace Centaureum or Pharnaceum, of Heraclium Siderium, of Henbane.
5. Of the herbe Mercurie female, of Parthenium, of Hermu-Pœa, or rather Mercurie: of Yarow, of Panace Heracleum, of Sideritis, of Millefoile, of Scopa regio, of Hemionium, Teucrium, Splenium, Melampodium or blacke Ellebore, and how many kinds there be of them. The medicinable vertues of blacke and white Ellebore: when Ellebore is to be giuen, how it is to be taken, to whom it is not to be giuen, also that it killeth Mice and Rats.
6. Of Mithridatium, of Scordotis or Scordium, of Polemonia, otherwise called Philætaria or Chiliodynamia, of Eupatorie or Agrimonie, of great Centaurie otherwise called Chironium, of the lesse Centaurie or Libadium, called Fel Terræ, the gall of the Earth. Of Triorches, and their vertues.
7. Of Clymenus, Gentian, Lyfimachia and Parthenius or Motherwort, Mugwort, Ambrose, Nenuphar, Heraclium, and Euphor-

In summe, this Booke doth yeeld of medicines, stories, and obseruations, a thousand two hundred ninetie and two.

Latine Authours cited.

M. Varro, C. Volgius, Pompeius Lenaus, Sextius Niger, and Iulius Bassus, who both wrote in Greeke; Antonius Castor, and Cornelius Celsus.

Forreine Writers.

Theophrastus, Apollodorus, Democritus, king Iuba, Orpheus, Pythagoras, Mago, Menander who wrote Biochresta, Nicander, Homer, Hesiodus, Musæus, Sophocles, Xanthus, and Anaxilans.

Physicians.

Mnestheus, Callimachus, Phanius the naturall Philosopher, Timaristius, Simo, Hippocrates, Chrysippus, Diocles, Ophion, Heraclides, Hiccius, Dionysius, Apollodorus the Tarentine, Praxagoras, Plisto.

The first Booke of

Plistonius, Medius, Dieneches, Cleophantus, Philistio, Asclepiades, Crateus, Iolla, Erasistratus, Diagoras, Andreas, Mnesicles, Epicharmus, Damion, Theopolemus, Metrodorus, Solon, Lycus, Olympias the midwife of Thebes, *Phyllinus, Petreius, Miction, Glaucias* and *Xenocrates*.

IN THE XXVI. BOOKE ARE CONTAINED the medicines for the parts of mans bodie.

Chap.

1. Of new maladies, and namely of Lichenes, what they be, and when they began to raige in Italic first. Of the Carbuncle, of the white Morpew or Leprosie called Elephantiasis, and of the Collicke.
2. The praise of *Hippocrates*.
3. Of the new practise in Physicke, of the Physician *Asclepiades*, and by what meanes hee abolished the old manner of practise, and set vp a new.
4. The superstitious follie of Magicke is derided. Also a discourse touching the foule tettar called Lichenes, the remedie thereof: and also the infirmities of the throat and chawes.
5. Receipts and remedies against the kings euill: also for the diseases of the fingers and the breast, and against the Cough.
6. Of Mullin, of Cacalia, Tussilage or Fole-foot, of Bechium, and Sauge, all herbes for to cure the cough.
7. For the paines of the sides and chist, for the difficultie of breath, and those that cannot take wind but sitting or standing vpright, for the pains of the liuer and the heart-ach, medicines appropriat to the lungs, difficultie of vrine, and the cough, for the breast, for inward vlcers, for the kidnies and imbecilitie of the liuer, to stay vomit and yexing, also for the pleurisie and disease of the sides and flankes.
8. Of all diseases of the bellie and the parts either within it or neare vnto it. How to stay the flux thereof, or to make it loose and soluble.
9. Of Peniroiall and Argemone.
10. Of water Lillie or Nenuphar, of abstinence

Chap.

- from *Venus*, of prouocation to fleshly lust, of Ragwort or Saryrium, called Erythraicum, of Crategis and Syderitis.
11. Generall remedies for infirmities of the feet, ankles, joints, and sinewes. Remedies against diseases that hold and possesse the whole bodie. Of Mirthryda. Medicines and meanes to procure sleepe: against the palse, agues with cold fits, feauers or agues incident vnto labouring Horses, Asses, and Mules: against francticke persons. Of the herbe *Chamaeæta*, of Houslecke or stonecrop, and Pricke-madame, of *S. Antonies* fire.
 12. Remedies against dislocations in the joints, against the yellow jaundise, fellons, fistulae, swelling of ventositie, burnes, scalds, and other diseases, for sinewes, and to stanch blood.
 13. Of the herb called Horse-taile, Nenuphar, Harstrange, Syderitis, of many other remedies good to restraine the flux of blood: of *Stephanomelis* and *Erisithale*, remedies against the wormes.
 14. For vlcers, old sores, and greene wounds: to take away werts, and of the herbe *Polycnemum*.
 15. Many good experiments either for to prouoke or to stay the flux of womens months: soueraigne remedies for the diseases of the matrice: also to cast forth the fruit within the wombe, or to containe it the full time, for to take away the blemishes and spots in the skin, and namely of the face, to colour the haire, to cause the haire to fall, also against the scab or maunge of foure-footed beastes.

In summe, this booke leadeth you to medicines, stories and obseruations, a thousand two hundred ninetie and two: collected out of

Latine Authours.

M. Varro, C. Volgius, Pompeius Lenæus, Sextius Niger, and Iulius Bassus, who writ both in Greeke, *Antonius Castor*, and *Cornelius Celsus*.

Forreine

Plinies Naturall History.

Forreine Writers.

Theophrastus, Apollodorus, Democritus, Iuba, Orpheus, Pythagoras, Mago, Menander the author of *Biochresta*, *Nicander, Homer, Hesiodus, Musæus, Sophocles, Xanthus* and *Anaxilaus*.

Physicians.

Mnesibheus, Callimachus the professour of Physicke, *Timaristius, Simus, Hippocrates, Chrysippus, Dioctes, Ophion, Heraclides, Aicefius, Dionysius, Apollodorus* the Tarentine, *Praxagoras, Plistonius, Medius, Dienechus, Cleophantus, Philistio, Asclepiades, Crateus, Iolla, Erasistratus, Diagoras, Andreas, Mnesicles, Epicharmus, Damion, Theopolemus, Metrodorus, Solon, Lycus, Olympias* the Midwife of Thebes, *Phyllinus, Petreius, Miction, Glaucias* and *Xenocrates*.

THE XXVII. BOOKE COMPREHENDETH all other sorts of herbes.

Chap.

1. The rest of Herbes.
2. Of Aconitum, and how this herbe killeth Leopards or Panthers.
3. That God is the Creator of all things.
4. Of the hearbe *Æthiopis*, *Ageratum*, *Aloe*, *Alcea*, *Alypum*, *Alfine*, *Androsacum*, *Androcæmon*, *Ambrocia*, *Restharrow*, *Anagyrion*, and *Anonymon*.
5. Of the great Burre, Of Cliuers or Goosegrasse, *Asplenium*, *Asclepias*, or Swallow-wort, *Aster* or *Bubonium*, *Ascyrum* or *Ascyroceides*, *Aphace*, *Alcibium*, and *Cockes combe*.
6. Of *Alus*.
7. Of sea Weeds or Reits, of Elder, wild Vine, and Wormewood.
8. Of Ballote or stinking Horehound, of *Bortrys* or *Oke* of *Ierusalem*, of *Brabylla*, of *Bryon* or *Corallina*, of *Bupleuron*, and *Catanance*, of *Calla*, *Cerceia*, *Cirsium* and *Crategonum*, *Thelygonum*, *Crocodilium*, *Dogs stone*, *Chrysolachanum*, *Cucubalum*, and *Conferua* or the ruer Sponge.
9. Of the graine called *Coccus*, *Gnidia*, of *Tazill*, of *Oke* searne, of *Dryophonum*, of *Ela-*

Chap.

- tine, of *Empetrum* or *Perce-Pierre*, of *Epipactus* or *Elleborus*, of *Epimedium*, *Enneaphyllon*, *i. the nine leaved herbe*, of *Ofmund* or searne, of *Fennur Bubulum*, *i. Ox thigh*, of *Galeopsis* or *Galeobdolon*, of *Glaux* or *Eugalaetum*.
10. Of *Glaucium*, of *Pæonie*, *Cudweed* or *Chamaezelum*, of *Galedragum*, *Holcos*, *Hyofiris*, *Holostemum*, and *Hypophæstum*.
 11. Of *Hypoglossa*, and *Hypecoon*, *Idæa*, *Icopyron*, *Spurge*, *Pat-delion*, *Lycopsis*, *Greimile*, &c.
 12. Of *Medium*, *Moufe-eare*, *Myagros*, an herb called *Natrix*, *Orthone*, *Onosma*, *Onopordos*, *Toads flax*, *Woodfoure* or *Alleluiah*, *Crowfoot*, *Knotgrasse*, *Camomile*, *Phyreutma*, *Phyllon*, *Phellandriion*, *Phalaris*, *Polyrhizon*, *Proserpinaca* or *Knotgrasse*, *Rhacoma*, *Refeda*, and *Stoechas*.
 13. Of *Nightshade* and *Dwale*, of *Smyrnum*, *Orpinum*, *Trichomanes*, *Thaliectrum*, *Thlaspi*, *Tragonias*, *Tragonis* and *Tragopogos*, the serpent *Spondylis*. To conclude, that some diseases and venomous things be not in all countries.

In summe, herein are comprehended medicines, stories, and notable obseruations, 702.

Latine Authours cited.

Pompeius Lenæus, Sextius Niger, and Iulius Bassus, who wrate both in Greeke, *Antonius Castor* and *Cornelius Celsus*.

Greeke Writers.

Theophrastus, Apollodorus, Cistienfis, Democritus, Aristogiton, Orpheus, Pythagoras, Mago, Menander, that wrote the Treatise *Biochresta*, and *Nicander*.

Physicians.

Mnesibheus and his fellowes, as they went in the former booke.

IN

¶ IN THE XXVIII. BOOKE ARE COMPRE-
hended the medicinable vertues from
liuing creature.

Chap.

1. The medicines and vertues obserued in li-
uing creatures.
2. Whether charmes and bare words or cha-
racters auail ought in Physicke. The pro-
digious tokens and prefaces may take effect
in some, and may be auerted and made fru-
strate by others.
3. Remedies euē in the bodies of men against
enchantments and Magicke.
4. Of certaine forceries, also the vertue of a
mans spittle.
5. The regard of diet for a mans health.
6. Of sneeing, the moderation to be vsed in
the act of *Venus* or companie with a woman,
of other preferuatiues of health.
7. What remedies and medicines a womans
mans bodie doth affourd.
8. The medicinable properties in certaine
strange beaſts, namely, the Elephant, Lion,
Cammell, Hyæna, Crocodile, Chamæle-
on, Skinke, Riuer-horſe, and Once.
9. The medicines which we haue from the bo-
dies of wild beaſts and tame of the ſame
kind. The vertue of milk, butter, and cheeſe,
the obseruations thereto belonging: also of
fat or greaſe.
10. Remedies receiued from Bores and Swine,
from Goats and wild Horſes: also from o-
ther beaſts, ſeruiug to cure all manner of
diseaſes.
11. Other remedies for many kinds of mala-

Chap.

- dies, taken from liuing creatures.
12. For the spots and wems in the viſage: for
the infirmities of the necke and of the
breast.
13. Against the diseaſes of the stomacke,
loines, and reines.
14. To stay a laske, against the loosenesse of
the stomacke, to cure the bloudie flux: the
inflations of the bellie, ruptures, the prouo-
cation to the ſcege without effect, the broad
flat long wormes in the bellie, and the col-
licke.
15. Against the torments and paines in the
bladder, against the stone, the infirmities in
the priue parts of man or woman: as also
in the fundament, and the twist or groine,
and the cure thereof.
16. For the gout, the falling euill, for thoſe
that bee blaſted or ſtrucken with a planer,
and bones broken.
17. Against Melancholie, and thoſe whoſe
braines bee troubled with fanſies, the le-
thargie, dropſie, wild fire or tetter, and the
paines or ach of the ſinewes, apt reme-
dies.
18. To ſtaunch blood, to cure vlcers or old
ſores, cankers and ſcabs.
19. Medicines appropriat to womens disea-
ſes.
20. Strange and wondrous things obserued in
ſundry beaſts.

In ſumme, here be reported medicines, ſto-
ries, and obseruations, to the number of a hundred
eightie and ſiue.

Latine Authours alledged,

*M. Varro, L. Piſo, Fabianus, Verres, Antias, Verrius Flaccus, Cato Cenſorius, Seruius Sulpitius, Lici-
nius Macer, Celfus, Maſſurius, Sextius Niger* who wrote in Greeke, *Bythus* the Dynhachian, *Ophilius*
the Phyſitian, and *Granius* the Phyſitian.

Forreine Writers,

Democritus, Apollodorus who wrote a book entituled *Myrſis*, *Miletus, Artemon, Sextilius, Antaus,*
Homer, Theophrastus, Lyſimachus, Attalus, Xenocrates who wrote a booke called *Diophros*, and *Ar-
chelaus* likewise that wrote ſuch another, *Demetrius, Sotira, Elephantis, Salpe,* and *Olympias* of
Thebes, ſiue women and midwiues, *Diotimus, Iolla, Miſſion* of Smyrna, *Eſchines* the Phyſician,
Hippocrates, Ariſtotele, Metrodorus, Icacidus the Phyſitian, *Hefiodus, Dialcon, Cacilius, Bion* the authour
of the booke *Peri Dynamæan*, *Anaxilaus*, and king *Iuba*.

¶ IN THE XXIX BOOKE ARE CONTAINED
medicines from other liuing creatures.

Chap.

1. The first beginning and originall of the Art
of Physicke: when Physicians began first to
viſit Patients lying ſicke in their beds: the
first Phyſitians that praſiſed the cure of
ſick perſons, by frictions, ointments, baths,
hot-houſes, &c. Of *Chryſippus* and *Eraſiſtra-
tus* their courſe and manner of praſiſe: of
Empiricke Physicke: of *Herophilus* and o-
ther famous Phyſitians: how often the Art
and ſtare of Physicke hath altered: the first
professed Phyſician at Rome; when it was
that hee praſiſed: what opinion the an-
cient Romans had of Physicians: finally the
imperfection and faults in that Art.
2. The medicinable vertues and properties
obserued in wooll.
3. The nature of eggs, and the vertues thereof

Chap.

- good in Physicke.
4. Remedies in Physicke receiued from doggs
and other creatures that are not tame but
wild: also from ſoules: and namely againſt
the ſtings of the venomous ſpiders *Phalan-
gia*.
5. Of the Oſtrich greace, and the vertues ther-
of: of a mad dog: also remedies had from
him, a lizard, geefe, doues, and weaſils.
6. Medicines againſt the falling of the haire,
and to make it grow againe: to kill nits: to
recouer the haire of the eye-lids: to cure the
dimneſſe and redneſſe, and generally all dif-
eaſes and accidents of the eyes, as also the
ſwellings and inflammations in the kernils
vnder the cares.

In ſum, there be medicines and other things worth obseruation in this booke, to the num-
ber of ſiue hundred twentie and one.

Latine Authours alledged,

*M. Varro, L. Piſo, Verrius Flaccus, Antias, Nigidius, Caſſius Hemina, Cicero, Plautus, Celfus, Sextius
Niger* who wrote in Greeke, *Cacilius* the Phyſician, *Metellus Scipio, Ouid* the Poet, and *Licini-
us Macer*.

Forreine Authours,

Philopater, Homerus, Ariſtotele, Orpheus, Democritus, Anaxilaus.

Physicians,

Botrys, Apollodorus, Archidemus, Anaxilaus, Ariſton, Xenocrates, Diodorius, Chryſippus the Philo-
ſopher, *Horus, Nicander, Apollonius* of Pytane.

¶ IN THE XXX. BOOKE ARE CONTAINED
medicines for liuing creatures, ſuch as were not obserued
in the former Booke.

Chap.

1. The beginning of the black Science & Art
magicke, when it began, who praſiſed it
first, and who were they that brought it in-
to requeſt and reputation. Also the reſt of
the medicines taken from beaſts.
2. Sundrie kinds of Magicke: the execrable
and curſed parts plaid by *Nero*, and of Ma-
gicians.
3. Of Warts or Mouldwarps: of liuing crea-
tures as well tame as ſauage which affourd

Chap.

- remedies, and thoſe are digeſted in order
according to the diſeaſes.
4. How to make the breath ſweet: againſt moles
and ſpots diſfiguring the face: remedies
for to cure the diſeaſes of the throat and
chaws.
5. Against the Kings euill, and namely when
the ſwelling is broken and doth run: to eaſe
the pain of the ſoulders, the heart and the
parts about it.

6. For

The first Booke of

Chap.

6. For the diseases of the lungs and liver: also to cure the casting and reiection of bloud vpward.
7. Remedies for the bloudie flix, and generally for all diseases of the bellie and the guts.
8. For the gravell and stone, for paines of the bladder, for swelling of the stones and rhe groine, of apostems or swellings in the kirkels and emunctories.
9. Against the gout of the feet and paines of other ioynts.
10. Remedies against many diseases that hold the whole bodie.
11. Against the jaundise, the phrensic, fevers,

Chap.

- and dropsie.
12. Against the wild fire, carbuncles, fellons or vncoms, burnes, scaldings, and shrinking of the finews.
13. To staunch bloud, to allay swellings in wounds: also to cure vlcers, greene wounds, and other maladies, diuerse remedies, all taken from liuing creatures.
14. To cure womens secret maladies, and to helpe conception.
15. Many receits and remedies huddled together one with another.
16. Certaine miraculous things obserued in beasts.

In summe, this booke sheweth vnto vs medicines and memorable obseruations 54.

Latine Authors cited.

M. Varro, Nigidius, M. Cicero, Sextius Niger who wrote in Greeke, and *Licinius Macer*.

Forreine Writers.

Eudoxus, Aristotle, Hermippus, Homer, Apion, Orphens, Democritus, and Anaxilans.

Physicians.

Botrys, Horus, Apollidorus, Menander, Archimedes, Ariston, Xenocrates, Diodorus, Chrysippus, Nicander, Apollonius, Pitaneus.

¶ THE XXXI. BOOKE SHEWETH MEDICINES gathered from fishes and water creatures: also it deliuereth vnto vs strange and wonderfull things as touching the Waters.

Chap.

1. Admirable matter obserued in the waters.
2. The difference of waters.
3. The nature and qualitie of waters: how to know good and wholesome waters from them that be naught.
4. The reason of some waters, that spring on a suddain, & so likewise cease and giue ouer.
5. Many historicall obseruations of waters.
6. The manner of water conduits, and how to draw them from their heads: when and how waters are to beeu'd which naturally are medicinable: how farre forth navigation or sailing vpon the salt water is good for the

Chap.

- health: medicines made of sea water.
7. Divers kinds of salt: the preparing and making thereof, together with the vertues medicinable of salt, and other considerations thereto belonging.
8. Of the fish Scamber or the Mackrell: of fish pickle: of Alex, a kind of brine or fish sauce
9. The nature of Salt, and the medicines made of it.
10. Sundrie sorts of Nitre, the handling and preparation thereof, the medicines and obseruation to it pertaining.
11. The nature of Spunges.

This booke comprehendeth medicines and notable obseruations 266.

Latine Authours alledged.

M. Varro, Cassius of Parma, Cicero, Mutius, Cor. Celsus, Trognus, Ouid, Polybius, and Sornatius.

Forreine Writers.

Callimachus, Ctesias, Eudicus, Theophrastus, Eudoxus, Theopompus, Polyclitus, Inba, Lycus, Apion, Epigenes,

Plinies Naturall Historie

Epigenes, Pelops, Apelles, Democritus, Thrasillus, Nicander, Memander the Comical Poet, Attalus, Sallustius, Dionysius, Andreas, Nigreatus, Hippocrates, Anaxilans.

¶ IN THE XXXII. BOOKE ARE CONTAINED other medicines behind, from fishes and water creatures.

Chap.

1. Of the fish Echeneis, his wonderfull propriety: of the Torpedo, and the Sea-hare: marvellous things reported of the red sea.
2. The naturall industrie, docilitie, and gentleness of some fish: where they will come to hand and take meat at a mans hand: in what countries fishes serue in stead of oracles.
3. Of those fishes that liue both on land and water: the medicines and obseruations as touching Castoreum.
4. Of the sea Tortoise: many vertues medicinable obserued in sundry fishes.
5. Receits of medicins taken from water creatures, digested and set in order according to sundry diseases, & first against poyson and

Chap.

- venomous beasts.
6. Of Oisters, Purple shell-fishes, & sea-weeds called Reits: their vertues medicinable.
7. Medicins against the shedding of the haire: how to fetch haire againe: also against the infirmities of eies, ears, teeth, and to amend the vicemely spots in the face. (ly.
8. Many medicins set down together vnorderly.
9. Remedies for the diseases of the liuer and sides, stomacke and bellie: others also disorderly put downe.
10. Against feuers and agues of all sorts, and many other infirmities.
11. A rehearfall of all creatures liuing in the sea, to the number of 122.

In summe, ye haue here medicines, stories, and obseruations, 928.

Latine Authors.

Licinius Macer, Trebins Niger, Sextius Niger who wrote in Greeke, *Ouid* the Poet, *Cassius Helmina, Mecanias, and L. Alceius.*

Forreine Writers.

*K. Inba, Andreas, * Salpe, Pelops, Apelles of Thafos, Thrasillus, and Nicander.*

* A Woman.

¶ THE XXXIII. BOOKE DECLARETH the natures of Mettals.

Chap.

1. In what estimation were the mines of gold at the first in the old world: the beginning of gold rings: the proportion of gold that our ancestors had in their treasure: the degree of knights or gentlemen at Rome: the priuiledge to weare gold rings, and who only might so do.
2. The courts and chambers of judges or justices at Rome: how often the gentlemen of Rome and men of armes changed their title: the presents giuen to valiant souldiours for their braue seruice in the wars: the first crowns of gold that were seene.
3. The ancient vse of gold besides, both in men & women: of the golden coine: when copper and brasse money was first stamped: when gold and siluer was put into coine: before money was coined, how they vsed brasse

Chap.

- for exchange in old time. At the first taxation and leuie made of Tribute, what was thought to be the greatest wealth; and at what rate were the best men seised. How often and at what time gold grew into credit and estimation.
4. The mines of gold, and how naturally it is found: when the statue or image of gold was first seene: medicinable vertues in gold.
5. Of Borras, and six properties of Borras in matters of Physicke: the wonderfull nature that it hath to foder all mettals, and giue them their perfection.
6. Of Siluer, Quick-siluer, Antimonic, or Alabaster: the drosse or refuse of siluer: also the scum or some of siluer called Litharge.
7. Of Vermilion: in what account it was in old time among the Romanes: the inuention thereof.

The first Booke of

- Chap.*
thereof: of Cinnabaris or Sangdragon vsed in painting and Physick: diuers sorts of vermillion, and how painters vse it.
8. Of Quicksilver artificiall: the maner of gilding silver: of touchstones: diuers experiments to trie silver: the sundry kinds thereof.
9. Of mirrors or looking-glasse: of the silver in Egypt.
10. Of the excessive wealth of some men: in money: who were reputed for the richest men: when it was that at Rome they began to make largesse and scatter money abroad

- Chap.*
to the commons.
11. Of the superfluitie of coine, and the frugalitie of others as touching silver plate, beds and tables of silver: when began first the making of excessive great and massie platters and chargers of silver.
12. Of silver statues: the grauing and chasing in silver, & other workmanship in that metall.
13. Of Sil, of Azur, of superfine Azur named Nestorianum: also of the Azur called Cœlum: that euery yere these kinds be not sold at one price.

This booke hath in it of medicines, stories, and obseruations, 1215.

Latine Authors alledged.

L. Piso, Antias, Verrinus, M. Varro, Cor. Nepos, Messula, Rufus, Marfus the Poet, Buthus, Iulius Bassus, and Sextius Niger, (who wrote both of Physicke in Greeke) and *Fabius Vellatius*.

Forreine Writers.

Democritus, Metrodorus Scepius, Menachmus, Xenocrates, and Antigonus, who wrote all three of the feat and skill of grauing, chasing and embossing in metall: *Heliodorus*, who wrote a booke of the rich ornaments and oblations of the Athenians: *Pasteles*, who wrote of wonderfull pieces of worke: *Nymphodoros, Timæus* who wrote of Alchymie or minerall Physicke: *Iolla, Apollodoros, Andreas, Heraclides, Diagoras, Botryerisus, Archimedes, Dionysius, Aristogenes, Democritus, Mnesicles, Attalus* the Physician, *Xenocrates* the sonne of *Zeno*, and *Theomnestus*.

¶ THE XXXIIII. BOOKE TREATETH of other Mettals.

- Chap.*
1. Mines of Brasse, Copper, Iron, Lead, & Tin.
2. Sundry kinds of Brasse, namely Corinthian, Deliacke, and Ægineticke.
3. Of goodly candlesticks, & other ornaments of temples.
4. The first images made at Rome: the originall of statues: the honour done to men by statues: sundry sorts and diuers forms of them.
5. Of statues pourtraied in long Robes; and of many others who first erected images vpon columnes and pillars at Rome: when they were allowed first at the cities charges: also what maner of statues the first wer at Rome.
6. Of statues without gowne or cassocke, and some other: the first statue pourtraied on horsebacke at Rome: when the time was that all Images as well in publike places as priuat houses were abolished at Rome and put downe: what women at Rome were allowed to haue their statues; and which were the first erected in publike place by forreine nations.

- Chap.*
7. The famous workemen in making & casting Images: the excessive price of Images: of the most famous and notable colosses or gyant-like images in the citie of Rome.
8. Three hundred sixtie and six peeces of work wrought in brasse by most curious and excellent artificers.
9. What difference there is in Brasse: the diuers mixtures with other mettals: how to keepe brasse.
10. Of Brasse ore called Cadmia, and for what it is good in Physicke.
11. The refuse or scum of Brasse, Verdegri: the skales of brasse and copper, Steele, copper rust, or Spanish greene: of the collyrie ore eye-salue called Hieracium.
12. Of a kinde of Verdegri named Scolecia: of Chalcitis, i. red Vitrioll, Myfy, Sory, and Coppore or Vitrioll, i. blacke Nil.
13. Of the soile of Brasse named white Nil or Tutia: of Spodium, Antispodium, of Diphryges, and the Trient of Seruilius.

14. Of

Plinies Naturall History.

- Chap.*
14. Of Iron and mines of Iron: the difference also of Iron.
15. Of the temperature of Iron: the medicinal vertues of Iron, and the rust of Brasse and Iron: the skales of Iron, and the liquid plaister named of the Greekes Hygemplastrum.

- Chap.*
16. The mines of Lead: of white and blacke Lead.
17. Of Tin, Of Argentine Tin, and some other minerals.
18. Medicines made of Lead & refuse of Lead, of Lead ore, of Ceruse or Spanish white, of Sandaricha of red Orpiment.

In summe, here are contained natable matters, stories, and obseruations, 815.

Latine Authours cited.

L. Piso, Antias, Verrinus, M. Varro, Messala, Rufus, Marfus the Poet, Buthus, Iulius Bassus, and Sextius Niger, who wrote both in Greeke of Physicke, and *Fabius Vellatius*.

Forreine Writers.

Democritus, Metrodorus Scepius, Menachmus, Xenocrates, Antigonus, and Duris, (who all foure wrote of grauing, chasing, and embossing mettals, a worke entituled *Toreutice*;) *Heliodorus*, who described the ornaments and oblations hanged vp in Athens: *Nymphodoros, Andreas, Heraclides, Diagoras, Botryerisus, Iolla, Apollodoros, Archimedes, Dionysius, Aristogenes, Diomedes, Mnesicles, Xenocrates* the sonne of *Zeno*, and *Theomnestus*.

¶ IN THE XXXV. BOOKE IS SHEWED IN what account Painting was in old time.

- Chap.*
1. The honour and regard of Pictures in times past.
2. In what price Images were of old.
3. When Images were first erected and set vp in publicke place, as also in priuat houses, with their scutcheons and armes: the beginning of pictures: the first draught of Pictures in one simple colour: the first Painters, and how ancient they were in Italic.
4. Of Roman Painters: the first time that Painting and Pictures grew into credit: who they were that drew their victories in colors vpon tables, and set them forth to be seen: and when forreine Pictures began to be of some good reckoning at Rome.
5. The art and cunning of drawing pictures: the colours that painters vse.
6. Of colours naturall and artificiall.
7. What colour will not abide to be laid wet: what colours they painted withall in old time: at what time first the combats of sword-fencers at vtterance, were set forth in painted tables to be seene.
8. How ancient the art of Painting is, when it began: a catalogue of the excellent workemen in that kind, and how their workmanship was prized and esteemed.
9. The first that contended & strone who could

- Chap.*
paint best: also who first vsed the pencill.
10. Of Pictures so liuely drawne that birds were deceived therewith: what is the hardest point in Painting.
11. The way to still birds that they sing and chatter nor: who was the first that deuised to enamell, or to set colours with fire, and with the pencill painted arched roufs and vaults; and among, the wonderful prizes that Pictures were set at in old time.
12. The first inuentors of potterie: of Images made of clay and cast in moulds: also of vessels made of earth, and their price.
13. Sundry sorts of earth for potters: of the dust or sand of Puteoli: of other kindes of earth which turne to be hard stone.
14. Of walls made by casting in moulds: also of bricke walls, and the manner of making them.
15. Of Brimstone & Alum, their diuers kinds and vse in Physicke.
16. Of sundry sorts of earth, & namely Samia, Eretria, Chia, Selenusia, Pingitis and Ampelitis, and the vse they haue in Physicke.
17. Sundry sorts of chalker for fullers to scoure clothes, to wit, Cimolia, Sarda, Vmblica, of a kind of earth called Saxum, as also that giueth a silver color & is called Argentaria.

18. Who

The first Booke of

Chap.

18. Who were they that enriched their slaues after they were enfranchised, and who they were of slaues came vp and grew to great wealth and power.

Chap.

19. Of the earth that comes out of the Island Galeta: of the earth Clupea: also, of that which commeth from the Balear Islands, and the Isle Ebufa.

In sum, the medicins, histories, and obseruations in this booke, amount to 956.

Latine Authors alledged.

Messala the Oratour, *Messala* the Elder, *Fenestella*, *Atticus*, *Verrinus*, *M. Varro*, *Cor. Nepos*, *Decimus Eculco*, *Mutianus*, *Melissus*, *Vitruvius*, *Cassius Senerus*, *Longulanus*, *Fabius Vastalis*, who also wrote of Painting.

Forreine Writers.

Pasiteles, *Apelles*, *Melanthius*, *Aclepiodorus*, *Euphranor*, *Parafius*, *Heliodorus*, who wrote of the Pictures and other ornaments set vp at Athens, *Metrodorus* (who likewise wrote of Architecture, to wit, Masonrie and Carpentrie:) *Democritus*, *Theophrastus*, *Apion* the Grammarian who also made a booke of Minerall or Chymicke Physicke, *Nymphodorus*, *Andreas*, *Heracides*, *Iolla*, *Apolodorus*, *Diagoras Botryensis*, *Archidemus*, *Dionysius*, *Aristogenes*, *Demanus*, *Menesicles*, *Xenocratos*, the scholler of *Zeno*, and *Theomnestus*.

¶ THE XXXVI. BOOKE TREATETH of Stones.

Chap.

1. The nature and propertie of stones: the superfluitie and expence about buildings, of marble.
2. Who first shewed at Rome columnes of marble in publike place.
3. The first that brought columns of marble to Rome out of forreine countries.
4. The first workemen that were commended for cutting in marble, and at what time that inuention began.
5. Excellent peeces of worke in marble to the number of 126. The cunning and curious workmen themselves: of the white marble of the Island Paros. The stately and admirable sepulchre Mausoleum.
6. When they began at Rome to build with marble: who was the first that ouercast the outside of walls with marble: at what times this or that kind of marble was taken vp in building at Rome: who cut marble first and brought it into leaues or thin plates by cutting: the manner thereof: also of sand.
7. Of the hard stone of Naxos, and Armenia: sundry kinds of marble.
8. Of the Alabastrer marble of Lygdinum and Alabandicum.
9. Of the great obeliske at Thebes in Ægipt, and at Alexandria: of that also which is in the great cirque or shew-place at Rome,

Chap.

10. Of that obeliske which standeth in Mars field at Rome, and serueth for a Gnomon or Stile in a quadrant or dyall.
11. Of a third obeliske at Rome in the Vatican.
12. Of the Pyramides in Ægipt, and a monstrous Sphynx of a wonderfull height.
13. Of the Mazes or Labyrinths in Ægipt, the Isle Lemnos, and in Italie.
14. Of hanging gardens made vpon terraces: of a great towne where all the houses were built vpon vaults and arches, seeming to hang in the aire: also of the temple of *Diana* in Ephefus.
15. Of the stately temple of Cyzicum: of a certaine rocke of stone called Fugitiue: of an Echo that rendreth the voice seven fold: of an house built without naile or pin: of the sumptuous and wonderfull buildings at Rome.
16. Sundry kinds of the Loadstone: the medicinal vertues and properties thereof.
17. Of certain stones which soone eat & consume dead bodies that be laid therein: of others againe that preferue them long: of the stone *Asius*, and the vertues of it.
18. Of Iuorie digged out of the earth: of stones conuerted into bones: of stones that represent palms imprinted in them, and of other kinds.

19. Of

Plinies Naturall Historie:

Chap.

19. Of Curalius, or a kind of Marquesite called Pyrites, and the vertues thereof: of the stone Ostracites, and Amiantus & the properties of it: of the stone Melitites, and the power thereof: of the Geat and his medicinal properties: of Sponge stones: of the stone Phrygius and his nature.
20. Of the Bloud-stone, and fure sorts of it, and of Schistus.
21. Foure kinds of the Ægle stone, of the stone within the bellie of them called Callimus: of the stones Samius and Arabus: also of Pumish stones.
22. Of stones meet for to make Apothecaries mortars, of soft stones, of the stone Specularis, & of Flints, of the shining stone Phenigites, of whetstones, and other stones meet for building: of stones that will resist the fire and abide all weather and tempest.

Chap.

23. Of Cesterns, of Limestone, sundry sorts of sand, the tempering of sand and lime for mortars: the ill building of some walls: of parget and roughcast: also columnes and buttresses in building.
24. The medicinal vertues of Quickelime, of Maltha, and Plaster.
25. Of paucements: when they were first vsed at Rome: of terraces and pauced floores lying open to the aire aboue: of certaine paucements called Græcanica: and when arched and embowed worke first began.
26. The first inuention of glasse: the manner of making it of a kind of glasse called Obsidianum: sundry sorts of glasse in great variety.
27. Wonderfull operations of fire: the vertues thereof medicinal, and the prodigious significations and prefaces by fire.

In summe, here you may find medicines, stories, and obseruations, in all 523.

Latine Authors.

M. Varro, *Calpus*, *Galba*, *C. Iulius*, *Mutianus*, *Cor. Nepos*, *L. Piso*, *Tubero*, *Seneca*, *Fabius Vastalis*, *Annianus*, *Facialis*, *Fabius*, *Cato Censorius*, and *Vitruvius*.

Forreine Writers.

Theophrastus, *Praxitiles*, *K. Tabn*, *Niceander*, *Sotacus*, *Sudines*, *Alexander*, *Polyhistor*, *Apion*, *Plistonius*, *Durus*, *Herodotus*, *Euemernus*, *Aristagoras*, *Dionysius*, *Artemidorus*, *Butoridas*, *Antisthenes*, *Democritus*, *Demoteles*, and *Lyceus*.

¶ IN THE XXXVII. BOOKE IS DECLARED the originall of pretious stones.

Chap.

1. The pretious stone of *Polycrates* the tyrant, also of *K. Pyrrhus*: who were the best lapidaries, & could cut excellently wel in stone: the first man that at Rome ware a pretious stone vpon his finger.
2. The rich stones that were shewed in the triumph of *Pompey* the Great: the nature and vertues of the Crystall stone: the costly vessels made thereof, and the superfluous expence that way: when the vessels of Cassiodore called Myrrhina, were first inuented: the wastfull expence in them: the nature and properties of them: what lies the Greekes haue told as touching Amber.
3. The true original and beginning of Amber: the medicinal vertues thereof: the sundry kinds, and the excessive cost that folke were at to get them: of Lincurium and the pre-

Chap.

- erties of it.
4. Of Diamonds, and their kinds: their vertues: also of Pearls.
5. Of the Hemerauld and diuers sorts of it: of other Greene pretious stones cleare and transparent.
6. Of the true Opall stones, their diuers kinds; and which be counterfeit: the meanes how to try them: also of diuers other rich stones.
7. Of Rubies and carbuncles: which be counterfeit: the waies to proue whether they be good or no. Also of other ardent stones like fire.
8. Of the Topaze, and all the kinds: of the Turquois: of other Greene stones that bee not cleare through.
9. Sundry sorts of the Iasper stone.
10. Of certaine pretious stones set downe in order.

The first Booke of

Chap.

order according to the Alphabet.
11. Of some pretious stones which take their denomination of the parts of mans bodie: also from other liuing creatures, & of those which haue the names from other things.

Chap.

12. Of other new stones growing naturally: of counterfeit and artificiall stones: of their sundry formes and fashions.
13. The manner and way how to proue fine stones from other.

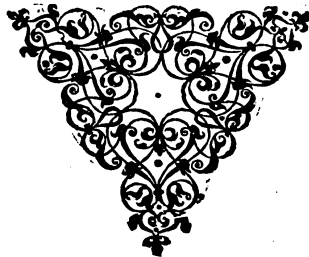
In summe, here are to be read of notable matters, worthy histories, and speciall obseruations, to the number of 1300, gathered out of

Latine Authours.

M. Varro, the Records of Romane triumphs, *Mecenas*, *Iacchus*, and *Cornelius Bocchus*.

Forreine Writers.

K. Iuba, *Xenocrates* the disciple of *Zeno*, *Sudines*, *Aeschylus*, *Philoxenus*, *Euripides*, *Nicander*, *Satyrus*, *Theophrastus*, *Chares*, *Philomenes*, *Democrates*, *Xenotimus*, *Metrodorus*, *Sotacus*, *Pytheas*, *Timaeus* the Sicilian, *Niceas*, *Theocrestus*, *Asaruba*, *M. nasea*, *Theomenes*, *Cresias*, *Mithridates*, *Sophocles*, *K. Arche-laus*, *Callistratus*, *Democritus*, *Ismenias*, *Olympicus*, *Alexander Polyhistor*, *Apion*, *Horus*, *Zoroastres*, and *Zactalas*.



THE SECOND BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS
SECVNDVS.

CHAP. I.

¶ Whether the World be finite, and but one.



C H E World, and this, which by another name men haue thought good to call heauen (vnder the pourprife and bending cope whereof, all things are emmanteled and couered) beleue we ought in all reason to be a God, eternally vnmeasurable, without beginning, and likewise endlesse. What is without the compasse hereof, neither is it fit for men to search, nor within mans wit to reach and conceiue. Sacred it is, euermlasting, infinit, all in all, or rather it selfe all and absolute: finite and limited, yet seeming infinite: in all motions orderly and certaine: howbeit in shew and iudgement of man, vncertaine: comprehending and containing all whatsoeuer, both without and within: Natures worke, and yet very Nature it selfe, producing all things. Great folly it is then, and meete madnesse, that **D** some haue deuised and thought in their minde to measure it, yea, and durst in writing set down the dimensions thereof: that others againe, by occasion hereupon taken or giuen, haue deliuered and taught, That worlds there were innumerable: as if we were to beleue so many natures as there were Heauens: or if all were reduced to one, yet there should be so many Sunnes and Moones neuerthelesse, with the rest also of those vnmeasurable and innumerable starres in that one: as though in this pluralitie of worlds we should not alwaies meet with the same question still at euery turne of our cogitation, for want of the vtmost and some end to rest vpon: or if this infinitenesse could possibly be assigned to Nature, the worke-mistresse and mother of all; the same might not be vnderstood more easily in that one Heauen which wee see; so great a worke especially and frame as it is. Now surely a fantasticall folly it is of all other follies, to go **E** forth of it, and so to keepe a seeking without, as if all things within were well and clearly knowne already: as who would say, a man could take the measure iust of any third thing, who knoweth not his owne: or the minde of man see those things, which the very World it selfe may not receiue.

CHAP. II.

¶ Of the forme and figure of the World.



F H A T the forme of heauen is round, in fashion of an absolute and perfect globe, the name thereof principally, and the consent of all men agreeing to call it in Latine *Orbis*, (i. a roundle; as also many naturall reasons, do evidently shew: to wit, not onely for that such a figure euery way falleth and bendeth vpon it selfe, is able to beare and vphold it selfe, includeth and compriseth it selfe, hauing need thereto of no ioints, as finding in any part thereof no end nor beginning: or because this forme agreeth best to that motion, whereby euery and anon it must turne about:

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Plinies Naturall Historie.

(as hereafter it shall appeare) but also because the eyesight doth approue the same: in that look which way soeuer you will thereupon, it seemeth to bend downward, round, and euen on all sides, shewing a iust Hemisphere, a thing not incident possibly to any other figure.

CHAP. III.

¶ Of the motion of Heauen.

That the world thus framed, in a continuall and vncessant circuit, with vspeakable swiftnesse turneth round about in the space of foure and twenty houres, the rising and setting ordinarily of the Sunne hath left cleare and doubtlesse. Now, whether it be led about, and neuer resteth in that reuolution, cannot be heard with our eares, I cannot so easily resolue and pronounce: no more I assure you, than I may auouch the ringing of the starres that are driuen about therewith, and toll with all their owne spheres: or determine, that as the Heauen moueth, it doth represent indeed a pleasant and incredible sweet harmonie both day and night: although to vs within, it seemeth to passe in silence. That there be imprinted therein the pourtraits of liuing creatures, and of all things besides without number, as also that the body thereof is not all ouer smooth and slicke (as we see in birds eggs) which excellent Authors haue termed *Tenerum* is shewed by good arguments: for that by the fall of naturall seeds from thence of all things, and those for the most part blended and mixed one with another, there are ingendred in the world, and the sea especially, an infinite number of strange and monstrous shapes. Ouer and besides, our eyesight testifieth the same; whiles in one place there appeareth the resemblance of a waine or chariot, in another of a beare, the figure of a bull in this part, of a letter in that, and principally the middle circle ouer our head, more white than the rest, toward the North pole.

CHAP. IIII.

¶ Why the World or Heauen is called *Mundus*.

Verily for mine owne part, moued I am and ruled by the generall consent of all nations. For, the World, which the Greekes by the name of ornament, called *Mundus*. And without all question, Heauen we haue named *Caelum*, as it were Engrauen and garnished, according as *M. Varro* interpreteth it. And hereto maketh much the orderly ranke of things therein, and namely the circle called *Signifer*, or the Zodiacke set forth and diuided by the formes of twelue liuing creatures therein portraied: together with the manner of the Sunnes race throughout them, keeping euer the same course still, for so many ages past.

CHAP. V.

¶ Of the foure Elements.

Neither see any doubt made as touching the Elements, That they be foure in number. The highest, Fire: from whence are those bright eyes of so many shining starres. The next, Spirit which the Greekes and our country men by one name called Aire: Vital this element is, and as it giueth life to all things, so it soone passeth through all, and is intermeddled in the whole: by the power wherof, the earth hangeth poised and ballanced iust in the midst, together with the fourth element of the Waters. Thus by a mutuall entertainment one of another, diuers natures are linked and knit together: so as the light elements are kept in & restrained by certain weights of the heauier, that they flie not out: and contrariwise the massier be held vp, that they fall not downe, by means of the lighter, which couer to be aloft. So, through an equall endeuor to the contray, each of them hold their owne bound as it were by the restlesse circuit of the very world: which, by reason that it maketh euen more upon it selfe, the earth falleth to be lowest, and the middle of the whole: and the same hanging steadily by the poles of the heauen, peiseth thofe

Plinies Naturall History.

A those elements by which it hangeth in a counterballance. Thus it alone resteth vnmoouable; whiles the whole frame of the world turneth about it: and as it is knit and vnited by all, so all rest and beare vpon the same.

CHAP. VI.

¶ Of the seuen Planets.

Betweene the earth and heauen there hang in the same spirit or element of aire about named, seuen stars, seuered one from another, and distant afunder certaine spaces, which of their variable motion wee call wandering planets, whereas indeed none stray and wander lesse than they. In the midst of them the Sun taketh his course, as being the greatest and most puissant of all the rest: the very ruler, not of times and seasons onely, and of the earth, but also of the starres and heauen it selfe. Beleue we ought, this Sun to be the very life, and (to speake more plainly) the soule of the whole world, yea, and the principall gouernance of nature: and no lesse than a God or diuine power, considering his workes and operations. He it is that giueth light to all things, and riddeth them from darknesse: he hideth the other starres, and sheweth them againe: he ordereth the seasons in their alternatiue course: he tempereth the yeare, arising euer fresh and new againe, for the benefit and good of the world. The lowering dimnesse of the skie he dispatcheth, yea, and cleareth the darke mists and clowdinesse of mans minde: to other stars likewise he lendeth out his owne light. Most excellent, right singular he is, as seeing all, & hearing all. For this, I see, is the opinion of *Homer* (the prince of learning) as touching him alone.

CHAP. VII.

¶ Of God.

I Suppose therefore that to seeke after any shape of God, and to assigne a forme and image to him, bewraith mans weakenesse. For God, whosoever hee be [if haply there be any other, but the very world] and in what part soeuer resiant, all sense he is, all sight, all hearing: he is all life, all soule, all of himselfe. And verily to beleuee that there be gods innumerable, and those according to mens virtues and vices, to wit, Chastitie, Concord, Vnderstanding, Hope, Honour, Clemencie, Faith; or (as *Democritus* was of opinion) that there are two gods onely, and no more; namely, Punishment, and Benefit: These conceits, I say, make mens idlenesse and negligencie the greater. But all commeth of this, That fraile and crasse mortall men, remembering wel their owne infirmities, haue digested these things apart, to the end that each one might from thence chuse to worship and honour that whereof he stood in need most. And hereupon it is, that in sundry nations we finde the same gods named diuersly, according to mens deuotion: and in one region ye shall haue innumerable gods. The infernall powers beneath likewise, yea, and many plagues haue been raunged by themselves, and reckoned for gods in their kinde, whilest with trembling feare wee desire that they were pacified. Which superstition hath caused a chappell to be dedicated to the Feuer, in the mount Palatium, euen by publike order from the State. Likewise an altar to *Orbona*, neere the temple of *Lares*: because another erected to *Bad Fortune* in *Esquiliaz*. And thereby we may conceiue that there are a greater number of gods in heauen aboue, than of men vpon earth: since that euery one of their owne accord make so many gods as they list, fitting themselves with *Iuno*es and *Genij* for their patrons. Now certain Nations there be that account beasts, yea, and some filthie things for gods; yea and many other matters more shamefull to be spoken: swearing by stinking meats, by garlick, and such like. But surely, to beleuee that gods haue contracted mariage, and that in so long continuance of time no children should be borne between them: also that some are aged, and euer hoarie and gray: others againe young and alwaies children: that they be blacke of colour and complexion, winged, lame, hatched of eggs, liuing and dying each other day, are meere fooleries, little better than childish toies. But it passeth and exceedeth all shamelesse impudencie, to imagine adulteries amongst them: erstfoones also chiding, scolding, harred, and malice: and more than that, how there be gods, patrons of theft and wickednesse. Whereas in very deed, a god vn-

to a man is he, that helpeth a man: and this is the true and direct path-way to everlasting glory. In this way went the noble Romans in old time: and in this tract at this day goeth, with heavenly pace, *Vespasian Augustus*, both he and his children: *Vespasian*, I say, the most mightie ruler of the whole world: whiles he relieueth the afflicted State of the Romane Empire and Common-weale. And this is the most ancient manner of requitall to such benefactors, That they should be canonized gods. And hereof came the names as well of all other gods, as of the stars and planets (which I haue mentioned before) in recognisance of mens good deserts. As for *Iupiter* verily and *Mercurie*, and other princes raunged among the gods, who doubteth that they were called otherwise among themselves? and who confesseth not how these be celestiall denominations, to expresse and interpret their nature.

Now, That the soueraigne power and deity, whatsoeuer it is, should haue regard of mankind is a toy and vanity worthy to be laughed at. For can we chuse but beleuee, can we make any doubt, but needs that Diuinity and Godhead must be polluted with so base & manifold a ministry? And hardly in manner may it be iudged, whether of the twain be better and more expedient for mankind to beleuee, that the gods haue regard of vs, or to be persuaded that they haue none at all: considering, That some men haue no respect and reuerence at all of the gods, others againe so much, as it is a very shame to see their superstition. Addicted these are and devoted to serue them by forein magicke ceremonies: they weare their gods vpon their fingers in rings, yea, they worship and adore monsters: they condemne and forbid some meats, yet they deuise others for them. Impose they do vpon them hard and vengible charges to execute, not suffering them to rest and sleep in quiet. They chuse neither mariages nor children, ne yet any one thing els, but by the approbation & allowance of sacred rites and mysteries. Contrariwise, others there are so godlesse, that in the very capitoll they vse deceit, and forswear themselves euen by *Iupiter*, for all that he is ready to shoot his thunderbolts: and as some speed wel enough with their wicked deeds and irreligion; so others againe feele the smart and are punished by the faines whom they adore, and the holy ceremonies which they obserue.

Howbeit, betwene both these opinions, men haue found out to themselves a middle God-head and diuine power, to the end that we should giue still a more vncertaine coniecture as touching God indeed. For throughout the whole world, in euery place, at all times, and in all mens mouths, Fortune alone is sought vnto and called vpon: she only is named and in request; shee alone is blamed, accused, and endited. None but shee is thought vpon; shee only is praised, shee only is reprobued and rebuked; yea, and worshipped is shee with railing and reprochfull tearms: and namely when shee is taken to be wauering & mutable: and of the most sort supposed also blind, rousing at random, vnconstant, vncertaine, variable, and fauoring the vnworthy: whatsoeuer is laid forth, spent, and lost, whatsoeuer is receiued, woon and gotten: all that comes in, all that goes out is imputed to Fortune: and in all mens reckonings and accounts shee makes vp the booke, and sets all freight. So abiect we are, so seruile also and enthralled to Lots, that euen the very chance of Lots is taken for a god, than which nothing maketh vs more doubtfull and ignorant of God.

Now there are another sort, that reiect Fortune & Chance both, and wil not abide them, but attribute the euents and issues of things, to their owne feuerall stars, and go by the fatall horoscope or ascendent of their natiuitie: affirming that the same shall euer befall, which once hath bin set downe and decreed by God: so as he for euer after may sit still and rest himselfe. And this opinion beginneth now to settle and take deep root, inso much as both the learned, and also the rude and ignorant multitude, run that way on end. From hence (behold) proceed the warnings & admonitions of lightnings, the fore-knowledge by Oracles, the predictions of Sooth-sayers, yea, and other contemptible things not worthy to be once spoken of; as freeing, and stumbling with the foot, are counted matters of presage. *Augustus Caesar* of famous memorie hath made report and left in writing, that his left foot shooe was vntowardly put on before the right, on that very day, when he had like to haue miscarried in a mutiny among his souldiers.

Thus these things euery one doe enwrap and entangle silly mortall men, void of all forecast and true vnderstanding: so as this only point among the rest remains sure and certain, namely, That nothing is certaine: neither is there ought more wretched and more proud withall; than man. For all liuely creatures else take care onely for their food, wherein Natures goodnes and bountie of it selfe is sufficient: which one point verily is to be preferred before all good things

*Here let
Christians take
heed, and be
thankfull to
God for the
light revealed
vnto them out
of the holy
scriptures;

A things whatsoeuer, for that they neuer thinke of glory, of riches, of seeking for dignities and promotions, nor ouer and aboue, of death. Howbeit, the beleefe that in these matters the gods haue care of mens estate, is good, expedient, and profitable in the course of this life: as also that the vengeance and punishment of malefactors may well come late (whiles God is busily occupied otherwise in so huge a frame of the world) but neuer misseeth in the end: and that man was not made next in degree vnto God, for this, That he should be wel-neare as vile and base as the brut beasts. Moreouer, the chiefe comfort that man hath, for his imperfections in Nature, is this, That euen God himselfe is not omnipotent, and cannot do all things: for neither he is able to worke his owne death, would he neuer so faine, as man can do when he is wearie of his life; the best gift which he hath bestowed vpon him, amid so great miseries of his life (nor indowd B mortall men with everlasting life: ne yet recall, raise, and reuiue those that once are departed and dead) nor bring to passe, that one who liued, did not liue, or he that bare honorable offices, was not in place of rule and dignity. Nay, he hath no power ouer things done and past, saue onely obliuion: no more than he is able to effect (to come with pleasant reasons and arguments to proue our fellowship therin with God) that twise ten should not make twenty: and many such things of like sort. Whereby (no doubt) is evidently proued, the power of Nature, and how it is she, and nothing els, which we call God. I thought it not impertinent thus to diuert and digresse to these points, so commonly divulged, by reason of the vsuall and ordinarie questions as touching the Essence of God. *Every thing is possible to God, but what is and is not possible*
Contradiction - 1.2. *And not Contradictions - therefore both possible & probable*

CHAP. VIII.

Of the Nature of Planets, and their circuit.



Et vs returne now to the rest of Natures workes. The stars which we said were fixed in heauen, are not (as the common sort thinketh) assigned to euery one of vs, and appointed to men respectiue, namely, the bright & faire for the rich; the lesse for the poore: the dim for the weak, the aged and feeble: neither shine they out more or lesse according to the lot and fortune of euery one, nor arise die likewise with the same: ne yet as they set and fall, do they signifie that any bodie is dead. D There is not, ywis, so great societie betwene heauen and vs, as that together with the fatall necessitie of our death, the shining light of the starres should in token of sorrow go out and become mortall. As for them, the truth is this; when they are thought to fall, they doe but shooe from them a deale of fire, euen of that abundance and ouermuch nutriment which they haue gotten by the attraction of humiditie and moisture vnto them, like as we also obserue daily in the wikes and matches of lampes or candles burning, with the liquour of oile. Moreouer, the celestiall bodies, which make and frame the world, and in that frame are compact and knit together, haue an immortall nature: and their power and influence extendeth much to the earth; which by their effects and operations, by their light and greatnesse might be knowne, notwithstanding they are so high and subtrill withall, as we shal in due place make demonstration. E manner likewise of the heavenly Circles and Zones shall be shewed more fitly in our Geographicall treatise of the earth, forasmuch as the consideration thereof appertaineth wholly thereunto: onely we will not put off, but presently declare the deuifers of the Zodiacke, wherein the signes are.

The obliquitie and crookednesse thereof, *Anaximander* the Milesian is reported to haue obserued first, and thereby opened the gate and passage to Astronomie, and the knowledge of all things: and this happened in the 58 Olympias. Afterwards *Clostratus* marked the signes therein, and namely those first of *Aries* and *Sagittarius*. As for the sphere it selfe, *Atlas* deuised long before. Now for this time we will leaue the very bodie of the starry heauen, and treat of all the rest betwene it and the earth.

F Certaine it is, that the Planet which they call *Saturne*, is the highest; and therefore seemeth least: so that he keepeth his course, and performeth his revolution in the greatest circle of all: and in thirtie yeares space at the soonest, returneth againe to the point of his first place. Moreouer, that the moouing of all the Planets, and withall of Sun and Moone, go a contrarie course vnto the starrie heauen, namely, to the left hand (i. Eastward:) whereas the said heauen alwaies

hasteneth to the right [i. Westward.] And albeit in that continuall turning with exceeding celerity, those planets be lifted vp aloft, and carried by it forcible into the West, and there set: yet by a contrarie motion of their owne, they passe euery one through their feuerall waies Eastward, and all for this, that the aire rolling euer one way, and to the same part, by the continuall turning of the heauen, should not stand still, grow dull, & as it were congealed, whiles the globe thereof reflecteth idle, but dissolue and cleaue, parted thus, & diuided, by the reuerberation of the contrarie beams, and violent crosse influence of the said planets. Now, the Planet *Saturne* is of a cold and frozen nature, but the circle of *Iupiter* is much lower than it, and therefore his reuolution is performed with a more speedy motion, namely, in twelue yerres. The third of *Mars*, which some call the Sphere of *Hercules*, is fry and ardent, by reason of the Suns vicinity, and wel-neere in two yerres runneth his race. And hereupon it is, that by the exceeding heate of *Mars*, and the vehement cold of *Saturne*, *Iupiter*, who is placed betwixt, is well tempered of them both, and so becommeth good and comfortable. Next to them is the race of the Sun, consistyng verily of 360 parts [or degrees:] but to the end that the obseruation of the shadowes which he casteth, may returne againe iust to the former marks, fise daies be added to euery yeare, with the fourth part of a day ouer and aboue. Whereupon euery fift yeere leapeeth, and one odde day is set to the rest: to the end that the reckoning of the times and seasons might agree vnto the course of the Sun. Beneath the Sun a goodly faire star there is, called *Venus*, which goeth her compasse, wandering this way and that, by turnes: and by the very names that it hath, testifieth her emulation of Sun and Moone. For all the while that she preuenteth the morning, and riseth Orientall before, she taketh the name of *Lucifer* (or Day-star) as a second Sun hastning the day. Contrariwise, when she shineth from the West Occidentall, drawing out the day light at length, and supplying the place of the Moone, she is named *Vesper*. This nature of hers, *Pythagoras* of Samos first found out, about the 42 olympias, which fel out to be the 142 yeere after the foundation of Rome. Now this planet in greatnesse goeth beyond all the other fise: and so cleare and shining withall, that the beames of this one star cast shadowes vpon the earth. And hereupon commeth so great diuersitie and ambiguitie of the names thereof: whiles some haue called it *Iuno*, other *Isis*, and other some the Mother of the gods. By the naturall efficacie of this star, all things are engendred on earth: for whether she rise East or West, she sprinckleth all the earth with dew of generation, and not onely filleth the same with seed, causing it to conceiue, but stirreth vp also the nature of all liuing creatures to engender. This planet goeth through the circle of the Zodiacke in 348 daies, departing from the Sun neuer aboue 46 degrees, as *Timaeus* was of opinion. Next vnto it, but nothing of that bignesse and powerful efficacie, is the star *Mercurie*, of some cleped *Apollo*: in an inferiour circle he goeth, after the like manner, a swifter course by nine daies: shining sometimes before the Sun rising, otherwhiles after his setting, neuer farther distant from him than 23 degrees, as both the same *Timaeus* and *Sofigenes* doe shew. And therefore these two planets haue a peculiar consideration from others, and not common with the rest aboue named. For those are seene from the Sun a fourth, yea, and third part of the heauen: oftentimes also in opposition full against the Sun. And all of them haue other greater circuits of full reuolution, which are to be spoken of in the discourse of the great yeare.

How much was this great emulation?

CHAP. IX.

¶ Of the Moones nature.

The Moone.



Vt the Planet of the Moone, being the last of all, most familiar with the earth, and deuised by Nature for the remedie of darknesse, out-goeth the admiration of all the rest. She with her winding and turning in many and sundry shapes, hath troubled much the wits of the beholders, fretting and fuming, that of this staire, being the neereft of all, they should be most ignorant, growing as it doth, or else waiting euermore. One while bended pointwise into tips of hornes: anotherwhiles diuided iust in the halfe, and anon againe in compasse round: spotted sometime and darke, and soone after on a sudden exceeding bright: one while big and full, and another while all at once nothing to bee seene. Sometime shining all night long, and otherwhiles late it is ere she riseth: shee also helpeth the Sunnes light some part of the day: eclipsed, and yet in that eclipse to be seene. The same at the moneths end lieth hidden, at what time (it is supposed) shee labour-

reth

- A reth and trauellet not. At one time yee shall see her below, and anon aloft: and that not after one manner, but one while reaching vp close to the highest heauen, and another while ready to touch the mountains: sometimes mounted on high into the North, and sometime cast down below into the South. Which feuerall constitutions and motions in her, the first man that obserued, was *Endymeeon*: and thereupon the voice went, That he was enamoured vpon the Moone. Certes, thankfull we are not, as we ought to be, vnto those who by their trauell and careful endeavour haue giuen vs light in this light. But delighted rather we are wonderously (such is the pestilent wit and wicked disposition of man) to record in Chronicles, bloudshed and murders: that lewd acts and mischieuous deeds should be knowne of them, who otherwise are ignorant of the world it selfe. Well, to proceed, the Moone being next to the Centre, and therefore of least compasse, performs the same course and circuit in feuen and twentie daies, and one third part of a day, which *Saturne* the highest planet runnes (as we said before) in thirty yerres. After this, making stay in coniunction with the Sun two daies, forth she goes, and by the thirtieth day at the most, returneth to the same point and ministry againe: the mistresse, if I may so say, and the teacher of all things Astronomicall, that may be known in heauen. Now by her meanes we taught that the yeere ought to be diuided into twelue moneths: for as much as, the Moone meeteth or ouertaketh the Sun so many times before he returneth to the same point where he began his course. Likewise that shee loseth her light (as the rest of the planets) by the brightness of the Sun, when she approacheth neere. For borrowing wholly of him her light, shee doth shine: much like to that which we see glittering and flying too and fro in the reflection and reuerberation of the Sun-beames from the water. And hereupon it is, that she, by her more mild and vnperfect power dissolueth, yea and increaseth, so great moisture as the doth, which the sun beames may consume. Hence it comes also, that her light is not euen and equall in sight, because then only when she is opposite vnto the Sunne, she appeareth full: but all other daies she sheweth no more to vs here on earth, than she conceiueh light of the Sunne. In time verily of coniunction or change, she is not seene at all: for that whiles she is turned away, all the draught of light, she casteth thither backe againe, from whence she receiued it. Now that these planets are fed doubtles with earthly moisture, it is euident by the Moone: which so long as she appeareth by the halfe in sight, neuer sheweth any spots, because as yet shee hath not her full power of light sufficient, to draw humour vnto her. For these spots be nothing else but the dregs of the earth, caught vp with other moisture among the vapors.

CHAP. X.

¶ Of the Sunne and Moones eclipse: and of the Night.

- MOREouer, the eclipse of the Moone and Sunne (a thing throughout the vniuersall contemplation of Nature most marvellous, and like a strange and prodigious wonder) doth shew the bignesse and shadow of these two planets. For euident it is, that the Sunne is hidden by the coming betweene of the Moone: and the Moone againe by the opposition of the Earth: also that the one doth quit the other, in that the Moone by her interposition bereaueth the Earth of the Sunnes raies, and the earth againe doth the semblable by the Moone. Neither is the Night any thing else but the shade of the Earth. Now the figure of this shadow resembleth a pyramis, pointed forward, or a top turned vp side downe: namely, when as it falleth vpon it with the sharpe end thereof, nor goeth beyond the heights of the Moone: for that no other starre is in that manner darkened: and such a figure as it, alwaies endeth point-wise. And verily, that shadowes grow to nothing in great space of distance, appeareth by the exceeding high flight of some fowles. So as the confines of these shadowes, is the vtmost bound of the aire, and the beginning of the fire. Aboue the Moone all is pure and light some continually. And we in the night doe see the starres, as candles or any other lights from out of darknesse. For these causes also the Moone in the night season is eclipsed onely.
- F But the reason why the Sun and Moone, are not both in the eclipse at set times and monethly, is the winding obliquitie of the Zodiacke, and the wandering turnings of the Moone one while fare South, and another while as much North (as hath been said:) and for that these planets do not alwaies in their motion meet iust in the points of the eclipticke line, to wit, in the head or taile of the Dragon.

CHAP. XI.

¶ Of the magnitude of Starres.

THe reason of this listeth vp mens mindes into heaven: and as if they beheld and looked downe from thence, discover vnto them the magnitude of the three greatest parts of the whole world. For the Sunnes light could not wholly be taken away from the earth, by the Moone comming betweene, in case the earth were bigger than the Moone. But the huge greatnesse of the Sunne is more certainly knowne, both by the shadow of the Earth, and the bodie of the Moone: so as it is needlesse to search and inquire into the largenesse thereof, either by prooffe of eie-sight, or by coniecture of the minde. How vnmeasurable it is, appeareth evidently by this, That trees which are planted in limits from East to West, casteth shadowes equall in proportion; albeit they be neuer so many miles assunder in length: as if the Sunne were in the middest of them all. This appeareth also about the time of the equinoctiall in all regions meridionall, when the Sunne shineth directly plumb over mens heads, and casteth no shadow. In like manner, the shadowes of them that dwell Northerly vnder the Solstitiall circle in Summer, falling all at noone tide, Northward, but at Sunne-rising, Westward, doing the same demonstration. Which possibly could not be, vnlesse the Sunne were far greater than the earth. Moreouer, in that, when he rises, he surpasses in breadth the hill Ida, compassing the same at large both on the right hand and the left, and namely, being so farre distant as he is. The eclipse of the Moone doth shew also the bignesse of the Sunne, by an infallible demonstration; like as himselfe eclipsed, declareth the littleness of the earth. For whereas there be of shadowes three formes and figures: and euident it is, that if the darke materiall body which casteth a shadow, be equall in bignesse to the light, then the shadow is fashioned like a colume or pillar, and hath no point at the end: if it be greater, it yeeldeth a shadow like a top directly standing vpon the point, so as the nether part thereof is narrowest, and then the shadow likewise is of infinite length: but if the said body be lesse than the light, then is represented a pyramidall figure like an hey-cocke, falling out sharpe pointed in the top; which manner of shadow appeareth in the Moones eclipse: it is plaine, manifest, and without all doubt, that the Sunne is much bigger than the earth. The same verily is seen by the secret and couert proofes of Nature it selfe. For why in dividing the times of the yeere, departeth the Sunne from vs in the winter? marry, euene because by meanes of the nights length and coolenesse, he would refresh the earth, which otherwise no doubt he should haue burnt vp: for, it notwithstanding, he burneth it in some measure, so excessiue is the greatnesse thereof.

CHAP. XII.

¶ The inuentions of man as touching the obseruation of the heauens.

THe reason verily of both eclipses, the first Romane that published abroad and divulged, was *Sulpitius Gallus*, who afterward was Consul, together with *M. Marcellus*: but at that time being a Colonell, the day before that King *Perseus* was vanquished by *Paulus*. he was brought forth by the Generall into open audience before the whole host, to fore-tell the eclipse which should happen the next morning: whereby he deliuered the armie from all penfuenesse and feare, which might haue troubled them in the time of battell, and within a while after he compiled also a booke thereof. But among the Greeks, *Thales Meseius* was the first that found it out, who in the eight and fortieth Olympias, and the fourth yeere thereof, did prognosticate and foreshew the Sunnes eclipse that happened in the reigne of *Halyattes*, and in the 170. yeere after the foundation of the citie of Rome. After them, *Hipparchus* compiled his Ephemerides, containing the course and aspects of both these planets, for six hundred yeeres ensuing: comprehending withall the moneths according to the calculation & reckonings of sundry nations, the daies, the houres, the scituation of places, the aspects, and latitudes of diuers townes and countries: as the world will beare him witnesse: and that no lesse assuredly, than if he had been priuie to Natures counsels. Great persons and excellent these were doubtlesse, who about the reach of all capacitie of mortall men, found out the reason of the course of so mighty starres and diuine powers: and whereas the sillie minde of men

WAS

A was before set and to seeke, fearing in these eclipses of the starres, some great wrong and violence, or death of the planets, secured them in that behalfe: in which dreadfull feare stood *Strechorus* and *Pindarus* the Poets (notwithstanding their lofty stile,) and namely at the eclipse of the Sun, as may appeare by their poems. As for the Moone, mortall men imagine, that by magicke, forceries, and charmes, she is enchanted, and therefore helpe her in such a case when she is eclipsed by dissonant ringing of basons. In this fearefull fit also of an eclipse, *Nicias* the Generall of the Athenians, as a man ignorant of the course thereof, feared to set saile with his fleet out of the haven, and so greatly endangered and distressed the state of his countrey. Faire chieue yee then for your excellent wit, O noble Spirits, interpreters of the heauens, capable of Natures works, and the deuisers of that reason whereby ye haue surmounted both God and man. For who is he, that seeing these things, and the painfull ordinarie trauels, since that this terme is now taken vp, of the stars, would not beare with his owne infirmitie, and excuse this necessitie of being born to die? Now for this present I will briefly and summarily touch those principall points which are confessed and agreed vpon as touching the said eclipses, hauing lightly rendred a reason thereof in most needfull places: for neither such prouing and arguing of these matters belongs properly to our purposed worke; neither is it lesse wonder to be able to yeeld the reason and causes of all things, than to be resolute and constant in some.

CHAP. XIII.

¶ Of Eclipses.

Certaine it is, that all Eclipses in 222 moneths haue their reuolutions, and return to their former points: as also that the Sun's eclipse neuer happeneth but vpon the change of the Moone, namely either in the last of the old, or first of the new, which they call conjunction: and that the Moone is neuer eclipsed but in the full, and alwaies somewhat preuent the former Eclipse. Moreouer, that euery yeare both planets are eclipsed at certaine daies and houres vnder the earth. Neither be these eclipses in all places seene when they are about the earth, by reason sometimes of cloudy weather, but most often, for that the globe of the earth hindereth the sight of the bending conuexitie of the heauen. Within these two hundred yeeres was it found out by the witty calculation of *Hipparchus*, that the Moone sometimes was eclipsed twice in five moneths space, and the Sun likewise in seven: also that the Sun and Moone twice in thirty daies were darkned about the earth: howbeit seene this was not equally in all quarters, but of diuers men in diuers places: and that which maketh me to maruell most of all in this wonder, is this, that when agreed it is by all, that the Moone light is dimmed by the shadow of the earth, one while this eclipse hapneth in the West, and another while in the East: as also by what reason it hapned, that seeing after the Sunne is vp, that shadow which dusketh the light of the Moone must needs be vnder the earth; it fell out once, that the Moone was eclipsed in the West, and both planets to be seene about the ground in our horizon: for that in twelue daies both these lights were missing, and neither Sun nor Moon were seene, it hapned in our time, when both the *Vespasians* (Emperors) were Consuls, the father the third time, and the son the second.

CHAP. XIV.

¶ Of the Moones motion.

Clearer it is, that the Moone alwaies in her encreasing hath the tips of her hornes turned from the Sun toward the East: but in the waine contrariwise Westward. Also that she shines the first day of her apparition, 3 parts, and the foure and twentieth part of an houre, and foriseth in proportion the second day forward, vnto the full: and likewise decreaseth in the same manner to the change. But alwaies she is hidden in the change within fourteen degrees of the Sunne. By which argument we collect, that the magnitude of the other Planets is greater than that of the Moone, for so much as they appeare otherwhiles when they be but seven degrees off. But the cause why they shew lesse, is their altitude: like as also the fixed starres, which by reason of the brightnesse of the Sunne are not seene in the day time; whereas indeed they shine as clearely by day as by night. And that is manifestly proued by some

some eclipses of the Sun, and exceeding deepe pits, for so they are to be seene by day light.

CHAP. XV.

¶ General rules touching the motions and lights of other Planets.

THose three which we say are about the Sun be hidden when they goe their course together with him. They arise in the morning, and be called Orientall Matutine, and neuer depart farther than eleuen degrees. But afterwards meeting with his raies and beames, they are couered, and in their triple aspect retrograde, they make their morning station a hundred and twenty degrees off, which are called the first; and anon in a contrarie aspect or opposition, 180 degrees off, they arise in the euening, and are Occidentall Vespertine. In like sort approaching from another side within an hundred and twenty degrees, they make their euening stations, which also they call the second, vntill he ouertake them within twelue degrees, and so hide them, and these are called the euening settings. As for *Mars*, as he is neerer vnto the Sun, so feelerh he the Sun beames by a quadrant aspect, to wit ninetic degrees, whereupon that motion tooke the name, called the first and second Nonagenarie from both risings. The same planet keepeth his stationarie residence six moneths in the signes: whereas otherwise of his owne nature but two moneths. But the other planets in both stations or houses continue not all out foure moneths apiece. Now the other two inferiour planets vnder the Sun go downe and are hidden after the same manner in the euening Coniunction, and in as many degrees they make their morning rising: and from the farthest bounds of their distance they follow the Sun, and after they haue once ouertaken him, they set againe in the morning, and so outgo him. And anon keeping the same distance, in the euening they arise againe vnto the same limits which we named before, from whence they are retrograde, and return to the Sun, and by the euening setting they be hidden. As for *Venus*, she likewise maketh two stations, according to the two manners of her apparance, morning and euening, when she is in farthest bounds and vtmost points of her Epicycle. But *Mercurie* keepeth his stations so small a while that they cannot be obserued. This is the manner and order as well of the lights and appearances of the planets, as of their occultations, and keeping close intricate in their morion, and enfolded within many strange wonders. For change they do their magnitudes and colours; sometime they approach into the North, the same againe go backe toward the South, yea, and all on a sudden they appeare one while neerer to the earth, and another while to the heauen: wherein if we shall deliuer many points otherwise than former Writers, yet confesse we do, that for these matters we are beholden vnto them, who first made demonstration of seeking out the wayes thereto: howbeit let no man dispaire, but that hee may profit and goe forward alwaies in further knowledge from age to age. For, these strange motions fall out vpon many causes. The first is, by reason of those eccentrique circles or Epicycles in the stars, which the Greekes call *Abfides*; for needs we must vse in this treatise the Greeke termes. Now euery one of the planets haue particular Auges or circles aforesaid by themselves, and these different from those of the starry heauen: for that the earth from those two points which they call Poles, is the very centre of the heauen, as also of the Zodiacke, scituate ouerthwart betweene them. All which things are certainly knowne to be so by the compasse, that neuer can lie. And therefore for euery centre there arise their owne *Abfides*, whereupon it is, that they haue diuers circuits, and different motions, because necessarie it is, that the inward and inferiour *Abfides* should be shorter.

CHAP. XVI.

¶ Why the same Planets seeme sometime higher, and some lower.



The highest *Abfides* therefore from the centre of the earth are of *Saturne*, in the signe Scorpio: of *Iupiter*, in Virgo: of *Mars*, in Leo: of the Sun, in Gemini: of *Venus* in Sagittarius: of *Mercury* in Capricorne: and namely in the middle or fifteenth degree of the said signes: and contrariwise the said planets in the same degrees of the opposite signes are lowest, and to the centre of the earth neereft. So it cometh to passe, that they seeme to moue more slowly when they goe their highest circuit: not for that

At that naturall motions doe either hasten or slacke, which be certaine and seuerall to euery one: out because the lines which are drawne from the top of the *Abfides*, must needs grow narrow and neere together about the centre, as the spokes in cart wheelles: and the same motion by reason of the neerenesse of the centre, seemeth in one place greater, in another lesse. The other cause of their subtilities is, for that in other signes they haue the *Abfides* eleuated highest from the centre of their own eccentrique circles. Thus *Saturne* is in the height of his Auge in the 20. degree of Libra, *Iupiter* in the 15. of Cancer, *Mars* in the 28. of Capricorne, the Sunne in the 29. of Aries, *Venus* in the 16. of Pisces, *Mercurie* in the 15. of Virgo, and the Moone in the 4. of Taurus. The third reason of their altitude or eleuation, is not taken from their Auges or circles eccentric, but vnderstood by the measure and conuexitie of heauen, for that these planets seeme to the eie as they rise and fall, to mount vp or settle downward through the aire. Hereunto is knit and vnited another cause also, to wit, the Zodiaks obliquitie, & latitude of the planets, in regard of the eclipticke: For through it the starres which we called wandering, do moue and take their course. Neither is there any place inhabited vpon earth, but that which lieth vnder it. For at the circle of the Zodiacke, 2. degrees: which is supposed to be the very efficient cause, that certaine liuing creatures are ingendred and bred euen in the desert and vnhabitable parts of the world. The Moone likewise rangeth throughout all the bredth of it, but neuer goeth out of it. Next after these, the starre of *Mercurie* hath the largest scope in the Zodiacke, but yet so, as of 12. degrees (for that is the bredth thereof) he wandreth out 8. and those none equally, but two in the midst, foure aboue, and two beneath. Then the Sunne in the midst, goeth alwaies betwene the two extremities of the Zodiacke: but in his declining course from South and North, he seemeth to wind bias after the manner of Dragons or Serpents, vnequally. *Mars* in his latitude reacheth the eclipticke line foure halfe degrees, *Iupiter* two degrees and a halfe, *Saturne* no more but two, like as the Sunne. Thus you see the manner of the latitudes, as they descend Southward, or ascend Northward. And vpon this is the reason grounded also of the 3. opinion of them, who imagine that the planets do arise and mount from the earth vpward into heauen. For very many haue thought, although vntuly, that they climbe in this manner. But to the end that they may be reproofed and confuted, we must lay open an infinite and incomprehensible subtiltie, & that which containeth all those causes & reasons aboue said. First therefore this is a reed on and resolved, that these stars or planets in their euening setting, are neereft to the earth, both in regard of latitude, & also of altitude: and then they be called Occidentall Vespertine, when the Sun toward the euening couereth them with his raies: also, when they be farthest from the earth, as well in latitude as eleuation, they be Orientall Matutine, & arise or appeare in the morning before the Sun is vp: as also that then they are Stationaries in their houses, which be in the middle points of the latitudes which they call eclipticks. Likewise, confessed it is, that so long as the planets are neer to the earth, their motion seemeth to encrease & be quicke: but as they depart on high, to decrease and be slow. And this reason is approued & confirmed principally by the eleuations and depressions of the Moone. As doubtles it is also, and held for an infallible rule, that euery planet being Orientall Matutine, riseth euery day higher than other. The superior three about the Sun diminish euen from their first stations vnto the second. Which being so, it will plainly appeare, that euery planet Orientall Matutine, rising before the Sun, begins to mount the latitude Septentrional, & decline from the Ecliptick Northward: in such sort, that from the time they begin to dismarch, their motion increases by little and little more spaciouly. But in the first Stations, they are at the highest altitude & ascent: for then and not before, the numbers begin to be withdrawne, & the planets to go backward, and be retrograde. Whereof a particular reason by it selfe may be giuen, in this manner: The Planets being smitten in that part wherof we spake, they are both inhibited by the triangular beames or Trine aspect of the sun, to hold on a straight and direct course in the longitude of heauen, and so be retrograde: and so are raised vp aloft by the fire power of the said sun. This cannot presently at the first be vnderstood by our eiesight: whereupon they are supposed to stand, and hereof their Stations took the name. Then proceedeth forward the violence of the Sun beames or aspect, and the vapour thereof by repercussion, forceth them to be euidently retrograde, and go backward. And much more is this perceiued in their euen rising, when they be Orientall Vespertine, when the Sun is wholly against them, and when they be driuen to the very top of their *Abfides*, and so not seene

at all, because they are at the highest, and goe their least motion, which is so much the lesse, when as it hapneth in the highest signes of their Auges or *Abides*. From the euen arising after the Sunne setting, they descend toward the latitude meridian all, for now the motion lesse diminisheth, but yet encreaseth not before the second stations: for that they are forced to descend, by reason of the Sun beames comming from the other side of their Epicycle: and the same force beareth them downward againe to the earth, which by the former triangular aspect raised them aloft towards heauen. So much skilleth it whether the said beames came from beneath or aboue. The same happeneth much more in the euen setting, when they be hidden with the raies of the Sun. This is the reason of the superiour planets aboue the Sunne: but the Theoricque is more difficult of the rest, and hath by no man before vs been deliuered.

CHAP. XVII.

¶ Generall rules as touching the Planets.



First and formost therefore let vs set downe the cause why *Venus* starre neuer departeth from the Sunne more than 46. degrees, and *Mercurie* not aboue 23. and (being as they are diuers Planets) why oftentimes they retyre backe vnto the Sunne within that compasse. For to be resolu'd in this point, note we must, that both of them haue their *Abides* turned opposite to the rest, as being seated vnder the Sun: and so much of their circles is vnderneath, as the forenamed were aboue: and therefore farther off they cannot be, because the curuature and roundle of their *Abides* in that place hath no greater longitude. Therefore both edges of their *Abides*, by a like proportion keepe an indifferent meane, & their course is limited: but the short spaces of the longitudes, they recomperce againe with the wandering of their latitudes. But what is the reason that they reach not alwaies to 46. degrees, and to 23. yes ywis do they: but this the Canonick Astronomers haue missed of in their Aphorismes. For it is apparent, that their *Abides* also or Auges do moue, because they neuer ouerpasse the Sunne. And therefore when their edges from either side are perceived to fall vpon the very point, then the planets also are supposed to reach vnto their longest distances: but when their edges or the points of their Epicycles be short so many degrees, the starres themselves are thought to returne more speedily in their retrogradation, than in their direct course forward, albeit the vtmost extremitie which they both haue, is euer the same. And from hence is the reason vnderstood of the contrary motions of these two planets. For the superiour planets moue most swiftly in the euen setting, but these most slowly. They, I say, be farthest from the earth, when they moue slowest; and these when they goe swiftest: for as in the former the neerenesse of the centre hasteneth them; so in these, the extremitie of the circle: they, from their mornerising begin to slack their celeritie; but these, to encrease it: they returne back from their morning Station to their euening mansion; but *Venus* contrariwise is retrograde from the Station Vespertine, to the Matutine. Howbeit, she from the morne rising beginneth to climbe the latitude Septentrionall: but to follow the altitude and the Sunne, from the morning station, as being most swift, and at the highest, in the morne setting. Moreouer, shee beginneth to digresse in latitude, and to diminish her motion from the morne rising; but, to be retrograde, and withall to digresse in altitude, from the euening station. Again, the planet *Mercury*, being Oriental Matutin, begins both waies to climb, that is, to mount higher day by day; but to digresse in latitude, being Oriental Vespertine: and when the Sunne hath overtaken him within the distance of fiftene degrees, he stands still for foure daies vnmoueable. Within a while he descendeth from his altitude dayly, and goeth backe retrograde from the euen setting, namely, when the Sunne hideth him with his raies, to the Moone rising, when hee appeareth before the Sunne is vp. This starre onely, and the Moone, descend in as many daies as they ascend. But *Venus* ascendeth vp to her station in fiftene daies and the vantage. Again, *Saturne* and *Jupiter* are twice as long descending, and *Mars* foure times. See how great variety is in their nature, but the reason thereof is euident. For they which go against the vapour and heate of the Sunne do also hardly descend. Many secrets more of Nature, and lawes whereunto she is obedient, might be shewed about these things. As for example: The planet of *Mars*, whose course of all others can be least obserued, neuer maketh station but in quadrate aspect: as for *Jupiter*, in triangle aspect: and very feldome seuered from the Sunne 60. degrees, which number maketh fix angled formes of the heauen,

A heauen, that is to say, is the iust sixth part of the heauen: neither doth *Jupiter* shew his rising in the same signe this yeare, as in the former, saue onely in two signes, *Cancer* and *Leo*. The planet *Mercurie* feldome hath his euen rising in *Pisces*, but very often in *Virgo*, and the morne rising in *Libra*. In like manner, the morne rising in *Aquarius*, but very feldome in *Leo*. Neither becommeth he retrograde in *Taurus* and *Gemini*: and in *Cancer*, not vnder the 25 degree. As for the Moone, she entrench not twice in coniunction with the Sun in any other signe but in *Gemini*; and sometime hath no coniunction at all, and that only in *Sagittarius*. As for the last and first of the Moone, to be seene in one and the selfe same day or night, hapneth in no other signe but *Aries*, and few men haue had the gift to see it: and hereupon came *Lincolne* to be so famous for his eye sight. Also the planets *Saturne* and *Mars* are hidden with the Sun beames, and appeare not in the heauen at the most 170 daies: *Jupiter* 36, or at least ten daies wanting, *Venus* 69, or when least 52. *Mercury* 31, or at least 17.

CHAP. XVIII.

¶ What is the cause that the Planets alter their colour.

The reason of the Planets altitudes is it that tempereth their colours, according as they be neerer or farther off from the earth. For they take the likenesse of the aire, into the coasts whereof they enter in their ascent: and the circle or circumference of another Planets motion coloureth them as they passe either way, ascending or descending. The colder setteth a pale colour, the hotter a red, and the windie a searefull and rough hue. Onely the points and coniunctions of the *Abides*, and the vtmost circumferences shew a darke blacke. Each planet hath a seuerall colour: *Saturne* is white, *Jupiter* cleare and bright, *Mars* fierie and red, *Venus* Orientall (or *Lucifer*) faire, Occidentall (or *Vesper*) shining, *Mercury* sparkeling his raies; the Moone pleasant, the Sunne when he riseth burning, afterwards glittering with his beames. Vpon these causes the sight is intangled, and discouereth euen those stars also which are contained and fixed in the sky, more or lesse. For one while a number of them appeare thicke about the halfe Moone, when in a cleare and calme night she gently beautifieth them. Another while they are seene but here and there, insomuch as we may wonder that they are fled vpon the full Moone, which hideth them: or when the beams either of the Sun or other aboue said haue dazzled our sight. Yea, the very Moone her selfe hath a feeling doubtlesse of the Sun beames, as they come vpon her: for those raies that come sidelong, according to the conuexitie of the heauen, giue but a darke and dim light to the Moone, in comparison of them that fall directly with straight angles. And therefore in the quadrangle aspect of the Sun she appeareth diuided in halfe: in the triangle she is well neere inuironed, but her circle is half empty and void, howbeit in the opposition she seemeth full: and againe, as she is in the waine she representeth the same formes, decreasing by quarters as she increased, with like aspects as the other three planets aboue the Sun.

CHAP. XIX.

¶ The reason of the Suns motion, and the vnequalitie of daies.

As for the Sun himselfe, a man may obserue foure differences in his course, twice in the yeare making the night equall with the day, to wit, in the Spring and Autumne, for then he falleth iust vpon the centre of the earth, namely in the eighth degree of *Aries* and *Libra*. Twice likewise exchanging the compasse of his race; to lengthen the day from the *Bruna* or mid-winter, in the eighth degree of *Capricorne*: and againe to lengthen the night from the Sommer Sunsted, being in as many degrees of *Cancer*. The cause of vnequall daies is the obliquitie of the Zodiack: whereas the one halfe iust of the world, to wit, fix signes of the Zodiack, is at all times aboue and vnder the earth. But those signes which mount vpright in their rising, hold light a longer tract, and make the daies longer: whereas they which arise crooked and gobyas passe away in shorter and swifter time.

CHAP. XX.

¶ Why lightnings are attributed to *Iupiter*.

Most men are ignorant of that secret, which by great attendance vpon the heauens, deepe Clerkes and principall men of learning haue found out: namely, that they be the fires of the three vppermost planets, which falling to the earth carry the name of lightnings: but those especially which are seated in the midst, to wit, about *Iupiter*, haply because participating the excessiue cold and moisture from the vpper circle of *Saturne*, and the immoderate heate from *Mars* that is next vnder, by this meanes he dischargeth the superfluitie, and hereupon it is commonly said, that *Iupiter* shooteth and darteth lightnings. Therefore, as out of a burning piece of wood a cole of fire flieth forth with a cracke; euen so from a star is spit out as it were and voided forth this cœlestiall fire, carrying with it presages of future things: so as the heauen sheweth diuine operations euen in these parcels and portions which are reiected and cast away as superfluous. And this most commonly hapneth when the aire is troubled, either because the moisture that is gathered moueth and stirreth forward that abundance to fall; or else for that it is disquieted with the birth (as it were) proceeding from a great bellied starre, and therefore would be discharged of such excrements.

CHAP. XXI.

¶ The distances of the Planets.

Many haue essayed to finde out the distance and eleuation of the planets from the earth, and haue set downe in writing, that the Sun is distant from the Moon 18 degrees, euen much as the Moone from the earth. But *Pythagoras*, a man of a quicke spirit, hath collected, that there are 126000 furlongs from the earth to the Moone, and a duple distance from her to the Sun, and so from thence to the twelue signes three times so much. Of which opinion was also our countreyman *Gallus Sulpitius*.

CHAP. XXII.

¶ Of the Planets musicke and harmonie.

But *Pythagoras* otherwhiles vsing the termes of Musicke, calleth the space betweene the earth and the Moone a Tonus, saying, that from her to *Mercurie* is halfe a tone, and from him to *Venus* in manner the same space. But from her to the Sun as much and half againe: but from the Sunne to *Mars* a Tonus, that is to say, as much as from the earth to the Moone. From him to *Iupiter* halfe a Tonus: likewise from him to *Saturne* halfe a Tonus: and so from thence to the signifer Sphere or Zodiacke, so much and halfe againe. Thus are composed seuen tunes, which harmonie they call Diapason, that is to say, the Generalitie, or whole state of consent and concord, which is perfect musicke. In which, *Saturne* moueth by the Dorick tune: *Mercury* by Phthongus; *Iupiter* by the Phrygian; and the rest likewise. A subtilty more pleasant yw is than needfull.

CHAP. XXIII.

¶ The Geometry or dimension of the world.

A Stadium or Furlong maketh of our paces an hundred twentie and fise, that is to say, six hundred twenty and fise foot. *Pofidonius* saith, That from the earth it is no lesse than forty stadia, to that height or altitude wherein thicke weather, windes, and clouds doe engender. Aboue which, the aire is pure, cleare, and light, without any troubled darkenesse. But from the cloudy and muddy region to the Moone is 2000000 stadia: from thence to the Sun fise thousand. By means of which middle space betweene it commeth to passe, that so exceeding great as the Sun is, he burneth not the earth. Many there be morouer, who haue taught, that the clouds are eleuated to the hight of nine hundred stadia. Vnknown these points are,

Are, and such as men cannot wind themselves out of: but as well may they now be deliuered to others, as they haue bin taught to vs in which notwithstanding, one infallible reason of a Geometrical collection which neuer lieth, cannot be reiected, if a man will searce deep into these matters. Neither need a man to seeke a iust measure hereof; for to desire that, were in manner a point of fond and foolish idlenesse, as if men had nothing else to do, but onely to make an estimate, and resolve vpon a guesse and coniecture thereof. For, whereas it is plaine and apparent by the course of the Sunne, that the circle through which he passeth, doth containe three hundred threescore, and almost six degrees: and alwaies the dimetrent line, or diameter, taketh a third part of the circumference, and little lesse than a seuenth part of a 3. it is plain, that deducting one halfe thereof (by reason that the earth seituates as a centre, commeth betweene) the first part well neere of this great circuit which he makes about the earth (so farre as our mind doth comprehend) is the very height from the earth vp to the Sunne, but the twelfth part to the Moone, because she runneth so much a shorter compasse than the Sun: whereby it appeareth, that she is in the middest betweene the earth and the Sun. A wonder it is to see how farre the presumptuous minde and heart of man will proceed, and namely being imited and drawne on by some little successe, as in the aboue named matter. The reason whereof ministrith plenteous occasion of impudencie, for they who dared once to giue a guesse at the space betweene the Sun and the earth, are so bold to do the like from thence to heauen. For presuming, that the Sunne is in the middest, they haue at their fingers ends by and by the very measure also of the whole world. For look how many seuen parts the dimetrent hath, so many 22. parts or thereabout hath the whole circle: as if they had gotten the iust and certain measure of the heauen by leuel, and the plumb or perpendicular line. The Egyptians according to the reckoning which *Petofiris* and *Necessos* haue inuented, do collect, That euery degree in the circle of the Moone, which is the least (as hath been said) of all other, containeth 33. stadia, and somewhat more: in *Saturne*, the greatest of all the rest, duple so much: and in the Sunne, which we said was the middest, the halfe of both measures. And this computation hath very great importance, for he that will reckon the distances betweene the circle of *Saturne* and the Zodiacke, by this calculation shall multiplie an infinite number of Stadia.

CHAP. XXIII. ¶ Of sudden Starres.

D There remaine yet some few points as touching the world: for in the very heauen there be Starres that suddenly arise and appeare, whereof be many kindes.

CHAP. XXV.

¶ Of Comets or blazing stars, and cœlestiall prodigies, their nature, situation, and diuers sorts.



E Hese blazing starres the Greekes call *Cometas*, our Romanes *Crinitas*: dreadfull to be seene, with bloody haire, and all ouer rough and shagged in the top like the bush of haire vpon the head. The same Greekes call those starres *Pogonias*, *Pogonias* which from the nether part haue a maine hanging downe, in fashion of a long beard. As for those named *Acrotie*, they brandish and shake like a speare or dart, signifying great swiftnesse. This was it, whereof *Tiberius Cesar* the Emperour wrote an excellent Poeme in his fift Consulship, the last that euer was seene to this day. The same, if they be shorter and sharpe pointed in the top, they vse to call *Xiphie*: and of all other palest they be, and glitter like a sword, but without any reies or beames: which another kind of them, named *Disiens* (resembling a dish or coit, whereof it beareth the name, but in colour like to amber) putteth forth here and there out of the brimmes and edges thereof. As for *Pitheus*, it is seene in forme of tunnes, enuironed within a smokie light, as if it were a concautie. *Cerattas* resembleth an horne: and such a one appeared when the whole manhood of Greece fought the battell of Salamis. *Lampadias* is like to burning torches: and *Hippus* to horse maines, most swift in motion, & turning round. There is also a white Comet with siluer haire, so bright and shining, that hardly a man can endure to looke vpon it, and in mans shape it sheweth the very image of a god. Moreouer, there be blazing starres that become all shaggie, compassed round with hairie fringe, and a kind of maine. One heretofore appearing in the forme of a main, changed

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g d,

ged into a speare, namely in the 108 Olympias, and the 398 yeare from the foundation of Rome. Noted it hath bin, that the shortest time of their appearance is a seuen-night, and the longest eighty daies: some of them moue like the wandering planets; others are fixed fast, and stir not. All in maner are seen vnder the very North star called *Charlemaignes* Wain: some in no certain part thereof, but especially in that white, which hath taken the name of the * Milk circle. *Aristotle* saith that many are seene together, a thing that no man else hath found out, so far as I can learne. Mary, boisterous windes and much heate of weather are foretoked by them. There are of them scene also in Winter season, and about the Antarticke South pole; but in that place without any beames. A terrible one likewise was scene of the people in Ethiopia and Egypt, which the King who reigned in that age named Typhon. It resembled fire, and was pleited and twisted in manner of a wreath, grim and hideous to be looked on, and no more truly to be counted a star than some knot of fire. Sometimes it falleth out, that the planets and other stars are bespred all ouer with haire: but a Comet lightly is neuer seen in the west part of the heauen.

A fearefull star for the most part this Comet is, and not easily expiated; as it appeared by the late ciuill troubles when *Octavianus* was Consul: as also a second time, by the intestine war of *Pompey* and *Cesar*. And in our dayes about the time that *Claudius Cesar* was poysoned, and left the Empire to *Domitius Nero*, in the time of whose reigne and gouernment there was another in manner continually seen, and euer terrible. Men hold opinion, that it is materiall for preface to obserue into what quarters it shooteth, or what stars power and influence it receiuet: also what similitudes it resembleth, and in what parts it shineth out and first ariseth. For if it be like vnto flutes or hautboies it portendeth somewhat to Musicians: if it appeare in the priuy parts of any signe, then let ruffians, whore-masters, and such filthy persons take heed. It is respectiue to fine wits, and learned men, if it put forth a triangular or foure-square figure, with euen angles, to any scituations of the perpetuall fixed stars. And it is thought to preface, yea to sprinkle and put forth poison, if seen in the head of the Dragon either North or South.

In one only place of the whole world, namely in a Temple at Rome, a Comet is worshipped and adored, euen that which by *Augustus Cesar* himselfe, of happy memorie, was iudged verie lucky and happy to him; who when it began to appeare, gaue attendance in person, as ouerseer of those playes and games which he made to *Venus genetrix*, not long after the death of his father *Cesar*, in the colledge by him instituted and erected: testifying his ioy in these words, *In those very daies during the solemnities of my Plaies, there was seen a blazing star for seuen daies together, in that region of the sky which is vnder the North star Septentriones. It arose about the 11 houre of the day, bright it was and cleare, and evidently scene in all lands: by that star it was signified, as the common sort beleueed, that the soule of (Iulius) Cesar was receiued among the diuine powers of the immortal gods. In which regard, that marke or ensigne of a star was set to the head of that statue of Iulius Cesar, which soone after we dedicated in the Forum Romanum.* These words published he abroad: but in a more inward ioy, to himselfe he interpreted and conceiued thus of the thing, That this Comet was made for him, and that himselfe was in it borne. And verily, if we wil confesse a truth, a healthfull, good, and happy preface that was to the whole world. Some there be who beleuee, that these be perpetuall stars, and go their course round, but are not seen vnlesse they be left by the Sun. Others againe are of opinion, that they are ingendred casuall by some humour, and the power of fire together, and thereby do melt away and consume.

CHAP. XXVI.

¶ *Hipparchus his opinion of the Stars. Also historicall examples of Torches, Lamps, beames, Fiery Darts, opening of the Firmament, and other such impressions.*

Hipparchus the foresaid Philosopher (a man neuer sufficiently praised, as who proued the affinitie of stars with men, and none more than he; affirming also that our soules were parcell of heauen) found out and obserued another new star ingendred in his time, and by the motion thereof on what day it first shone, he grew presently into a doubt, Whether it hapned not very often that new stars should arise; and whether those starres also moued not, which we imagined to be fixed. The same man went so farre, that he attempted (a thing euen hard

A hard for God to performe, to deliuer to posteritie the iust number of starres. He brought the same stars within the compasse of rule and art, deuising certaine instruments to take their seuerall places, and set out their magnitudes: that thereby it might be easily discerned, not only whether the old died, and new were borne, but also whether they moued, and which way they tooke their course, likewise whether they increased or decreased. Thus he left the inheritance of heauen vnto all men, if haply any one could be found able to enter vpon it as lawfull heire.

There be also certaine flaming torches shining out in the sky, howbeit neuer scene but when they fall. Such a one was that which at the time that *Germ. Cesar* exhibited a shew of Sword-fencers at vtterance, ran at noontide in sight of all the people. And two sorts there be of them, namely *Lampades*, which they call plaine torches; and *Bolides*, i. Lances, such as the Mutinians saw in their calamitie when their city was sacked. Herein they differ, for that those lampes or torches make long traines, whiles the forepart only is on a light fire: but *Bolides* burnes all ouer, and draweth a longer taile. There appeare and shine out after the same manner certain beames, which the Greekes call *Docus*: like as when the Lacedemonians being vanquished at sea, lost the empire and dominion of Greece. The firmament also is scene to chinke and open, and this they name *Chasma*.

CHAP. XXVII.

¶ *Of the strange colours of the Sky.*

THere appeareth in the Sky also a resemblance of bloud, and (than which nothing is more dread and feared of men) a fiery impression, falling from out of heauen to earth; like as it hapned in the 3 yeare of the 107 Olympias, at what time King *Philip* made all Greece to shake with fire and sword. And these things verily I suppose to come at certaine times by course of nature, like as other things, and not as the most part thinke, of fundry causes, which the subtil wit and head of man is able to deuise. They haue indeed been fore-runners of exceeding great miseries; but I suppose those calamities hapned not because these impressions were, but these therefore were precatored to foretell the accidents that ensued afterward. Now for that they fall out so seldome, the reason thereof is hidden and secret, and so not knowne, as the rising of planets about said, the eclipses, and many other things.

CHAP. XXVIII. ¶ *Of the Heauen flame.*

Likewise there are seen stars together with the Sun all day long; yea, and very often about the compasse of the Sun other flames, like vnto garlands of corne eares; also circles of fundry colours, such as those were when *Augustus Cesar* in the prime of his youth entered the city of Rome after the decease of his father, to take vpon him his great name and imperial title.

CHAP. XXIX. ¶ *Of Celestiall Crownes.*

Also the same garlands appeare about the Moone and other goodly bright stars which are fixed in the firmament. Round about the Sun there was scene an arch, when *Lu. Opimius* and *Q. Fabius* were Consuls: as also a round circle, when *L. Porcius* and *M. Acilius* were Consuls.

CHAP. XXX. ¶ *Of sudden Circles.*

THere appeared a circle of red colour when *L. Iulius* and *P. Rutilius* were Consuls. Moreover, there are strange eclipses of the Sunne, continuing longer than ordinarie; as namely when *Cesar* Dictator was murdered. Moreover, in the wars of *Antony* the Sun continued almost a whole yeare of a pale wan colour.

CHAP. XXXI. ¶ *Many Suns.*

Over and besides, many Suns are scene at once, neither about nor beneath the bodie of the true Sunne indeed, but crosse-wise, and ouerthwart: neuer neere nor directly against the earth, neither in the night season, but when the Sun either riseth or setteth. Once they

they are reported to haue bene scene at noone day in Bosphorus, and continued from morne to euen. Three Suns together our Ancestors in old time haue often beheld, as namely when *Sp. Posthumus*, with *Q. Mutius*, *Q. Marius*, with *M. Porcius*, *M. Antonius*, with *P. Dolabella*, and *Mar. Lepidus*, with *L. Plancus*, were Consuls. Yea, and we in our daies haue scene the like, when *Cl. Cesar* (of famous memorie) was Consul, together with *Cornelius Orfitus* his Colleague. More than three we neuer to this day finde to haue been scene together.

CHAP. XXXII. ¶ *Many Moones.*

THree Moones also appeared at once, and namely when *Cn. Domitius* and *C. Fannius* were Consuls, which most men called Night Sunnes.

CHAP. XXXIII. ¶ *Day light in the Night.*

OVt of the Firmament by night there was seen a light, when *C. Calius* and *Cn. Papyrius* were Consuls, yea and oftentimes besides, so as the night seemed as light as the day.

CHAP. XXXIV. ¶ *Burning Shields or Targets.*

A Burning shield ran sparkling from the West to the East, at the Suns setting, when *L. Valerius* and *C. Marius* were Consuls.

CHAP. XXXV. ¶ *A strange sight in the Sky.*

BY report there was once scene, and neuer but once, when *Cn. Octavius* and *C. Scribonius* were Consuls, a sparkle to fall from a star: and as it approached the earth, it waxed greater; and after it came to the bignesse of the Moone it shined out and gaue light, as in a cloudy and darke day: then being retyred againe into the sky, it became, to mens thinking, a burning Lampe. This, *Licinius Syllanus* the Proconsull saw, together with his whole traine.

CHAP. XXXVI. ¶ *The running of Stars to and fro in the Sky.*

SEene there be also Stars to shooe hither and thither, but neuer for nought and to no purpose: for, from the same quarter where they appeare, there rise terrible windes, and after them stormes and tempests both by sea and land.

CHAP. XXXvij. ¶ *Of the Stars called Castor and Pollux.*

I Haue scene my selfe in the campe, from the soldiers sentinels in the night watch, the resemblance of lightning to sticke fast vpon the speares and pikes set before the rampier. They settle also vpon the crosse Saile yards and other parts of the ship, as men do faile in the sea, making a kinde of vocall sound, leaping to and fro, and shifting their places as birds do which fly from bough to bough. Dangerous they be and vnlucky when they come one by one without a companion; and they drowne those ships on which they light, and threaten shipwrack, yea, and they set them on fire if haply they fall vpon the bottome of the keele. But if they appeare two and two together, they bring comfort with them, and foretell a prosperous course in the voyage, as by whose comming, they say, that dreadfull, cursed, and threatening meteor called *Helena* is chased and driuen away. And hereupon it is that men assigne this mighty power to *Castor* and *Pollux*, and inuocate them at sea no lesse than gods. Mens heads also in the euen tyde are scene many times to shine round about, and to be of a light fire, which presageth some great matter. Of all these things there is no certain reason to be giuen, but secret these be, hidden with the maiestie of Nature, and reserved within her cabinet.

CHAP. XXXvij. ¶ *Of the Aire.*

IT remaineth now (thus much and thus far being spoken of the world it selfe) to wit, the starry heaven and the planets) to speake of other memorabell things obserued in the Skie. For euen that part also hath our forefathers called *Caelum*, (i. e.) the Skie, which otherwise they name *aere*: euen all that portion of the whole, which seeming like a void and empty place, yeeldeth this vitall spirit whereby all things do liue. This region is seated beneath the Moone, and farre vnder that Planet (as I obserue it is in a manner by euery man agreed vpon.) And mingling together an infinite portion of the superiour coelestiall nature or elementarie fire, with

A with an huge deale likewise of earthly vapours, it doth participate confusedly of both. From hence proceed clouds, thunders, and those terrible lightnings. From hence come haile, frosts, shoures of raine, stormes and whirlewindes: from hence arise the most calamities of mortall men, and the continuall warre that nature maketh with her owne selfe. For these grosse exhalations as they mount upward to the heauen, are beaten backe and driuen downward by the violence of the starres: and the same againe when they list, draw vp to them those matters, which of their owne accord ascend not. For thus we see, that shoures of raine do fall, foggie mists and light clouds arise, riuers are dried vp, haile stormes come downe amaine, the Sunne beames doe scorch and burne the ground, yea, and driue it euery where to the middle centre: but the same againe vnbroken, and not losing their force, rebound backe and take vp with them whatsoeuer they haue drunke vp and drawne. Vapours fall from aloft, and the same returne againe on high: winds blow forcibly, and come empty, but backe they goe with a bootie, and carry away euery thing before them. So many liuing creatures take their wind and draw breath from aboue: but the same labourer contrariwise, and the earth infuseth into the aire a spirit and breath, as if it were cleane void and empty. Thus while the Nature goes too and fro, as forced by some engin, by the swiftnesse of the heauen, the fire of discord is kindled and groweth hot. Neither may the abide by it, and stand to the fight, but being continually carried away, she rolleth vp and downe: and as about the earth shee spreadeth and pitcheth her tents, as it were, with an vnmeasurable globe of the heauen, so euery and anon of the clouds she frameth another skie. And this is that region where the winds raigne. And therefore their kingdom principally is there to be scene, where they execute their forces, and are the cause well neere of all other troubles in the aire. For thunderbolts and flashing lightnings most men attribute to their violence. Nay, more than that, therefore it is supposed that otherwhiles it raineth stones, because they were taken vp first by the winde: so as we may conclude, that they cause many like impressions in the aire. Wherefore many matters besides are to be treated of together.

CHAP. XXXIX. ¶ *Of ordinary and set seasons.*

IT is manifest, that of times and seasons, as also of other things, some causes be certaine; others, casual and by chance; or, such as yet the reason thereof is vnknowne. For who need to doubt, that Summers and Winters, and those alternatiue seasons which we obserue by yearely course, are occasioned by the motion of the Planets. As therefore the Sunnes nature is vnderstood by tempering and ordering the yeare: so the rest of the starres and planets also haue euery one their proper and peculiar power, and the same effectually to shew and performe their owne nature. Some are fruitfull to bring forth moisture, that is turned into liquid raine: others to yeeld an humour either congealed into frosts, or gathered and thickened into snow, or else frozen and hardened into haile: some afford winds: others warmth: some hot and scorching vapours: some, dewes: and others, cold. Neither yet ought these starres to be esteemed so little as they shew in sight, seeing that none of them is lesse than the Moone, as may appeare by the reason of their exceeding height. Well then, euery one in their own motion, exercise their seuerall natures: which appeareth manifestly by *Saturne* especially, who setteth open the gates for raine and shoures to passe. And not onely the seuen wandering starres be of this power, but many of them also that are fixed in the firmament; so often as they be either driuen by the excesse and approach of those planets, or pricked and prouoked by the casting and influence of their beams; like as we find it happeneth in the seuen stars called *Sucula*, which the Grecians of raine name *Hyades*, because they euery bring foule weather. Howbeit some, of their owne nature, and at certaine set times do cause raine, as the rising of the Kids. As for *Arcturus*, he neuer lightly appeareth without some tempestuous and stormie haile.

CHAP. XL. ¶ *The power of the Dog-starre.*

W H knoweth not, that when the Dogge-starre riseth, the heate of the Sunne is fierie and burning: the effects of which starre are felt exceeding much vpon the earth. The seas at his rising do rage and take on, the wines in sellars are troubled, pooles also and standing waters doe stirre and moue. A wilde beast there is in Egypt, called *Orix*, which the Egyptians say doth stand full against the Dog-starre when it riseth, looking

looking wistly vpon it, and testifieth after a sort by sneezing, a kind of worship. As for dogs, no man doubteth verily, but all the time of the canicular daies they are most ready to run mad.

CHAP. XLI.

¶ *That the stars haue their seuerall influences in sundry parts of the signes, and at diuers times.*

Some take it
for Rudo:
Wert-wort:
others for
Turn-fol, or
the Marygold.

Moreover, the parts of certaine signes haue their peculiar force, as appeareth in the Equinoctiall of Autumne, and in mid-winter, at what time we perceiue, that the Sun maketh tempests. And this is proued, not onely by raines and stormes, but by many experiments in mens bodies, and accidents to plants in the country. For some men are stricken by the Planet, and blasted: others are troubled and diseased at certaine times ordinarily, in their belly, sinewes, head, and minde. The Oliue tree, the Aspe or white Poplar, and Willowes, turne or wryth their leaues about at Mid-summer, when the Sun entreth Cancer. And contrariwise, in very Mid-winter, when he entreth Capricorne, the herbe Penyroiall flourisheth fresh, euen as it hangs within house, drie and ready to wither. At which time all parchments & such like bladders or skinned are so pent and stretched with spirit and wind, that they burst withall. A man might maruell hereat, who marketh not by daily experience, that one herbe called * *Heliotropium*, regardeth and looketh toward the Sun euer as he goeth, turning with him at all houres, notwithstanding he be shadowed vnder a cloud. Now certaine it is, that the bodies of Oysters, Muskles, Cocles, and all shell fishes, grow by the power of the Moone, and thereby againe diminish: yea, and some haue found out by diligent search into Natures secrets, that the fibres or filaments in the liuers of rats and mice, answer in number to the daies of the Moones age: also that the least creature of all others, the Pismire, feelth the power of this Planet, and alwaies in the change of the Moone ceaseth from worke. Certes, the more shame it is for man to be ignorant and vnskillfull, especially seeing that he must confesse, that some labouring beasts haue certaine diseases in their eyes, which with the Moone do grow and decay. Howbeit the excessiue greatnesse of the heauen and exceeding height thereof, diuided as it is into 72 signes, maketh for him, and serueth for his excuse: Now these signes are the resemblances of things or liuing creatures, into which the skillfull Astronomers haue with good respect digested the firmament. For example sake, in the taile of Taurus there be seuen, which they named in old time *Verigilie*, in the forehead other seuen called *Sucule*, and *Bootes*, who followeth after the wain or great Beare *Septentriones*.

CHAP. XLII.

¶ *The causes of raine, showers, winds, and cloudes.*

I Cannot denie but without these causes there arise raines and windes: for that certaine it is, how there is sent forth from the earth a mist sometimes moist, otherwhiles smokie, by reason of hot vapours and exhalations. Also that clouds are ingendered by vapours which are gone vp on high, or else of the aire gathered into a waterie liquor: that they be thicke, grosse, and of a bodily consistence, wee guesse and collect by no doubtful argument, considering that they ouer-shadow the Sun, which otherwise may be seene through the water, as they know well that diue to any depth whatsoeuer.

CHAP. XLIII.

¶ *Of Thunder and Lightning.*

Denie I would not therefore, but that the ferie impressions from stars aboue may fall vpon these clouds, such as we oftentimes see to shoot in cleare and faire weather: by the force-ble stroke whereof, good reason it is, that the aire should be mightily shaken, seeing that arrows and darts when they are discharged, sing and keepe a noise as they flie. But when they encounter a cloud, there arises a vapor with a dissonant sound (like as when a red hot yron maketh

A keth an hissing being thrust into water) & a smokie fume walmeth vp with many turnings like waues. Hereupon stormes do breed. And if this flatuositie or vapour doe struggle and wrestle within the cloud, from thence it commeth that thunderclaps be heard; but if it breake through still burning, then flieth out the thunderbolt: if it be longer time a struggling, and cannot pierce through, then leams and flashes are seene. With these, the cloud is clouen, with the other, burst in sunder. Moreover, thunders are nothing els but the blows and thumps giuen by the fires beating hard vpon the clouds: and therefore presently the fry chinkes and rifts of those clouds do glitter and shine. Possible it is also, that the breath and winde cleuated from the earth, being repelled back, and kept downe by the stars, & so held in and restrained within a cloud, may thunder, whiles Nature choketh the rumbling sound, all the while it strueth and quarelleth; but sendeth forth a crack when it breaketh out, as we see in a bladder puffed vp with winde. Likewise it may be, that the same wind or spirit whatsoeuer, is set on fire by fretting and rubbing, as it violently passeth headlong downe. It may also be stricken by the conflict of two clouds, as if two stones hit one against another; and so the leams and flashes sparkle forth, so as all these accidents happen by chance-medley, and be irregular. And hereupon come those bruitish & vain lightnings, such as haue no natural reason, but are occasioned by these impressions abovesaid. With these are mountains and seas smitten: and of this kind be all other blasts and bolts that do no hurt to liuing creatures. As for those that come from aboue, and of ordinary causes, yea, and from their proper stars, they alwaies preface and foretell future euent. In like manner as touching the windes, or rather blasts, I would not denie but that they may proceed from a dry exhalation of the earth, void of all moisture: neither is it impossible, but that they do arise out of waters, breathing and sending out an aire, which neither can thicken into a mist, nor gather into clouds: also they may be driuen by the ligitation and impulsion of the Sun, because the winde is conceiued to be nought els but the fluctuation and wauiing of the aire, and that by many means also: for some we see to rise out of riuers, firths, and seas, euen when they be stil and calme: as also others out of the earth, which winds they name *Altani*. And those verily when they come backe againe from the sea, are called *Tropai*: if they go onward, *Apogai*.

CHAP. XLIIII.

¶ *What is the reason of the resounding and doubling of the Echo.*

D Vt the windings of hils, and their often turnings, their many tops, their crests and ridges also bending like an elbow or broken, and arched as it were into shoulders, together with the hollow noukes of vallies, do cut vnequally the aire that reboundeth them fro: which is the cause of reciprocall voices called Echoes, answering one another in many places, when a man doth hoila or houe among them.

CHAP. XLV.

¶ *Of Windes againe.*

E Now there be certaine caues and holes which breed windes continually without end: like as that is one which we see in the edge of Dalmatia, with a wide mouth gaping, & leading to a deep downfall, into which if you cast any matter of light weight, be the day neuer so calm otherwise, there ariseth presently a stormie tempest like a whirle puffe. The places name is Senta. Moreover, in the prouince Cyrenaica there is reported to be a rock consecrated to the South-wind, which without prophanation may not be touched with mans hand; but if it be, presently the South wind doth arise and cast vp heaps of sand. Also in many houses there be hollow places deuised & made by mans hand for receipt of wind, which being inclosed with shade and darknesse, gather their blasts. Whereby we may see how all winds haue one cause or other. But great difference there is betweene such blasts and winds. As for these, they be settled and ordinarie, continually blowing, which, not some smal tractes & particular places, but whole lands do feele: which are not light gales nor stormy pusses, named *Aura* and *Procella*, but simply called winds, by the Masculine name *Venti*: which whether they arise by the continuall motion of the heauen, and the contrary course of the Planets; or whether this winde be that spirit of Nature that engendreth all things, wandering to and fro as it were in some wombe; or rather the

the aire, beaten and driuen by the vnlike influences and raies of the straying starres or planets, and the multiplicitee of their beames: or whether all winds come from their owne stars, namely these planets neerer at hand, or rather fall from them that be fixed in the firmament. Plaine and euident it is, that guided they by an ordinary law of Nature, not altogether vnknowne, although it be not yet thoroughly knowne.

CHAP. XLVI.

¶ The Natures and observations of the Winds.



He old Greeke writers, not so few as twentie, haue set downe and recorded their obseruations of the Winds. I maruell so much the more, that the World being so at discord, and diuided into kingdomes, that is to say, dismembred as it was, so many men haue had care to seek after these things, so intricate and hard to be found out, and namely in time of wars, and amid those places where was no safe lodging nor abode, and especially when pyrats and rousers, common enemies to mankind, held welneere all passages: I maruell, I say, that at this day each man in his owne tract and countrey taketh more light and true knowledge of some things by their commentaries and bookes, who neuer set foot there, than they doe by the skill and information of home-borne inhabitants; whereas now in time of so blessed and iolious peace, and vnder a prince who taketh such delight in the progresse of the State and of all good arts, no new thing is learned by farther inquisition, nay, nor so much as the inuentions of old writers are thoroughly vnderstood. And verily it cannot be said, that greater rewards were in those daies giuen, considering that the bountie of Fortunewas dispersed, and put into many mens hands: and in truth most of these deepe Clerkes and learned men, fought out these secrets for no other reward or regard, than to doe good vnto posteritie. But now, mens manners are waxen old and decay; now, all good customes are in the waine: and notwithstanding that the fruit of learning be as great as euer it was, and the recompences as liberall, yet men are become idle in this behalfe. The seas are open to all, an infinite multitude of saylers haue discovered all coasts whatsoeuer, they saile through and arriue familiarly at euery shore: all for gaine and lucre, but none for knowledge and cunning. Their mindes altogether blinded, and bent vpon nothing but couetousnesse, neuer consider that the same might with more safetie be performed by skill and learning. And therefore seeing there be so many thousand poore sailers that hazard themselves on the seas, I will treat of the winds more curiously and exquisitly than perhaps befeemes the present worke that is begun.

CHAP. XLVII.

¶ Many sorts of Winds.



En in old time obserued foure Windes only, according to so many quarters of the world (and therefore *Homer* nameth no more:) a blockish reason this was, as soone after it was iudged. The Age ensuing added eight more; and they were on the other side in their conceit too subtil and concise. The Modern sailers of late daies found out a meane betweene both: and they put vnto that short number of the first, foure windes and no more, which they tooke out of the later. Therefore euery quarter of the Heaven hath two windes apiece. From the equinoctiall Sunne-rising bloweth the East-winde *Sub-solanus*: from the rising thereof in the Mid-winter, the South-east *Vulturinus*. The former of these twaine the Greekes call *Apeliotes*, and the later *Eurus*. From the Mid-day, riseth the South winde: and from the Sun-setting in Mid-winter the South-west, *Africus*. They also name these two, *Notus* and *Libs*. From the Equinoctiall going down of the Sun, the West winde *Fauonius* commeth: but from that in Summer season, the North-west *Corus*. And by the same Greekes they are termed *Zephyrus* and *Argestes*. From the North waine or pole Arcticke, bloweth the North winde *Septentrio*: betweene which and the Sun, rising in Summer, is the North-east winde *Aquilo*, named *Aparctius* and *Boreas* by the Greekes. A greater reckoning than this for number, is brought in by some, who haue thrust in foure more betweene; namely, *Thracias* betweene the North and the Summer setting of the Sunne: in like manner

Cacias

A *Cacias* in the midst betweene the North-east *Aquilo*, and that of the Sun rising in the Equinoctiall *Sub-solanus*. Also, after the Sun-rising in Sommer, *Phenicias* in the midst, betweene the South-east and the South. Last of all, betweene the South and the South-west, *Lyborotus*, iust in the midst, compounded of them both, namely, betweene the Noonetead, and the Sun setting in Winter. But here they could not lay a straw, and see to make an end. For others haue set one more yet called *Mese*, betweene the North-east winde *Borias* and *Cacias*: also *Euronotus* betweene the South and the Southwest winds. Besides all these, there be some winds appropriate and peculiar to euery nation, which passe not beyond one certaine tract and region: as namely *Scyros* among the Athenians, declining a little from *Argestes* a winde vnknowne to other parts of Greece. In some other place it is more aloft, and the same then is called *Olympias*, as coming from the high hill *Olimpus*. But the vsuall and customable manner of speech vnderstandeth by all these names *Argestes* only. Some call *Cacias*, by the name of *Hellepontias*, and giue the same winds in sundry places diuers names. In the prouince likewise of *Narbone*, the most notorious winde is *Circius*, and for violence inferiour to none, driuing directly before it very often, the current at *Ostia*, into the *Ligurian* sea. The same winde is not only vnknown in all other climats of the heauen, but reacheth not so much as to *Vienna*, a citie in the same prouince. As great & boisterous a winde as he is otherwise, yet a restraint he hath before he come thither, and is kept within few bounds by the opposition of a meane and small hill. *Fabianus* also auouches, that the South winds enter not so far as into *Egypt*. Whereby, the law of Nature sheweth it selfe plainly, that euen windes haue their times and limits appointed.

C To proceed then, the Spring openeth the sea for sailers: in the beginning whereof, the West winds mitigate the Winter weather, at what time as the Sun is in the 25 degree of *Aquarius*: and that is the first day before the Ides of February. And this order holdeth in manner with all other winds, that I will set downe one after another, so that in euery leape yeare ye anticipate and reckon one day sooner, and then againe keep the same rule throughout all the foure yeares following. Some call *Fauonius* (which beginneth to blow about the 7 day before the Calends of March) by the name of *Chelidonius*, vpon the sight of the first Swallows, but many name it *O-rinthias*, comming the 71 day after the shortest day in winter, by occasion of the comming of birds: which wind bloweth for nine dayes. Opposite vnto *Fauonius* is the VVind which we called *Sub-solanus*. Vnto this VVind is attributed the rising of the *Vergilia* or seven stars, in as many degrees of *Taurus*, six daies before the Ides of May; which time is a southerly constitution: and to this Winde the North is contrarie. Moreouer, in the hottest season of the Sommer, the Dog-star ariseth, at what time as the Sun entrench into the first degree of *Leo*, which commonly is the 15 day before the Calends of August. Before the rising of this star for eight daies space or thereabout, the Northeast winds are aloft, which the Greekes call *Prodrumi*, i. forerunners. And two daies after it is risen, the same winds hold still more stiffely, and blow for the space of fortie daies, which they name *Etesia*. The Suns heate redoubled by the hotnesse of that star, is thought to be asswaged by them: and no winds are more constant, nor keep their set times better than they. Next after them come the Southerne winds againe, which are vsually vp, vntill the star *Arcturus* riseth, and that is nine daies before the Equinoctiall in Autumne. With it entereth *Corus*, and thus *Corus* beginneth the Autumne. And to this *Vulturinus* is contrarie. After that Equinoctiall, about 44 daies the *Virgilie* go downe, and begin winter, which season vsually falleth vpon the third day before the Ides of Nouember. This is the winter Northeast wind, which is far vnlike to that in Sommer, opposit and contrary to *Africus*. Now, a seven night before the Mid-winter day, and as much after, the sea is allaid and calmed for the sitting and hatching of the birds *Halciones*, whereupon these daies tooke the name *Alcionis*: the time behind, plaie the part of Winter. And yet these boisterous seasons full of tempests, shut not vp the sea: for pyrats and rousers at the first forced men with present perill of death, to run headlong vpon their death, and to hazard themselves in Winter seas; but now a daies couetousnesse causeth men to do the like.

F The coldest winds of all other, be those which we said to blow from the North-pole, and together with them their neighbor, *Corus*. These winds do both allay and still all others, and also scatter and driue away clouds. Moist winds are *Africus*, and especially the South wind of Italy called *Auster*. Men report also, that *Cacias* in *Pontus* gathereth & draweth to it selfe clouds. *Corus* and *Vulturinus* are dry, but onely in the end when they giue ouer. The Northeast and the North,

North, engender snow. The North winde also bringeth in haile, so doth *Cornus*. The South winde is exceeding hot and troublous withall. *Vulturnus* and *Favonius* be warme. They also be drier than the East: and generally all winds from the North and West are drier than from the South and East. Of all winds the Northern is most heathfull: the Southern wind is noisome, and the rather when it is drie; haply, because that when it is moist, it is the colder. During the time that it bloweth, liuing creatures are thought to be lesse hungry: the *Etesia* giue ouer ordinarily in the night, & arise at the third houre of the day. In Spaine and Asia they blow from the East: but in Pontus, from the North: in other quarters from the South. They blow also after the Mid-winter, when they be called *Orimbia*, but those are more milde, & continue fewer daies. Two there be that change their nature together with their site and place: the South winde in Affrick bringeth faire weather, and the North wind there is cloudy. All winds keep their course in order for the more part, or els when one ceaseth, the contrary beginneth. When some are laid, & the next to them do arise, they go about from the left hand to the right, according to the Sun. Of their manner and order monthly, the prime or fourth day after the change of the Moone, doth most commonly determine. The same windes will serue to faile contrariwise, by means of setting out the failes: so as many times in the night, ships in sailing run one against another. The South winde raiseth greater billowes and more surging waues than the North: for that the South wind ariseth below from the bottome of the Sea; the other blustereth aloft, and troubleth the top of the water. And therefore after Southern winds, earth-quakes are most hurtful. The South wind in the night time is more boisterous, the Northerne wind in the day. The winds blowing from the East, hold and continue longer than those from the West. The Northern winds giue ouer commonly with an odde number: which obseruation serueth to good vse in many other parts of naturall things, and therefore the male winds are iudged by the odde number. The Sun both raiseth, and also laith the windes. At rising and setting hee causeth them to be aloft: at noon-tide he represseth and keepeth them vnder, in Summer time. And therefore at mid-day or mid-night commonly the winds are down and lie still, for both cold and heat if they be immoderate, do spend and consume them. Also rain doth lay the winds: and most commonly from thence they are looked for to blow, where clouds break and open the skie to be seen. And verily *Endoxus* is of opinion (if wee list to obserue the least reuolutions) that after the end of euery fourth yere, not onely all winds, but other tempests and constitutions also of the weather, return again to the same course as before. And alwaies the Lustrum or computation of the five yerres beginneth at the leap yere, when the Dog-star doth arise. Thus much touching general winds.

CHAP. XLVIII.

¶ Of sudden Blasts.

Now wil we speake of sudden blasts, which being risen (as hath bin said before) by exhalations of the earth, and cast downe againe; in the meane while appeare of many fashions; enclosed within a thin course of clouds newly ouercast. For such as be vnconstant, wandering, and rushing in manner of land fouds (as some men were of opinion, as wee haue shewed) bring forth thunder and lightening. But if they come with a greater force, sway, and violence, and withall burst and cleaue a dry cloud asunder all abroad, they breed a storme, which of the Greeks is called *Ecnephias*; but if the clift or breach be not great, so that the wind be constrained to turne round, to roll and whirle in his discent, without fire (i.e.) lightening, it makes a whirle-puffe or ghuft called *Typhon* (i.e.) the storme *Ecnephias* aforesaid, sent out with a winding violence. This takes with it a peece broken out of a congealed cold cloud, turning, winding, and rolling it round, and with that weight maketh the owne fall more heauie, and changeth from place to place with a vehement and sudden whirling; the greatest danger and mischief that poore sailers haue at sea, breaking not onely their crosse saile yards, but also writhing and bursting in peeces the very ships; and yet a small matter is the remedy for it, namely, the casting of vinegre out against it as it commeth, which is of nature most cold. The same storme beating vpon a thing, is it selfe smitten backe againe with a violence, and snatcheth vp whatsoeuer it meeteth in the way aloft into the skie, carrying it back, and swallowing it vpon high. But if it breake out from a greater hole of the said cloud, by it so borne down, and yet not altogether so broad as the abouenamed storm *Procella* doth, nor without a cracke; they call this boisterous winde

A wind *Turbo*, casting downe and ouerthrowing all that is next it. The same, if it be more hot and catching a fire as it rageth, is named *Prester*, burning, and withall laying along, whatsoeuer it toucheth and encountereth.

CHAP. XLIX.

¶ Other enormous Kindes of Tempests.

NO *Typhon* commeth from the North, ne yet any *Ecnephias* with snow, or while snow lieth on the ground. This tempestuous winde, if when it brake the cloud burned light withall, hauing fire of the owne before, and caught it not afterward, it is very lightning; and differeth from *Prester*, as the flame from a cole of fire. Againe, *Prester* spreadeth broad with a flash and blast; the other gathereth round with forcible violence. *Typhon* moreover or *Vortex*, differeth from *Turben* in flying backe, and as much as a crash from a cracke. The storme *Procella* from them both, in breadth: and to speake more truly, rather scattereth than breaketh the cloud. There riseth also vpon the sea a darke mist, resembling a monstrous beast; and this is euer a terrible cloud to sailers. Another likewise called a Columne or Pillar, when the humour and water ingendred is so thicke and stiffe congealed, that it standeth compact of it selfe. Of the same sort also is that cloud which draweth water to it, as it were into a long pipe.

CHAP. L.

¶ In what Lands Lightnings fall not.

IN Winter and Summer seldome are there any Lightnings, and that is long of contrary causes: because in Winter the aire is driuen close together, and thickened with a deeper course of clouds: besides, all the exhalations breathing and rising out of the earth, being stark congealed, and frozen hard, do extinguish cleane what fire vapour soeuer otherwise they receiue: which is the reason that Scythia and other cold frozen quarters thereabout, are free from lightnings. And *Aegypt* likewise vpon the contrarie cause, and exempt from Lightnings; namely, exceeding heate: for the hot and dry exhalations of the earth, gather into very slender, thin, and weeke clouds. But in the Spring and Autumne, lightnings are more rise; because in both those seasons, the causes as well of Summer as Winter, are confused and corrupt. And this is the reason also, that lightnings are common in our Italie; for that the aire being more moueable and waivering, by reason of a kinder Winter and a cloudie Summer, is alwaies of the temperature of Spring or Autumne. In those parts also of Italy which lie off from the North, and encline to warmth (as namely in the tract about Rome and Campania) it lightneth in Winter and Summer alike, which happeneth in no other part thereof.

CHAP. LI.

¶ Sundry sorts of Lightnings, and Wonders thereof.

VERIE many Kindes of Lightnings are set downe by Authors. Those that come drie, burne not at all, but onely dissipate and disperse. They that come moist, burne not neither, but blast things, and make them looke dusky. Now a third kinde there is, which they call Bright and Cleare, and that is of a most strange and wonderfull nature; whereby tuns and such like vessels are drawne drie, and their sides, hoops, and heads, neuer toucht therewith or hurt, nor any other shew and token thereof is left behinde: Gold, copper, and siluer money is melted in the bags, and yet the very bags no whit scorched, no nor the wax of the seale hurt and defaced, or put out of order. *Martia* a noble Ladie of Rome being great with childe, was stricke with lightning: the childe she went withall was killed within her, and she without any harme at all liued still. Among the *Cailline* prodigies it is found vpon Record, that *M. Herennius* (a Counsellor and Staes-man of the incorporate towne Pompeianum) was in a faire and cleare day smitten with Lightning.

THe Antient Tuscans by their learning do hold, that there be nine gods that send forth Lightnings, and those of eleuen sorts: for *Iupiter* (say they) casteth three at once. The Romans haue obserued two of them, and no more; attributing those in the day time to *Iupiter*; and them in the night to *Summanus* or *Pluto*. And these verily be more rare, for the cause aforesaid; namely, the coldnesse of the aire aboue. In *Hetruria*, they suppose that lightnings break also out of the earth, which they call *Inferaj*. Infernall, and such be made in Mid-winter. And these they take to be terrene and earthly, and of all most mischieuous and execrable: neither be those generall and vniuersall lightnings, nor proceeding from the stars, but from a very neere and more troubled cause. And this is an euident argument for distinction, that all such as fall from the vpper skie aboue, strike a slant and side-wise: but those which they call earthly, smite straight and directly. But the reason why these are thought to issue forth of the earth is this; because they fall from out of a matter nearer to the earth, forasmuch as they leaue no markes of a stroke behind: which are occasioned by force not from beneath, but comming full against. Such as haue searched more subtilly into these matters, are of opinion, that these lightnings come from the Planet *Saturne*, like as the burning lightning from *Mars*: And with such lightning was *Volfinij* (a most welthy citie of the Tuscans) burnt full and whole to ashes. Moreover, the Tuscans call those lightnings Familiar, which presage the fortune of some race, and are significant during their whole life: and such are they that come first to any man, after he is newly entred into his owne patrimonie or familie. Howbeit their iudgement is, that these priuat lightnings are not of importance and fore-tokening aboue ten yerres; vnlesse they happen either vpon the day of first marriage, or of wedding. As for publique lightnings, they be not of force aboue 30 yerres, except they chance at the very time that townes or colonies be erected and planted.

CHAP. LIII. ¶ Of raising or calling out Lightnings by Coniuration.

IT appeareth vpon record in Chronicles, that by certaine sacrifices and prayers, Lightnings may be either compelled or easily intreated to fall vpon the earth. There goeth a report of old in *Hetruria*, that such a lightning was procured by exorcismes and coniuurations, when there entered into the citie *Volfinij* (after all the territory about it was destroyed) a moaster which they named *Volta*. Also, that another was raised and coniuured by *Porfenna* their King. Moreover, *L. Piso* (a writer of good credit) reporteth in his first booke of *Annales*, that *Numa* before him praesided the same feat many a time and often: and when *Tullus Hostilius* would haue imitated him and done the like (for that he obserued not all the ceremonies accordingly) was himselfe stricke and killed with lightning. And for this purpose, sacred groues we haue and altars, yea and certaine sacrifices due thereto. And among the *Iupiters* surnamed *Statores*, *tonantes*, and *Feretri*, we haue heard that one also was called *Elicius*. Sundry and diuers are mens opinions as touching this point, and euery man according to his owne liking and fancie of his minde. To beleuee that Nature may be forced and commanded, is a very audacious and bold opinion: but it is as blockish on the other side, and fencelesse, to make her benefites of no power and effect; considering that in the interpretation of Lightning, men haue thus farre forth proceeded in skill and knowledge, as to foretell when they will come at a set and prescript day: and whether they will fordoe and frustrate the dangers pronounced, or rather open other destinies, which lie hidden: and an infinite sort of publicke and priuat experiments of both kinds are to be found. And therefore (since it hath so pleased Nature) let some men be resolued herein, and others doubtfull: some may allow thereof, and others condemne the same. As for vs, we will not omit the rest which in these matters are worth remembrance.

CHAP. LIIII. ¶ Generall rules of Lightning.

That the Lightning is scene before the Thunderclap is heard, although they come indeed jointly both together, it is certainly knowne. And no maruell, for the eye is quicker to see light, than the eare to heare a sound. And yet Nature doth so order the number and measure,

A measure, that the stroke and the sound should accord together. But when there is a noise, it is a signe of the lightning proceeding of some naturall cause, and not sent by some god: and yet furthermore this is a breath or wind that commeth before the thunderbolt: and hereupon it is, that euery thing is shaken and blasted: ere it be smitten; neither is any man stricken, who either saw the lightning before, or heard the thunderclap. Those lightnings that are on the left hand, be supposed to be luckie and prosperous, for that the East is the left side of the world: but the coming therof is not so much regarded as the return, whether the fire leap back attendeth the stroke giuen; or whether after the deed done and fire spent, the spirit and blast aboue fall downe backe againe. In that respect the Tuscans haue diuided the heauen into 16 parts. The first is from the North to the Sun rising in the Equinoctiall line: the second, to the Meridian line, or the South: the third, to the Sun setting in the Equinoctiall: and the fourth taketh vp all the rest from the said West to the North star. These quarters againe they haue parted into foure regions apiece: of which eight from the Sun rising they called the Left, & as many again from the contrary part the Right. Which considered, most dreadfull and terrible are those lightnings, which from the Sun setting reach into the North; and therefore it skilleth very much, from whence lightnings come, and whither they go: the best thing obserued in them is, when they return into the Easterly parts. And therefore when they come from that first and principall part of the skie, and haue recourse again into the same, it is holden for passing good hap: & such was the signe and token of victories giuen (by report) to *Sylla* the Dictator. In all other parts of the element they be lesse fortunate or fearful. They that haue written of these matters, haue delineated in writing, that there be lightnings, which to vtter abroad is held vnlawful, as also to giue care vnto them, if they be disclosed, vnlesse they be declared either to parents, or to a friend and guest. How great the vanity is of this obseruation, was at Rome, vpon the blasting of *Tunoes* temple, found by *Scaurus* the Consull, who soone after was President of the Senate. It lightneth without thunder, more in the night than day time. Of all creatures that haue life and breath, man only it doth not alwaies kill; the rest, it dispatcheth presently. This priuiledge & honour we see Nature hath giuen to him; whereas otherwise so many great beasts surpass him in strength. All other creatures smitten with lightning, fall downe vpon the contrary side; man onely (vnlesse he turne vpon the parts stricken) dyeth not. Those that are smitten from aboue vpon the head, lie downe and sinke directly. He that is stricken watching, is found dead with his eyes winking and close shut, but whose eie is smitten sleeping, is found open eyed. A man thus comming by his death, may not by law be burned: Religion hath taught, that he ought to be entred and buried in the earth. No liuing creature is set a fire by lightning, but it is breathlesse first. The wounds of them that be smitten with thunderbolts, are colder than all the body besides.

CHAP. LV.

¶ What things are not smitten with Lightning.

EOF all those things which grow out of the earth, Lightning blasteth not the *Layrell* tree; nor entrench at any time aboue fise foot deep into the ground; and therefore, men fearful of lightning, suppose the deeper caues to be the surest and most safe: or els booths made of skins of sea-beasts, which they call *Seales*, or *Sea-calues*; for of all creatures in the sea, this alone is not subiect to the stroke of lightning; like as of all flying foules the Eagle, (which for this cause is imagined to be the armour-bearer of *Iupiter*, for this kinde of weapon.) In *Italie* betwene *Tarracina* and the temple of *Feronia*, they gaue ouer in time of warre, to make towers and forts; for not one of them escaped, but was ouerthrowne with lightning.

CHAP. LVI.

¶ Of strange and prodigious raine, to wit, of Milke, Bloud, Flesh, Iron, Wooll, Tyles, and Bricks.

BESIDES these things aboue, in this lower region vnder heauen, we finde recorded in monuments, that it rained milke and bloud, when *M. Acilius* and *C. Porcius* were Consuls. And many times else besides it rained flesh, as namely, whiles *L. Volturnius* and *Serv. Sulpitius*

Pittius were Consuls: and look what of it the fowles of the aire caught not vp nor carried away, it neuer putrified. In like manner, it rained yron in the Lucanes countrey, the yere before that *M. Crassus* was slaine by the Parthians, and together with him all the Lucanes his souldiers, of whom there were many in his army. That which came downe in this raine resembled in some sort Sponges: and the Wisards and Southlayers being sought vnto, gaue warning to take heed of wounds from aboue. But in the yere that *L. Paulus*, and *C. Marcellus* were Consuls, it rained wooll about the Castle Carissa, neare to which a yere after, *T. Annus Milo* was slaine. At the time that the same *Milo* pleaded his owne cause at the bar, there fell a raine of tyles and bricks, as it is to be seen in the Records of that yere.

CHAP. LVII.

¶ *Of the rustling of Armour and sound of Trumpets heard from Heauen.*

IN the time of the Cimbrian warres, we haue bin told, that Armour was heard to rustle, and the trumpet to sound out of heauen. And this happened very often both before and after those wars. But in the third Consulship of *Marius*, the Amerines and Tudertes saw men in armes in the skie, rushing and running one against another from the East and West, and might behold those of the West discomfited. That the very firmament it selfe should be of a light fire, it is no maruel at all; for oftentimes it hath been seene, when clouds haue caught any greater deale of fire.

CHAP. LVIII.

¶ *Of Stones falling downe from the Skie.*

AMong the Greeks there is much talke of *Anaxagoras Clazomenius*, who by his learning and skill that he had in Astronomie, foretold in the second yere of the 78 Olympias, what time a stone should fall from out of the Sun: and the same happened accordingly in the day time, in a part of Thracia neere the riuier Aegos; which stone is shewed at this day as big as a waine load, carrying a burnt and adust colour: at what time as a comets or blazing starre also burned in those nights. Which if any man beleue that it was fore-signified, must needs also confesse, that this diuinitie or fore-telling of *Anaxagoras* was more miraculous and wonderfull than the thing it selfe: and then farewell the knowledge of Natures workes, and welcome confusion of al; in case we should beleue that either the Sun were a stone, or that euer any stone were in it. But, that stones fall oftentimes downe, no man will make any doubt. In the publicke place of Exercise in Abydos, there is one at this day vpon the same cause preferred and kept for to be seene, and held in great reuerence: it is but of a meane and small quantitie, yet it is that which the selfe same *Anaxagoras* (by report) fore-signified that it should fall in the mids of the earth. There is one also at *Cassandria*, which was in old time vsually called *Potidea*, a colony from thence deducted. I my selfe haue seene another in the territorie of the Vocantians, which was brought thither but a little before.

CHAP. LIX. ¶ *Of the Rainbow.*

THose which we call Rain-bowes are seene often without any wonder at all, or betokening any great matter: for they portend not so much as rainy or faire daies, to trust vpon. But manifest it is, that the Sun beames striking vpon an hollow cloud, when their edge is repelled, are beaten backe against the Sun: and thus ariseth varietie of colours by the mixture of clouds, aire, and fire light together. Certes, they neuer are knowne but opposite to the Sun; nor at any time otherwise than in forme of a Semicircle: ne yet in the night season, although *Aristotle* saith there was a Rain-bow seen by night: howbeit he confesseth, that it could not possibly be but at the full of the Moone. Now they happen for the most part in winter, namely from the Autumne Equinoctiall, as the daies decrease and wax shorter. But as daies grow longer againe, that is to say, after the Spring Equinoctiall, they be not seene no more than about the Summer Sunstead, when daies are at longest. But in Bruma, namely when they bee shortest

A test, they chance very often. The same appeare aloft, when the Sun is low, and below, when he is aloft. Also, they be of narrower compass, when the Sun either riseth or setteth, but their body spreadeth broad: and at noone narrower it is, and smal, yet greater and wider in circumference. In Sommer time they be not seene about noon-tide, but after the Autumne Equinoctiall, at all houres; and neuer more at once than twaine. The rest of the same nature I see few men doe make any doubt of.

CHAP. LX.

¶ *Of Haile, Snow, Frost, Mist, and Dew.*

HAile is ingendred of Raine congealed into an Ice: and Snow of the same humor growne together, but not so hard. As for frost, it is made of dew frozen. In winter Snowes fall, and not haile. It haileth oftner in the day time than in the night, yet haile sooner melteth by farre than snow. Mists be not seene neither in Summer, nor in the cold weather. Dewes shew not either in frost, or in hot seasons; neither when winds be vp, but only after a calm and cleere night. Frosts dry vp wet and moisture; for when the yce is thawed and melted, the like quantitie of water in proportion is not found.

CHAP. LXI.

¶ *Of the Shapes of Clouds.*

SVndry colours and diuers shapes are seene in clouds, according as the fire intermingled therein is either more or lesse.

CHAP. LXII.

¶ *Of the properties of weather in diuers places.*

Moreouer, many properties there be of the weather, peculiar to certain places: the nights in Africke bedewie in Winter. In Italy, about Locri and the lake Velinus, there is not a day but a Rainbow is seene. At Rhodes and Syracusa, the aire is neuer so dimme and cloudy, but one houre or other the Sun shineth out. But such things as these shall be related more fitly in due place. Thus much of the Aire.

CHAP. LXIII.

¶ *Of Earth, and the nature thereof.*

THE Earth followeth next: vnto which alone of all parts of the world, for her singular benefits we haue giuen the reuerend and worshipfull name of Mother. For like as the Heauen is the (mother) of God, euen so is she of men. She it is that taketh vs when wee are comming into the world, nourisheth vs when we are new borne: and once being come abroad, euer susteineth and beareth vs vp: and at the last when wee are reiectd and forlorne of all the world besides, she embraceth vs: then most of all other times, like a kinde mother, she couereth vs all ouer in her bosom; by no merit more sacred than by it, wherewith she maketh vs holy and sacred; euen bearing our tombes, monuments, and titles, continuing our name, and extending our memorie, thereby to make recompence and weigh against the shortnes of our age: whose last power we in our anger wish to be heauy vnto our enemy, and yet she is heauy to none, as if wee were ignorant that she alone is neuer angry with any man: waters ascend vp, & turn into clouds, they congeale and harden into haile, swel they do into waues and billows, & down they hasten headlong into brooks and land-floods. The aire is thickened with clouds, & rageth with winds and stormes. But she is bountifull, mild, tender ouer vs, & indulgent, ready at all times to attend and wait vpon the good of mortall men. See what she breeds being forced! nay, what she yeeldeth of her owne accord! what odoriferous smells, and pleasant fauors! what wholesome iuices and liquors, what soft things to content our feeling, what louely colors doth she giue to please our eie, how faithfully and iustly doth she repay with vsury that which was lent and credited out vnto her! Finally, what store of all things doth shee feed and nourish for our sake! Alas

poor wretch, pestiferous and hurtfull creatures, when the vitall breath of the aire was too blame to giue them life, she could not otherwise chuse but receiue them, after they were sown in her, and being once ingendred and bred, keepe and maintain them. But in that they proued afterwards bad and venomous; the fault was to be laid vpon the parents that ingendred them, and not to be imputed vnto her. For, shee entertaineth no more a venomous serpent after it hath stung a man: nay, more than that, she requirerth punishment, for them that are slow and negligent of themselves to seeke it. Shee it is that bringeth forth medicinable herbes, and euermore is in trauell to be deliuered of some thing or other, good for man.ouer and besides, it may be thought and beleueed, that for very pittie of vs shee ordained and appointed some poisons, that when we were weary of our life, cursed famine (most aduerser and crosse of all other to the merits of the earth) should not consume and waste vs with languishing and pining consumption, and so procure our death; that high and steepe rockes should not dash and crush our bodies in pieces; nor the ouerthwart and preposterous punishment by the halter, wreath our necks, and stop that vital breath which we seek to let out and be rid of: last of all, that we might not worke our owne death in the deep sea, and being drowned feed fishes, and be buried in their bellies, ne yet the edge and point of the sword cut and pierce our bodie, and so put vs to dolorous paine. So that it is no doubt, but in a pittifull regard and compassion of vs, shee hath ingendred that poyson, by one gentle draught whereof, going most easily downe, we might forgoe our life, and die without any hurt and skin broken of our body, yea, and diminish no one drop of blood: without grievous paine, I say, and like onely to them who be athirst: that being in that manner dead, nether soule of the aire, nor wilde beast prey vpon or touch our bodies, but that he should be referued for the earth, who perished by himselfe and for himselfe: and, to confesse and say the troth, the earth hath bred the remedy of all miseries, howsoeuer we haue made it a venome and poyson to our life. For after the like sort we employ iron and Steele, which we cannot possibly be without. And yet we should not do well and iustly to complain, in case shee had brought it forth for to do hurt and mischief. Now surely to this only part of Nature and the world, we are vnthankfull, as though shee serued not mans turne for all dainties; not for contumely and reproch to be misused. Cast shee is into the sea, or else to let in peeres and frithes, eaten away with water. With yron tooles, with wood, fire, stone, burdens of corne tormented shee is euery houre: and all this much more to content our pleasures and wanton delights than to serue vs with naturall food and necessary nourishment. And yet these misusages which shee abideth aboue, and in her outward skin, may seeme in some sort tolerable. But we, not satisfied therewith, pierce deeper and enter into her very bowels, we search into the veines of gold and siluer, we mine and dig for copper and lead mettals. And for to seek out gemmes and some little stones, we sinke pits deep within the ground. Thus we plucke the very heart-strings out of her, and all to weare on our finger one gemme or precious stone, to fulfill our pleasure and desire. How many hands are worne with digging and deluing, that one ioynt of our finger might shine again. Surely, if there were any diuels or infernall spirits beneath, ere this time verily these mines (for to feed couetousnes and riot) would haue brought them vp aboue ground. Maruell we then, if shee hath brought forth some things hurtfull and noisome? But sauage beasts (I well thinke) ward and saue her, they keepe sacrilegious hands from doing her iniurie. Nay ywis it is nothing so. Dig we not amongst dragons and serpents: and together with veines of gold, handle we not the roots of poisoned and venomous herbes? howbeit this goddesse we finde the better appaied, and lesse discontented for all this misusage, for that the end and issue of all this wealth tends to wickednesse, to murder and wars, and her whom we drench with our blood, we couer also with vnburied bones. Which neuertheless, as if shee did reprocue and reproch vs for this rage and furie of ours, shee her selfe couereth in the end, and hideth close euen the wicked parts of mortall men. Among other imputations of an vnthankfull minde, I may well count this also, That we be ignorant of her nature.

CHAP. LXIII. ¶ *Of the forme of the earth.*

THe first and principall thing that offereth it selfe to be considered, is her figure, in which by a generall consent we doe all agree. For surely we speake and say nothing more commonly, than the round ball of the earth; and confesse that it is a globe enclosed within 2 poles. But yet the forme is not of a perfect and absolute roundle, considering so great height

A of hills and such plaines of downs: howbeit, if the compasse thereof might be taken by lines, the ends of those lines would meet iust in circuit, and proue the figure of a iust circle. And this the very consideration of naturall reason doth force and conuince, although there were not those causes which we alledged about the heauen. For in it the hollow bending conuexitie boweth and beareth vpon it selfe, and euery way resteth vpon the centre thereof, which is that of the earth. But this, being solid and close compact, ariseth still like as if it swelled, stretching and growing forth. The heauen bendeth and inclineth toward the centre, but the earth goeth from the centre, whiles the world with continuall volubilitie and turning about it, driueth the huge and excessive globe thereof into the forme of a round ball.

CHAP. LXV.

¶ *Of the Antipodes, whether there be any such. Also of the roundnesse of water.*

Much adoe there is here, and great debate betwene learned men; and contrariwise those of the leaud and ignorant multitude: for they hold, that men are ouerspread on all parts vpon the earth, and stand one against another, foot to foot: also that the Zenith or point of the heauen is euen and alike vnto all: and in what part soeuer men be, they go still and tread after the same manner in the midst. But the common sort aske the question and demand, How it happeneth that they opposite iust against vs fall not into Heauen? as if there were not a reason also ready, That the Antipodes againe shall maruell why we fell not downe. Now there is reason that commeth betwene, carrying a probabilitie with it euen to the multitude, were it neuer so blockish and vnapt to learne; That in an vneuen and vnequall Globe of the Earth, with many ascents and degrees, as if the figure thereof resembled a Pine-apple; yet neuertheless it may be well enough inhabited all ouer in euery place. But what good doth all this, when another wonder as great as it ariseth? namely, That it selfe hangeth, and yet falleth not together with vs: as if the power of that Spirit especially which is enclosed in the World were doubted: or that anything could fall, especially when nature is repugnant thereto, and affordeth no place whither to fall: for like as there is no seat of Fire, but in fire; of Water, but in water; of Aire and Spirit, but in aire; euen so, there is no roome for Earth but in earth, seeing all the Elements besides, are ready to put it backe from them. Howbeit, wonderfull it remaineth still, How it should become a Globe, considering so great flatnesse of Plaines and Seas! Of which doubtfull opinion, *Dicaearchus* (a right learned man as any other) is a fauourer; who, to satisfie the curious endeaours of Kings and Princes, had a charge and commission to leuell and take measure of mountaines: of which he said, that Pelion the highest, was a mile and a halfe high by the plumbe rule; and collected thereby, that it was nothing at all to speake of, in comparison of the vniuersall rotunditie of the whole. But surely in my conceit, this was but an vncertaine guesse of his, since that I am not ignorant, that certaine tops of the Alpes, for a long tract together, arise not vnder fiftie miles in heighth.

But this is it that troubles the vulgar sort most of all, if they should be forced to beleue, that the forme of water also gathers round in the top. And yet there is nothing in the whole world more euident to the sight, for the drops euery where not onely as they hang, appeare like little round bals, but also if the light vpon dust, or rest vpon the hairy downe of leaues, we see they keep a perfect and exquisite roundnes. Also in cups that are filled brim full, the middle part in the top swell most. Which thing considering the thinnes of the humour, and the softnes thereof settling flat vpon it selfe, are sooner found out by reason, than by the eie. Nay, this is a thing more wonderfull, that when cups are filled to the full, put neuer so little more liquor thereto, the ouerplus will run ouer all about: but contrariwise it falleth out, if you put in any solid weights, yea, and it were to the weight of twenty deniers or French crowns in a cup. Forsooth the reason is this, for that these things receiued within lift vp the liquor aloft to the top, but poured vpon the tumour that beareth aloft aboue the edges, they must needs glide off and run by. The same is the reason why the land cannot be seen by them that stand vpon the hatches of the ship, but very plainly at the same time from the top of the masts. Also as a ship goeth a far off from the land, if any thing that thineth and giueth light be fastened to the top-gallant, it seemeth from the land side to goe downe and sinke into the sea by little and little, untill at last it be hidden cleane.

clean. Last of all the very Ocean, which we confesse to be the vtmost and farthest bound enuironing the whole globe, by what other figure else could it hold together, and not fall downe, since there is no other banke beyond it to keepe it in? And euen this also is as great a wonder, how it commeth to passe, although the sea grow to be round, that the vtmost edge thereof falleth not downe? Against which, if the seas were euen, flat, and plaine, and of that forme as they seem to be, the Greeke Philosophers to their own great ioy and glory do conclude, and proue by Geometricall subtil demonstration, that it cannot possibly be that the waters should fall. For seeing that waters run naturally from aloft to the lower parts, and that all men confesse, that this is their nature, and no man doubteth that the water of the sea came euer in any shore so far as the deuexitie would haue suffered; doubtlesse it appeares, that the lower a thing is, the neerer it is to the centre; and that all the lines which from thence are sent out to the next waters, are shorter than those which from the first waters reach to the vtmost extremitie of the sea. Hereupon the whole water from euery part thereof bends to the centre, and therefore falls not away, because it inclines naturally to the inner parts. And this we must beleue that Nature the work-mistresse framed and ordained so, to the end that the earth being dry, could not by it selfe alone, without some moisture keepe any consistence; and the water likewise could not abide and stay vnlesse the earth vpheld it; in which regard they were mutually to embrace one another, and so be vnited, whiles the one opened all the creeks and nouks, and the other ran wholly into the other, by means of secret veins within, without, and aboue, like ligaments to claspe it, yea, and so break out at the vtmost tops of hils; whether being partly caried by a spirit, and partly exprest forth by the ponderositie of the earth, it mounteth as it were in pipes: and so far is it from danger of falling away, that it leapeth vp to the highest and loftiest things that be. By which reason it is euident also, why the seas swell not and grow, notwithstanding so many riuers daily run into them.

CHAP. LXXVj.

¶ How the matter is vnited and knit to the earth.

THe earth therefore in his whole globe is in the midst thereof, hemmed in by the sea running round about it. And this need not to be sought out by reason and argument, for it is knowne already by good prooue and experience.

CHAP. LXXvij.

¶ Nauigation vpon the sea and great Riuers.

From Gades and Hercules pillars, the West sea is at this day nauigable and sailed all ouer euen the whole compasse of Spaine and France. But the North Ocean was for the most part disconered vnder the conduct of *Augustus Caesar* of famous memorie, whowith a fleet compassed all Germanie, and brought it about as far as to the cape of the Cimbrians: and so from thence hauing kenned and viewed the vast and wide sea, or else taken notice thereof by report, he passed to the Scythian Clymat and those cold coasts, frozen, and abounding with too much moisture. For which cause there is no likelihood that in those parts the seas are at an end, whereas there is such excessiue wet that all stands with water. And neere vnto it from the East, out of the Indian sea, that whole part vnder the same clyme of the world which bendeth vnder the Caspian sea, was sailed throughout by the Macedonian armies, when *Seleuchus* and *Antiochus* reigned, who would needs haue it so, that *Seleuchus* and *Antiochus* should beare their names. About the Caspian sea also many coasts and shores of the Ocean haue bin discovered, and by piece-meale rather than all whole at once, the North of one side or other hath been failed or rowed ouer. But yet to put all out of coniecture, there is a great argument collected out of the Mere Mæotis, whether it be a gulfe and arme of that Ocean (as I know many haue beleueed) or an ouerflowing of the same, and diuided from it by a narrow piece of the continent. In another side of Gades, from the same West, a great part of the South or Meridian gulfe round about Mauritania is at this day sailed. And the greater part verily of it, like as of the East also, the victories of *Alexander the Great* viewed and compassed on euery side, euen as farre as vnto the Arabian Gulfe. Wherein when *Caius Caesar*, the sonne of *Augustus*, warred,

A warred in those parts, the marks and tokens by report were seen remaining after the Spaniards shipwracke. *Hanno* likewise in the time that Carthage flourished in puissance sailed round about from Gades to the vtmost bounds and lands end of Arabia, and set downe that his voyage in writing. Like as also *Himilco* was at the same time sent out in a voyage to discover the vtter coasts of Europe. Moreouer, *Cornelius Nepos* writeth, that in his time one *Eudoxius* a great sailer, at what time he fled from King *Lathyrus*, departed out of the Arabian gulfe, and held on his course as far as Gades. Yea, and *Celins Antipater* long before him reporteth, that he saw the man who had sailed out of Spain to Æthiopia for traffique of merchandise. The same *Nepos* maketh report as touching the compassing about of the North, That vnto *Qu. Metellus Celer*, **B** Colleague to *C. Afranius* in the Consulship, but at that time Proconsull in Gaule; certain Indians were giuen by a King of the Sueuians, who as they sailed out of India for traffick as merchants, were driuen by tempests, and cast vpon Germanie. Thus the seas flowing on all sides about this globe of the earth, diuided and cut into parcels, becaue vs of a part of the world, so as neither from thence hither, nor from hence thither there is a thorow-faire and passage. The contemplation whereof seruing fit to discover and open the vanitie of men, seemes to require and challenge of me, that I should proiekt to the view of the eye, how great all this is, whatsoever it be, and wherein there is nothing sufficient to satisfie and content the feuerall appetite of each man.

CHAP. LXXvij.

¶ What portion of the earth is habitable.

Now first and formost me thinks men make this reckoning of the earth, as if it were the iust halfe of the globe, and that no portion of it were cut off by the Ocean: which notwithstanding, clasping round about all the midst thereof, yeelding forth and receiuing againe all other waters besides, and what exhalations sweeter that go out for clouds, and feeding withall the very stars, so many as they be, and of so great a bignesse, what a mighty space thinke you will it be thought to take vp and inhabit, and how little can there be left for men to inhabit? surely the possession of so vast and huge a deale must needs be exceeding great and infinite. What say you then to this, That of the earth which is left the heauen hath taken away the greater part? For whereas there be of the heauen siue parts, which they call Zones, all that lieth vnder the two vtmost, to wit, on both sides about the poles, namely this here, which is called *Septentrio*, that is to say, the North, and the other ouer against it, named the South, it is overcharged with extreme and rigorous cold, yea, and with perpetuall frosts and ice. In both Zones it is alwaies dim and darke, and by reason that the aspect of the more milde and pleasant planets is diuerted cleane from thence, the light that is, sheweth little or nothing, and appeareth white with the frost onely. Now the middle of the earth, whereas the Sun hath his way, and keepeth his course, scorched and burnt with flames, is euen parched and fried againe with the hot gleames thereof, being so neere. Those two only on either side about it, namely betweene this burnt Zone and the two frozen, are temperate; and euen those haue not accessse and passage the one to the other, by reason of the burning heate of the said planet. Thus you see that the heauen hath taken from the earth three parts, and what the Ocean hath plucked from it besides no man knoweth. And euen that one portion remaining vnto vs, I wot not whether it be not in greater danger also. For the same Ocean entring, as we will shew, into many armes and creeks, keepeth a roaring against the other gulfes and seas within the earth, and so neere comes vnto them, that the Arabian gulfe is not from the Egyptian sea about 115 miles: the Caspian likewise from the Ponticke but 375. Yea, and the same floweth between, and entrench it into so many armes, as that thereby it diuideth Africke, Europe, and Asia asunder. Now what a quantity of land it taketh vp may be collected and reckoned at this day, by the measure and proportion of so many riuers, and so great Meres. Adde thereto both Lakes and pooles, **F** and withall take from the earth the high mountaines bearing vp their heads aloft into the sky, so as the eye can hardly reach their heights: the woods besides, and steepe descents of the valleys, the Wildernesces, and waste wildes left desart vpon a thousand causes. These so many pieces of the earth, or rather, as most haue written, this little-pricke of the world (for surely the earth is nothing else in comparifon of the whole) is the only matter of our glory. This, I say,

is the very feat thereof: here we seeke for honors and dignities; here we exercise our rule and G
authoritie: here we couet wealth and riches: here all mankind is set vpon stirs and troubles;
here we raise ciuill wars still one after another, and with mutuall massacres and murders wee
make more roome in the earth. And to let passe the publique furious rages of nations abroad,
this is it, wherein we chafe and drue out our neighbor borderers, and by stealth dig turfe from
their soile to put vnto our owne: and when a man hath extended his lands, and gotten whole
countries to himselfe far and neere, what a goodly deale of earth enioyeth he: and say that he
set out his bounds to the full measure of his couetous desires, what a great portion thereof shal
he hold when he is once dead, and his head laid low.

CHAP. LXIX.

¶ That the earth is in the midst of the world.

T Hat the earth is in the midst of the whole world it appeareth by manifest and vndoubted
reasons: but most evidently by the equal houres of the Equinoctial; for vnlesse it were
in the midst, the Astrolabe and instruments called *Diopha* haue proued, that nights and
daies could not possibly be found equall: and those aboue-said instruments aboue all other
confirme the same: seeing that in the Equinoctial, by one and the same line both rising and
setting of the Sun are seen; but the Sommer Sun rising, and the Winter setting, by their owne
seuerall lines: which could by no means happen, but that the earth resteth in the centre.

CHAP. LXX.

¶ Of the vnequall rising of the stars: of the Eclipse, both where
and how it commeth.

N Ow three circles there be infolded within the Zones afore named, which distinguish the
inequalities of the dayes: namely the Sommer Solstitiall Tropicke, from the highest
part of the Zodiacke in regard of vs, toward the North Clyme. And against it another
called the Winter Tropicke toward the other Southern Pole: and in like maner the Equino-
ctial, which goes in the mids of the Zodiacke circle. The cause of the rest, which we wonder
at, is in the figure of the very earth, which together with the water is by the same arguments
knowne to be like a globe: for so doubtlesse it commeth to passe, that with vs the stars about
the North pole neuer go downe; and those contrariwise about the Meridian neuer rise. And
again, these here be not seene of them, by reason that the globe of the earth swelleth vp in the
mids between. Again, Trogloditine and Egypt confining next vpon it, neuer set eye vpon the
North pole stars, neither hath Italy a sight of Canopus, named also Berenices haire. Likewise
another, which vnder the Empire of *Augustus* men surnamed *Cæsaris Thronon*: yet be they stars
there of speciall marke. And so evidently bendeth the top of the earth in the rising, that Ca-
nopus at Alexandria seemeth to the beholders eleuate aboue the earth almost one fourth part
of a signe: but if a man looke from Rhodes, the same appeareth after a sort to touch the verie
horizon: and in Pontus, where the eleuation of the North pole is highest, not seene at all: yea,
and this same pole at Rhodes is hidden, but most in Alexandria. In Arabia all hid it is at the
first watch of the night in Nouember, but at the second it sheweth. In Meroe, at Midsummer
in the euening it appeareth for a while; but some few daies before the rising of *Arcturus* seene
it is with the very dawning of the day. Sailers by their voiaiges finde out and know these stars
most of any other, by reason that some seas are opposite vnto some stars; but other lie flat and
incline forward to other: for that also those pole stars appeare suddenly, and rising out of the
sea, which lay hidden before vnder the winding compasse as it were of a ball. For the heauen
riseth not aloft in this higher pole, as some men haue giuen out; else should these stars be seen
in euery place: both those that vnto the next Sailers are supposed to be higher, the same seeme
to them as farre off drowned in the sea. And like as this North pole seemeth to be aloft vnto
those that are situate directly vnder it; so to them that be gone so far as the other dexextie
or fall of the earth, those aboue-said starres rise vp aloft there, whiles they decline downeward
which here were mounted on high. Which thing could not possibly fall out but in the figure
of

A of a ball. And hereupon it is that the inhabitants of the East perceiue not the eclipses of Sun
or Moone in the euening, no more than those that dwell West in the morning: but those that
be at noone in the South they see very oft. At what time *Alexander* the great won that famous
victorie at Arbela, the Moone by report was eclipsed at the second houre of the night; but at
the very same time in Sicily she arose. The eclipse of the Sun, which chanced before the Ca-
lends of May, when as *Vipsanius* and *Fontius* were Consuls (being not many yeares past) was
seene in Campania, betwene the 7 and 8 houres of the day: but *Corbulo*, a General Comman-
der then in Armenia, made report, that it was seene there betwene the tenth and 11 houres of
the same day; by reason that the compasse of the globe discovereth and hides some things to
some, and other to others. But if the earth were plaine and leuell, all things should appeare at
once to all men; for neither should one night be longer than another, ne yet should the day of
12 houres appeare euen and equall to any, but to those that are seated in the mids of the earth,
which now in all parts agree and accord together alike.

CHAP. LXXj.

¶ What is the reason of the day light vpon earth.

A Nd hence it commeth, that it is neither night nor day at one time in all parts of the
world, by reason that the opposition of the globe brings night, and the round compasse
or circuit thereof discovereth the day. This is knowne by many experiments. In Africk
C and Spaine there were raised by *Hanibal* high watch-towers; and in Asia for the same feare of
rouers and pyrats, the like helpe of beacons was erected; wherein it was noted oft times, that
the fires giuing warning afore-hand (which were kindled at the sixth houre of the day) were de-
scribed by them that were farthest off in Asia at the third houre of the night. *Philonides* the cur-
ror or Post of the same *Alexander* aboue named, dispatched in 9 houres of the day 1200 stadia,
euen as far as from Sicyone to Elis: and from thence againe (albeit he went downe hill all the
way) he returned oftentimes, but not before the third houre of the night. The cause was, for
that he had the Sun with him in his first setting out to Elis, and in his returne backe to Sicy-
one he went full against it, met with it, and ere he came home ouerpassed it, leauing it in the
West behind going from him. Which is the reason also, that they who by day light saile west-
ward in the shortest day of the yeare, rid more way than those who saile all night long at the
same time, for that the other do accompany the Sun.

CHAP. LXXij.

¶ The Guomonike art of the same matter: as also of the first Diall.

A Lso the instruments seruing for the houres, as Quadrants and Dials, will not serue for all
places, but in euery 300 stadia, or 500 at the farthest, the shadowes that the Sun casteth
change; and therefore the shadow of the style in the Dial, called the Gnomon, in Egypt
at noone tide in the Equinoctial day is little more in length than halfe the Gnomon. But in
E the city of Rome the shadow wanteth the ninth part of the Gnomon. In the towne Ancona it
is longer than it in 35 part. But in Venice at the same time and houre the shadow and the
Gnomon be all one.

CHAP. LXXiiij.

¶ Where and when there be no shadowes at all.

I N like manner they say, that in the towne Syene (which is aboue Alexandria 50 stadia) at
noone tide in the midst of Sommer there is no shadow at all: and for further experiment
thereof, let a pit be sunke in the ground and it will be light all ouer in euery corner. Where-
by it appeareth, that the Sun then is iust and directly ouer that place, as the very Zenith there-
of. Which also at the same time hapneth in India aboue the riuer Hypasis, as *Onesiratus* hath
set downe in writing. Yea and it is for certaine knowne, that in Berenice a city of the Troglod-
ites, and from thence 4820 stadia in the same countrey, at the towne of Prolemais (which was
built at the first vpon the very banke of the Red sea, for the pleasure of chasing and hunting
of

of Elephants) the selfe same is to be seen 45 daies before the Summer Sunsted, and as long after, and that for 90 daies space all shadowes are cast into the South. Again, in the Isle Meroe, the capitall place of the Æthiopian nation, inhabited 5000 stadia from Syene vpon the Riuer Nilus, twice in the yeare the shadowes are gon, and none at all seen; to wit, when the Sun is in the 18 degree of Taurus, and the 14 of Leo. In the country of the Oretes within India there is a mountaine named Maleus, neere which the shadowes in Summer are cast into the South, and in Winter into the North. There for 15 nights and no more is the star Charles-wain neere the pole to be seen. In the same India at Patales (a most famous and frequented port) the Sun ariseth on the right hand, and all shadowes fall to the South, Whiles Alexander made abode there, Onesicritus a captaine of his wrot, that it was obserued there, that the North star was seen the first part only of the night: also in what places of India there were no shadowes, there the North star appeared not: and that those quarters were called *Ascia*, (i. without shadow) neither keepe they any reckoning of houres there.

CHAP. LXXIV.

¶ Where twice in the yeare the shadowes go contrarie waies.

B Vt throughout all Trogliditine, *Cratosthenes* hath written, that the shadowes two times in the yeare for 45 daies fall contrarie waies.

CHAP. LXXV.

¶ Where the day is longest, and where shortest.

IT comes thus to passe, that by the variable increment of the day light, the longest day in Meroe doth comprehend 12 Equinoctial houres, and 8 parts of one houre aboue; but in Alexandria 14, in Italy 15, in Britaine 17: where in Sommer time the nights being light and short, by infallible experience shew that which reason forceth to beleue; namely, that at Midsummer time, as the Sun maketh his approach neere vnto the pole of the world, the places of the earth lying vnderneath hath day continually for six moneths, and contrariwise night, when the Sun is remote as far as Bruma. The which *Pythias* of Massiles hath written of Thule, an Island distant Northward from Britaine six daies sailing. Yea, and some affirme the same of Mona, an Island distant from Camalodunum, a towne of Britaine, about 200 miles.

CHAP. LXXVI. ¶ Of Dials and Quadrants.

THis cunning and skill of shadowes, named Gnomice, *Anaximenes* the Milesian, the disciple of *Anaximander* aboue named, inuented: and hee was the first also that shewed in Lacedemon the Horologe or Dial which they call Sciotericon.

CHAP. LXXVII. ¶ How the dayes are obserued.

THe very day it selfe men haue after diuers manners obserued. The Babylonians count for day all the time betweene two Sun-risings: the Athenians, betweene the settings. The Vmbrians from noone to noone. But all the common sort euery where, from day light vntill it be darke. The Roman Priests, and those that haue defined and set out a ciuill day, likewise the Egyptians and *Hipparchus*, from midnight to midnight. That the spaces or lights are greater or lesse betwixt Sun risings, neere the Sunsteds, than the equinoctials, it appeareth by this, that the position of the Zodiacke about the middle parts thereof is more oblique and crooked, but toward the Sunsted more streight and direct.

CHAP. LXXVIII.

¶ The reason of the varietie and difference of sundry Countries and Nations.

Hereunto we must ioine such things as are linked to celestiall causes. For doubtlesse it is, that the Æthiopians by reason of the Sunnes vicinitie are scorched and tanned with the heate thereof, like to them that be adust and burnt, hauing their beards and bush of haire curled. Also, that in the contrarie Climate of the world to it, in the frozen and icie regions

A gions the people haue white skins, haire growing long downward, and yellow; but are fierce and cruell by reason of the rigorous cold aire: howbeit the one as well as the other in this mutabilitie are dull and grosse, and the very legs do argue the temperature: for, in the Æthiopians the iuice or bloud is drawen vpward againe by the naturall heate. But among the nations Septentrionall the same is driuen to the inferior parts, by reason of moisture apt to fall downward. Here breed noisome and hurtfull wilde beasts; but there be ingendred creatures of sundry and diuers shapes, especially birds. Tall they are of bodily stature, as well in one part as the other; in the hot regions by the occasionall motion of fire: in the other by the moist nourishment. But in the midst of the earth there is an wholesome mixture from both sides: the whole Tract is fertill and fruitfull for all things, the habit of mens bodies of a mean and indifferent constitution, the colour also shewing a great temperature. The fashions and manners of the people are ciuill and gentle, their fences cleare and lightsome, their wits pregnant and capable of all things within the compasse of Nature: they also beare soueraigne rule, and sway empires and monarchies, which those vttermost nations neuer had. Yet true it is, that euen they who are out of the temperate Zones may not abide to be subiect, nor accommodate themselves to these: for such is their sauaige and brutish nature that it vrgeth them to liue solitarie by themselves.

CHAP. LXXIX.

¶ Of Earthquakes.

THe Babylonians were of this opinion, that earthquakes and gaping chinks, and all other accidents of that nature are occasioned by the power and influence of the planets, but of those three only to which they attribute lightnings: and by this means, namely as they keepe their course with the Sun, or meet with him, and especially when this concurrence is about the quadratures of the heauen. And surely if it be true which is reported of *Anaximander*, the Milesian naturall Philosopher, his prescience and foreknowledge of things was excellent, and worthy of immortalitie; who, as it is said, forewarned the Lacedemonians to looke well to their city and dwelling houses, for that there was an earthquake toward: which hapned accordingly, when not only their whole city was shaken, and fell downe, but also a great part of the mountain Taygetus, which bare out like to the poupe of a ship, broken as it were from the rest, came down too, wholly couering the foresaid ruines. There is reported another shrewd guesse of *Pherecydes*, who was *Pythagoras* his master, and the same likewise diuine and propheticall: he by drawing water out of a pit both foresaw and also foretold an earthquake there. Which if they be true, how far off I pray you may such men seeme to be from God, euen while they liue here on earth. But as for these things verily, I leaue it free for euery man to weigh and deeme of them according to their owne iudgement; and for mine owne part I suppose, that without all doubt the windes are the cause thereof. For neuer beginneth the earth to quake but when the sea is still, and the weather so calme withall, that the birds in their flying cannot honer and hang in the aire, by reason that all the spirit and winde which should beare them vp is withdrawn from them: ne yet at any time, but after the windes are laid, namely when the blast is pent and hidden within the veines and hollow caues of the earth. Neither is this shaking in the earth any other thing than is thunder in the cloud; nor the gaping chinke thereof ought else but like the clift whereout the lightning breaketh, when the spirit inclosed within strugleth and stirreth to go forth at libertie.

CHAP. LXXX.

¶ Of the gaping chinks of the earth.

F A Frer many and sundry sorts the earth therefore is shaken, and thereupon ensue wondrous effects: in one place the walls of cities are laid along: in another they be swallowed vp in a deepe and wide chawne: here are cast vp mighty heaps of earth; there are let out Riuers of water, yea and sometimes fire doth breathe forth, and hot springs issue abroad: in another place the course and channell of riuers is turned clean away and forced backward. There goeth before and commeth with it a terrible noise: one while a rumbling more like the loowing

and bellowing of beasts: otherwhiles it resembles a mans voice, or else the clattering and rustling of armor and weapons, beating one vpon another according to the qualitie of the matter that catcheth and receiueth the noise, or the fashion either of the hollow cranes within, or the cranny by which it passeth, whiles in a narrow way it taketh on with a more slender and whistling noise: and the same keepeth an hoarse din in winding and crooked caues, rebounding againe in hard passages, roaring in moist places, wauing and floting in standing waters, boiling and chafing against solid things. And therefore a noise is often heard without any earthquake, and neuer at any time shaketh it simply after one and the same manner, but trembles and waggeth to and fro. As for the gaping chink, sometimes it remaineth wide open, and sheweth what it hath swallowed vp; otherwhiles it closeth vp the mouth, and hideth all, and the earth is knit together so againe, as there remaine no marks and tokens to be seene: notwithstanding many times it hath deuoured cities, and drawne into it a whole tract of ground and fields. Sea coasts and maritime regions most of all other feeble earthquakes. Neither are the hilly countries without this calamitie: for I my selfe haue known for certain, that the Alps and Apenine haue often trembled. In the Autumne also and Spring there happen more earthquakes than at other times, like as lightnings. And hereof it is that France and Egypt least of all other are shaken: for that in Egypt the continuall Sommer, and in France the hard Winter, is against it. In like manner, earthquakes are more rife in the night than in the day time: but the greatest vse to be in the morning and euening. Toward day light there be many; and if by day, it is vsually about noon. They fortune also to be when the Sun and Moone are eclipsed, because then all tempests are asleepe and laid to rest. But especially, when after much raine there followes a great time of heate; or after heate store of raine.

CHAP. LXXXJ.

¶ *Signes of Earthquake comming.*

Sailers also haue a certaine foreknowledge thereof, and guesse not doubtfully at it, namely when the waues swel suddenly without any gale of wind, or when in the ship they are shocked with billowes shaking vnder them: then are the things seen to quake which stand in the ship, as well as those in houses, and with a rustling noise giue warning before-hand. The foules likewise of the aire sit not quietly without feare. In the sky also there is signe thereof; for there goeth before an earthquake, either in day time, or soon after the Sun is gon downe, a thin streak or line as it were of a cloud, lying out in a great length. Moreover, the water in wells and pits is more thicke and troubled than ordinary, casting out a stinking sent.

CHAP. LXXXIj.

¶ *Remedies or helps against Earthquakes toward.*

But a remedie there is for the same, such as vaults and holes in many places do yeeld: for they vent and breathe out the wind that was conceiued there before: a thing noted in certain townes, which by reason they stand hollow, and haue many sinks and vaults digged to conuey away their filth, are lesse shaken: yea, and in the same townes, those parts which be pendant be the safer: as is well seen in Naples, where that quarter thereof which is folliid and not hollow is subiect to such casualties. And in houses the arches are most safe, the angles also of walls, yea, and those posts which in shaking will jog to and fro euery way. Moreover, walls made of brick or earth take lesse harme when they be shaken in an earthquake. And great difference there is in the very kinde and manner of earthquakes, for the motion is diuers: the safest is, when houses as they rocke keep a trembling and warbling noise: also when the earth seemeth to swell vp in rising, and again to settie down and sink with an alternatiue motion. Harmlesse it is also when houses run on end together by a contrary stroke, and butt or jure one against another; for the one mouing withstandeth the other. The bending downward in maner of wauing, and a certain rolling like to surging billowes is it that is so dangerous, and doth all the mischief: or when the whole motion beareth and forceth it selfe to one side. These quakings or tremblings of the earth giue ouer when the winde is once vented out: but if they continue still, then they cease not vntill forty daies end, yea and many times it is longer ere they stay, for some of them haue lasted the space of a yeare or two.

CHAP.

CHAP. LXXXIII.

¶ *Monstrous Earthquakes seene neuer but once.*

Here hapned once (which I found in the books of the Tuscane learning) within the territorie of Modena, whiles *L. Martius* and *S. Iulius* were Consuls, a great strange wonder of the earth; for two hills encountered together, charging as it were, and with violence assaulting one another, yea and retrying againe with a most mighty noise. It fell out in the day time, and between them there issued flaming fire and smoke mounting vp into the sky; while a great number of Roman Gentlemen (from the highway *Æmylia*) and a multitude of seruants and passengers stood and beheld it. With this conflict and running of them together all the villages vpon them were dashed and broken to pieces: very much cattell that was within died therewith. And this hapned the yeare before the war of our Associates: which I doubt whether it were not more pernicious to the whole land of Italy, than the ciuill wars. It was no lesse monstrous a wonder that was knowne also in our age, in the very last yeare of *Nero* the Emperour (as we haue shewed in his acts) when medows and oliue rowes (notwithstanding the great publique port way lay betweene) passed ouerthwart one into anothers place, in the *Marrucine* territorie, within the lands of *Vestius Marcellus* a gentleman of Rome, Procurator vnder *Nero* in his affaires.

CHAP. LXXXIv.

¶ *Wonders of Earthquakes.*

Here happen together with earthquakes deluges also and inundations of the sea, being infused and entering into the earth with the same aire and wind, or else receiued into the hollow receptacle as it setleth down. The greatest earthquake in mans memory was that which chanced during the empire of *Tiberius Caesar*, when twelue cities of Asia were laid leuell in one night. But the earthquakes came thickest in the Punick war, when in one yeare were reported to be in Rome 57. In which yeare verily, when the Carthaginians and Romans fought a battell at *Thrasymenus* lake, neither of both armies tooke notice of a great earthquake. Neither is this a simple euill thing, nor the danger consisteth only in the very earthquake, and no more: but that which it portendeth is as bad or worse. Neuer abode the city of Rome any earthquake, but it gaue warning thereof before hand of some strange accident and vnhappie euent following.

CHAP. LXXXv.

¶ *In what places the seas haue gone backe.*

The same cause is to be rendred of some new hill or piece of ground not seen before; when as the said winde within the earth, able to huffe vp the ground, was not powerful enough to breake forth and make issue. For, firme land groweth not only by that which Riuer bring in (as the Isles *Echinades*, which were heaped and raised vp by the riuer *Achelous*; and by *Nilus* the greater part of Egypt, into which, if wee beleue *Homer*, from the Island *Pharus* there was a cut by sea of a day and a nights sailing) but also by the retiring and going backe of the sea, as the same poet hath written of the *Circeia*. The like (by report) hapned both in the bay of *Ambracia* for ten miles space, and also in that of the Athenians, for five miles, nere *Piræum*: also at *Ephesus*, where sometime the sea beate vpon the temple of *Diana*. And verily, if we giue care to *Herodotus*, it was all a sea from about Memphis to the *Ethyopian* hills: and likewise from the plaines of Arabia. It was sea also about *Ilium*, and the flat of *Teuthrania*; and all that leuell whereas the riuer *Mæander* now runneth by goodly medowes.

CHAP. LXXXvi.

¶ *The reason of Islands that newly appeare out of the sea.*

Here be lands also that put forth after another manner, and all at once shew on a sudden in some sea; as if Nature cried quittance with her selfe, and made euen, paying one for another, namely by giuing againe that in one place, which those chawnes and gaping gulfes tooke away in another.

¶ *What Islands haue sprung vp, and when.*

Those famous Islands long since, to wit, Delos and Rhodes, are recorded to haue growne out of the sea: and afterwards others that were lesse, namely Anaphe beyond Melos, and Nea, betweene Lemnus and Hellespont. Alone also, betweene Lebedus and Teos. Thera likewise, and Therasia, among the Cyclades, which shewed in the fourth yere of the 135 Olympias. Moreover, among the same Isles 130 yeres after, Hiera, which is the same that Automate. And two furlongs from it, after 110 yeres, Thia, euen in our time, vpon the 8 day before the Ides of Iuly, when *M. Iunius Syllanus* and *L. Balbus* were Consuls.

¶ *What lands the Seas haue broken in betweene.*

Even within our kenning, neere to Italy, between the isles *Eoliæ*. In like maner neer Creta there was one shewed it selfe with hot fountaines out of the sea, for a mile and halfe; and another in the 3 yere of the 143 Olympias, within the Tuscan gulf, and this burned with a violent winde. Recorded it is also, that when a great multitude of fishes floted ebbe about it, those persons died presently that did feed thereof. So they say that in the Campaine gulfe the *Pithecusæ* Islands appeared. And soon after, the hill *Epopos* in them (at what time as suddenly there burst forth a flaming fire out of it) was laid leuell with the plain champion. Within the same also there was a town swallowed vp by the sea: and in one earthquake there appeared a standing poole; but in another, by the fall and tumbling downe of certain hills, grew the Island *Prochyta*. For after this maner also Nature hath made Islands; thus she dis-ioyned Sicily from Italy, Cyprus from Syria, Eubœa from Bœotia, Atalante and Macris from Eubœa, Besbycus from Bithynia, Leucostia from the promontorie and cape of the Syrenes.

¶ *What Islands came to ioyne vnto the Main.*

Again, shee hath taken Islands from the sea, and ioyned them to the firme land; namely, Antissa to Lesbos, Zephyria to Halicarnassus, Aethusa to Myndus, Dromiscos and Pern to Miletus, and Narthecusa to the promontorie Parthenius. Hybanda, sometime an Isle of Ionia, is now distant from the sea 200 stadia. As for Syrie, Ephesus hath it now in the midland parts far from the sea. So Magnesia neighbouring to it, hath Derasitas and Sophonia. As for Epidaurus and Oricum, they are no more Islands at this day.

¶ *What lands haue been turned wholly into sea.*

Nature hath altogether taken away certaine lands: in the first place, whereas now the sea Atlanticum is, was sometime the continent for a mighty space of ground, as *Plato* saith. Likewise in our Mediterranean sea, all men may see at this day how much hath been drowned vp, to wit, Acarnania by the inward gulfe of Ambracia, Achaia within that of Corinth, Europ and Asia within Propontis and Pontus.ouer and besides, the sea hath broken through Leucas, Antirrhium, Hellespont, and the two Bosphori.

¶ *What lands haue swallowed vp themselves.*

And now to passe ouer armes of the sea and lakes; the very earth hath deuoured and buried her selfe: to wit, that most high hill *Cybotus*, with the towne *Curites*; *Sipylus* in Magnesia: and in the same place before time the most noble city called *Tantalus*; the territories of *Galanis* and *Gamale* in Phœnice, together with the very cities. *Phogium* also, a passing high hill in Ethiopia, as if the very stronds and continent were not to be trusted, but they also must worke hurt and mischief.

¶ *What Cities haue been drowned with the sea.*

The sea Pontus hath ouerwhelmed *Pyrria* and *Antyssa* about *Mæotis*, *Elice* and *Bura* in the gulfe of Corinth; whereof the marks and tokens are to be seene in the Deep. Out of the Island *Cea* more than 30 miles of ground was lost suddenly at once, with many men. In Sicily also the sea came in and bare away halfe the city *Thindaris*, and all that Italy nurseth betweene it and Sicily. The like it did in Bœotia and Eleusina.

¶ *Of the strange wonders of the land.*

For let vs speake no more of Earthquakes, and whatsoeuer else of that kind, as of graues and sepulchres of cities buried, and extant to be seene; but discourse we rather of the wonders, than the mischiefs wrought by Nature in the earth. And surely the story of cœlestiall things was not more hard to be declared: the wealth is such of mettals and mines, in such variety, so rich, so fruitfull, rising still one vnder another for so many ages, notwithstanding daily there is so much wasted and consumed throughout the world, with fires, ruines, shipwrecks, wars, and fraudulent practises: yea and so much spent in ryot and superfluous vanities, that it is infinite: yet see how many sorts of gemmes there be still, so painted and set out with colors? in precious stones what varieties of sundry colours, and how bespotted are they: and amongst them behold the brightnesse and white hue of some, excluding all else but onely light! The vertue and power of medicinable fountaines: the wonderfull burning so many hundred yeres together of fire issuing forth in so many places: the deadly dampes and exhalations in some places, either sent out of pits when they are sunke, or else from the very natieue seat and position of the ground; present death in one place to the birds and foules of the aire only (as at *Socrate*, in a quarter neere the city:) in other, to all other liuing creatures saue only man: yea and sometimes to men also, as in the territories of *Sinuessa* and *Puteoli*. Which damp holes breaching out a deadly aire some call *Charonæa Scrobes*, i. *Charons* ditches. Likewise in the *Hirpines* land, that of *Amisanctus*, a caue neere vnto the temple of *Nephtes*, wherinto as many as enter dy presently. After the like manner at *Hierapolis* in Asia there is another such, hurting all that come to it, except the priest of *Cybele*, the great mother of the gods. In other places there be also caues and holes of a propheticall power; by the exhalation of which men are intoxicate and as it were drunken, and so foretell things to come, as at *Delphi* that most renowned Oracle. In all which things what other reason can any mortall man make, than the diuine power of Nature, diffused and spread through all, which breaketh forth at times in sundry sorts.

¶ *Of certaine Lands that alwaies quake.*

Some parts of the earth there be that shake and tremble vnder mens feet as they go: namely in the territorie of the *Gabians* not far from Rome, there be almost two hundred acres of ground which tremble as horsemen ride ouer them. And the like is in the territory of *Reate*.

¶ *Of Islands euer floting and swimming.*

Certaine Isles are alwaies wauiing and neuer stand still, as in the countrey about *Cæcubum*, *Reate* about named, *Mutina*, and *Statonia*. Also in the lake *Vadimonis*, and neer the waters *Cutylia*, there is a shadowie darke groue which is neuer seene in one place a day and night together. Moreover in *Lydia*, the Isles *Calanuca* are not only driuen to & fro by winds, but also many be shoued and thrust with long poles which way a man will: a thing that faued

many a mans life in the war against *Mithridates*. There be other little ones also in the River *Nymphæus*, called *Saltuares* or *Dancers*, because in any consort of Musicians singing they stir and moue at the stroke of the feet, keeping time and measure. In the great lake of *Italy*, *Tarquinienfis*, two Islands carry about with them groues and woods: one while they are in fashion three square, another while round, when they close one to the other by the drift of winds, but neuer fouresquare.

CHAP. XCVI.

¶ In what lands it neuer raineth. Also many strange wonders and miracles of the earth, and other Elements heaped together.

Paphos hath in it a famous temple of *Venice*, vpon a certain floure and altar whereof it neuer raineth. Likewise in *Nea* a towne of *Troas* a man shall neuer see it raine about the Image of *Minerva*. In the same also the beasts killed in sacrifice, if they be left there neuer putrifie. Neere to *Harpasa* a towne in *Asia* stands a rocke of stone of a strange and wonderful nature, lay one finger to it and it will stir, but thrust at it with your whole body, it moueth not at all. Within the demy Island of the *Tauri*, and city *Parasinum*, there is a kinde of earth that healeth all wounds: but about *Affios* in *Troas* there growes a stone, wherewith bodies are consumed, and therefore is called *Sarcophagus*. Two hills there be neere the river *Indus*: the nature of the one is to hold fast all manner of iron, and of the other not to abide it: wherefore if a mans shooe sole be clouted with hob nailes, in the one of them a man cannot plucke away his foot, and in the other he can take no footing at all. Noted it is, that in *Locri* and *Crotone* was neuer pestilence knowne, nor any danger by earthquake. And in *Lycia* euer after an earthquake it hath been faire for forty daies. In the territorie of *Arda* if corne be sowed it neuer comes vp. At the altars *Murtiæ* in the *Veientian* field, likewise in *Tusculanum* and the wood *Cyminia*, there be certaine places, wherein whatsoever is pitched into the ground, can neuer be plucked vp againe. In the *Crustumine* countrey all the hay there growing is hurtfull in the same place: but being once without, it is good and wholefome.

CHAP. XCVII.

¶ What is the reason of the reciprocall ebbe and flow of the seas; and where it is that they keepe no order, and are without reason.

OF the nature of waters much hath bin said: but the sea tide that it should flow and ebbe againe is most maruellous of all other: the maner thereof verily is diuers, but the cause is in the Sun and Moon. Between two risings of the Moone they flow twice, and twice go backe, and alwaies in the space of 24 houres. And first as he riseth aloft together with the world the tides swell, and anon again, as it goeth from the height of the Meridian line, and enclineth Westward, they flake: again, as she moueth from the West vnder our horizon, and approacheth to the point contrarie to the Meridian, they flow, and then they are receiued backe into the sea vntill she rise again: and neuer keepeth the tyde the same houre that it did the day before; for it waiteth and attendeth vpon the planet, which greedily draweth with it the seas, and euer riseth to day in some other place than it did yesterday. Howbeit the tides keepe iust the same time between, and hold alwaies six houres apiece: I meane not of every day and night, or place indifferently, but only the equinoctial. For in regard of houres the tides of the sea are vnequall, forasmuch as by day and night the tydes are more or lesse one time than another: in the equinoctial only they are euen and alike in all places. A very great argument this is, full of light, to conuince that grosse and blockish conceit of them who are of opinion, that the planets being vnder the earth lose their power, and that their vertue beginneth when they are aboue only: for they shew their effects as well vnder as aboue the earth, as well as the earth, which worketh in all parts. And plaine it is, that the Moone performeth her operations as well vnder the earth, as when we see her visibly aloft: neither is her course any other beneath, than aboue our horizon. But yet the difference and alteration of the Moone is manifold, and first every seven daies: for whiles she is new the tides be but small vntill the first quarter:

for

A for as she groweth bigger, they flow more, but in the full they swell and boile most of all. From that time they begin again to be more milde; and in the first daies of the wain to the seuenth, the tides are equall: and againe when she is diuided on the other side, and but halfe Moon, they increase greater. And in the Coniunction or the change, they are equal to the tides of the full. And euidently it appeareth, that when she is Northerly, and retired higher & farther from the earth, the tides are more gentle, than when she is gone Southerly; for then she worketh neerer hand, and putteth forth her full power. Euery eight yere also, & after the hundreth revolution of the Moone, the seas returne to the beginning of their motions, and to the like encrease and growth: by reason that she augmenteth all things by the yerely course of the Sun: forasmuch as in the two equinoctials they euer swell most, yet more in that of the Autumne, than the Spring: but nothing to speak of in Mid-winter, & lesse at Mid-summer. And yet these things fall not out iust in these very points and instants of the times which I haue named, but some few daies after: like as neither in the full nor in the change, but afterward: ne yet presently so soon as the heauen either sheweth vs the Moon in her rising, or hideth her from vs at her setting, or as shee declineth from us in the middle climat, but later almost by two equinoctial hours. Forasmuch as the effect of all influences and operations in the heauen reach not so soon vnto the earth, as the eyesight pierceth vp to the heauen: as it appeareth by lightnings, thunders, & thunderbolts. Moreouer, all tides in the main Ocean, ouerspread, couer, and ouerflow much more within the land, than in other seas besides: either because the whole and vniuersall element is more courageous than in a part: or for that the open greatnesse and largenesse thereof, feeleth more effectually the power of the Planet, working forcibly as it doth far and neere at liberty, than when the same is pent and restrained within those streights. Which is the cause that neither lakes nor little riuers ebbe and flow in like manner. *Pythias* of *Massiles*, writeth, That about *Brittain* the tide floweth in height 80 cubits. But the more inward and *Mediterranean* narrow seas are shut vp within the lands, as in an haue. Howbeit in some places a more spacious liberty there is that yeeldeth to the power and command of the Moon; for we haue many examples and experiments of them that in a calm sea without wind and saile, by a strange water onely, haue tided from *Italy* to *Vtica* in three daies. But these tides and quick motions of the sea are found to be about the shores, more than in the deep maine sea. For euen so in our bodies the extreme and vtmost parts haue a greater feeling of the beating of arteries, that is to say, the vitall spirits.

D Yet notwithstanding in many firths and armes of the sea, by reason of the vnlike risings of the planets in euery coast, the tides are diuers, and disagreeing in time, but not in reason and cause, as namely in the *Syrtis*. And yet some there be that haue a peculiar nature by themselves, as the *Firth Taurominitanum*, which ebbeth and floweth oftner than twice: and that either in *Eubœa*, called likewise *Euripus*, which hath seven tides to and fro in a day and a night. And the same tide three daies in a moneth standeth still, namely in the 7, 8, and 9 daies of the moons age. At *Gades*, the fountain next vnto the chappell of *Hercules*, is inclosed about like a well, the which at sometimes riseth and falleth as the Ocean doth: at others againe it doth both, at contrary seasons. In the same place there is another spring that keepeth order and time with the motions of the Ocean. On the banke of *Betis* there is a towne, the wells whereof as the tide floweth, do ebbe; and as it ebbeth, do flow: in the mid times betweene, they stirre not. Of the same qualitie there is one pit in the towne *Hispalis*; all the rest be as others are. And the sea *Pontus* euermore floweth and runneth out into *Propontis*, but the sea neuer retireth backe againe within *Pontus*.

CHAP. XCVIII.

¶ *Marmels of the Sea.*

ALl seas are purged and scoured in the full Moone; and some besides at certain times. About *Messala* and *Nylæ*, there is voided vpon the shore certaine dregges and filthinesse like to beasts dung: whereupon arose the fable, That the Sunnes oxen were there kept in stall. Hereunto addeth *Aristotle* (for I would not omit willingly any thing that I know) that no liuing creature dieth but in the reflux and ebbe of the sea. This is obserued much in the Ocean of *France*, but found onely in man by experience, true.

CHAP.

By which it is truly guessed and collected, that not in vaine the planet of the Moone is supposed to be a Spirit: for this is it that satisfieth the earth to her content: fhee it is that in her approch and comming toward, filleth bodies full; and in her retire and going away, emptieth them again. And hereupon it is, that with her growth all shell-fish wax & encrease: and those creatures which haue no bloud, them most of all do feele her spirit. Also, the bloud in men doth increase or diminish with her light more or lesse: yea the leaues of trees and the grasse for fodder (as shall be said in conuenient place) do feele the influence of her, which euer more the same pierceth, and entreth effectually into all things.

CHAP. C.

¶ *Of the power of the Sun, and why the Sea is salt.*

Thus by the feruent heate of the Sun all moisture is dried vp: for wee haue been taught, that this Planet is Masculine, trying and sucking vp the humidity of all things. Thus the broad and spacious sea hath the taste of salt foddren into it: or else it is, because when the sweet and thin substance thereof is sucked out from it, which the fire power of the Sun most easily draweth vp, all the tarter and more grosse parts thereof remaine behinde: and hereupon it is, that the deep water toward the bottom is sweeter and lesse brackish than that aboue in the top. And surely, this is a better and truer reason of that vnpleasant smacke and taste that it hath, than that the sea should be a sweat issuing out of the earth continually: or, because ouer-much of the dry terrene element is mingled in it without any vapour: or else because the nature of the earth infecteth the waters, as it were, with some strong medicine. We finde among rare examples and experiments, that there happened a prodigious token to *Demis* tyrant of Sicily, when he was expelled and deposed from that mightie state of his, and this it was; the sea water within one day in the haueu grew to be fresh and sweet.

CHAP. CI.

¶ *In like manner of the Moones Nature*

On the contrary, they say that the Moone is a planet Foeminine, tender & nightly, diffolueeth humors, draweth the same, but carieth them not away. And this appeareth evidently by this prooffe, that the carcases of wilde beafts slaine, she putrifieth by her influence, if she shine vpon them. When men also are found asleepe, the dull nummednesse thereby gathered, she draweth vp into the head: she thaweth yce, and with a moistening breath proceeding from her, enlargeth and openeth all things. Thus you see how Natures turn is serued and supplied, and is alwaies sufficient; whiles some stars thicken and knit the elements, others againe resolue the same. But as the Sun is fed by the salt seas, so the Moone is nourished by the fresh riuer waters.

CHAP. CII.

¶ *Where the Sea is deepest.*

Fabianus saith, that the sea where is deepest, exceedeth not fifteen furlongs. Others againe do report, that in Pontus the sea is of an vnmeasurable depth, ouer against the Nation of the Coraxians, the place they call *Bathei Ponti*, whereof the bottome could neuer bee founded.

CHAP. CIII.

¶ *The wonders of Waters, Fountaines and Rivers.*

Of all wonders this passeth, that certain fresh waters hard by the sea, issue & spring forth as out of pipes: for the nature of the waters also ceaseth not from strange and miraculous properties. Fresh waters run aloft the sea, as being no doubt the lighter: and therefore

Afore the sea water (which naturally is heauier) vpholdeth and beareth vp whatsoeuer is brought in. Yea and amongst fresh waters, some there be that floe and glide ouer others. As for example, in the lake Fucinus, the riuer that runneth into it: in Larius, Addua; in Verbanus, Ticinus; in Benacus, Mincius; in Scuinus, Ollius; in Lemanus lake, the riuer Rhodanus. As for this riuer beyond the Alpes, and the former in Italy, for many a mile as they passe, carry forth their owne waters from thence where they abode as strangers, and none other; and the same no larger than they brought in with them. This is reported likewise of Orontes, a riuer in Syria, and of many others. Some riuers again there be, which vpon an hatred to the sea, run euen vnder the bottom thereof, as Arethusa, a fountaine in Syracusa: wherein this is obserued, that whatsoeuer is cast into it, commeth vp againe at the riuer Alpheus, which running through Olimpia, falleth into the sea shore of Peloponnesus. There go vnder the ground, and shew about the ground againe, Lycus in Asia, Erasinus in Argolica, Tygris in Mesopotamia. And at Athens what things soeuer are drowned in the fountain of Esculapius, be cast vp againe in Phalericus. Also in the Attinate plaines, the riuer that is buried vnder the earth, twentie miles off appeareth againe. So doth Timavus in the territory of Aquileia, in Asphaltes (a lake in Iury which ingenders *Bitumen*) nothing will sinke nor can be drowned, no more than in Arcthusa in the greater Armenia: and the same verily, notwithstanding it be full of Nitre, breedeth and feedeth fish. In the Salentines country, neere the towne Manduria, there is a lake brim full: lade out of it as much water as you will, it decreaseth not; ne yet augmenteth, poure in neuer so much to it. In a riuer of the Ciconians, and in the lake Velinus in the Picene territory, if wood be throwne in, it is couered ouer with a stony barke. Also in Surius, a riuer of Colchis, the like is to be seen: in so much, as ye shall haue very often the bark that ouergrowes it, as hard as any stone. Likewise in the riuer Silarus beyond Surrentum, not twigs onely that are dipped therein, but leaues also grow to be stones; and yet the water thereof otherwise is good and wholesome to be drunk. In the very passage and issue of Reatine meere, there growes a rocke of stone bigger and bigger by the dashing of the water. Moreover in the red sea there be oliue trees and other shrubs, that grow vp green. There be also very many springs, which haue a wonderfull nature, for their boiling heat: yea, and that vpon the very mountains of the Alpes, and in the sea between Italy and Anaria: as in the Firth Baianus, and the riuer Liris, and many others. For in diuers and sundry places ye may draw fresh water out of the sea, namely about the islands Chelidonæ and Aradus: yea and in the Ocean about Gades. In the hot waters of the Padouans there grow greene herbes: in those of the Pisanes there breed frogs: and at Vetulonij in Hetruria, not far from the sea, fishes also are breed. In the territory Casinas there is a riuer called Scatebra, which is cold, and in Summer time more abounding and fuller of water than in winter: in it, as also in Symphalis of Arcadia, there breed & come forth of it little water-mice, or small Limpins. In Dodone, the fountain of *Iupiter* being exceeding chill and cold, so as it queneth and putteth out light torches dipped therein, yet if you hold the same neere vnto it when they are extinct and put out, it setteth them on fire againe. The same spring at noon-tide euermore giueth ouer to boile, and wants water, for which cause they call it *Anapaomenos*: anon it begins to rise vntill it be midnight, and then it hath great abundance: and from that time againe it faints by little and little. In Illyricum there is a cold spring, ouer which, if ye spread any clothes, they catch a fire and burne. The fountaine of *Iupiter Hammon* in the day time is cold, all night it is seething hot. In the Troglodites country there is a fountaine of the Sunne, called the sweet Spring, about noon it is exceeding cold, anon by little and little it growes to be warm, but at midnight it passeth and is offensive for heate and bitterness. The head of the Po, at noon in Summer giueth ouer, as it were, and intermits to boile, and is then euer drie. In the Island Tenedus there is a spring, which after the Sommer Sunsteed euermore from the third houre of the night vnto the sixth, doth ouerflow. And in the isle Delos, the fountain Inopus, falleth and rises after the same sort that Nilus doth, and together with it. Ouere against the riuer Timavus, there is a little Island within the sea, hauing hot wells, which ebbe and flow as the tide of the sea doth, and iust therewith. In the territory of the Pitinates beyond Apenninus, the riuer Nouanus at euery mid-summertime swelles and runnes ouer the bankes, but in mid-winter is cleane dry. In the Faliscane countrie, the water of the riuer Clitumnus makes the oxen and kine white that drinke of it. And in Beotia, the riuer Melas maketh sheepe blacke: Cephysus running out of the same lake, causeth them to be white: and Penius again giues them a black colour: but Xanthus neere

vnto Ilium, coloureth them reddish; and hereupon the riuer tooke that name. In the land of G Pontus there is a riuer that watereth the plaines of Attace, vpon which those mares that feed, giue blacke milke for the food and sustenance of that nation. In the Reatine territorie there is a fontaine called Nemina: which, according to the springing and issuing forth out of this or that place, signifyeth the change in the price of come and victuals. In the haue of Brindis there is a Well, that yeeldeth vnto failers and sea-fering-men, water, which will neuer corrupt. The water of Linceitis, called Acidula [*i. Soure*] maketh men drunken no lesse than wine. Semblably, in Paphlagonia, and in the territory of Cales. Also in the Isle Andros there is a fontaine neere the temple of Father *Bacchus*, which vpon the Nones of Ianuarie, alwaies runneth with water that tasteth like wine, as *Mulianus* verily beleueth, who was a man that had bene thrice Confull: The name of the spring is Dios Tecnosia. Neere vnto Nonacris in Arcadia, there is the riuer Styx, differing from the other Styx neither in smell nor colour: drinke of it once, and it is present death. Also in Berofus (an hill of the Tauri) there be three fountaines, the water whereof whosoeuer drinketh, is sure to die of it, remediless, and yet without paine. In the Countrey of Spaine called Carrinenfis, two Springs there bee that runne neere together, the one rejecteth, the other swalloweth vp all things. In the same countrey there is another water, which sheweth all fishes within it a golden colour, but if they be once out of that water, they be like to other fishes. In the Canenian territory, neere to the lake Larius, there is a large and broad Well, which euery houre continually, swelleth and falleth downe againe. In the Island Sydonia before Lesbos, an hot fontaine there is that runneth onely in the Spring. The lake Sinnaus in Asia, is infected with the wormewood growing about it, and there of it tasteth. At Colophon in the vault or caue of *Apollo Clarius*, there is a gutter or trench standing full of water: they that drinke of it, shall prophesie and foretell strange things like Oracles, but they liue the shorter time for it. Riuer running backward, euen our age hath seen, in the later yeres of Prince *Nero*, as we haue related in the acts of his life. Now, that all Springs are colder in Summer than Winter, who knoweth not? as also these wonderous workes of Nature, That brasse and lead in the masse or lumpes sinke downe and are drowned, but if they be driuen out into thin plates, they flote and swim aloft: and let the weight be all one, yet some things settle to the bottome, others againe glide aboue. Moreouer, that heauie burdens and lodes be stirred and remoued with more ease in water. Likewise, that the stone Thyreus, be it neuer so big, doth swim whole and intire: breake it once into pieces, and it sinketh. As also, that bodies newly dead, fall downe to the bottome of the water, but if they be swollen once, they rise vp againe. Out and besides, that empty vessels are not so easily drawne forth of the water, as those that be full: that raine water for salt pits is better and more profitable than all other: and that salt cannot be made, vnlesse fresh water be mingled withall: that sea-water is longer before it congeale, but sooner made hot and set a seething. That in Winter the sea is hotter, and in Autumne more brackish and salt. And that all seas are made calme and still with oile: and therefore the Diuers vnder the water doe spirt and sprinkle it abroad with their mouthes because it dulceth and allaieth the vnpleasant nature thereof, and carrieth a light with it. That no snowes fall where the sea is deep. And, whereas all water runneth downward by nature, yet Springs leape vp; euen at the very foot of *Aetna*, which burneth of a light fire so farre forth, as that for fiftie, yea, and an hundred miles, the waulming round bals and flakes of fire cast out sand and ashes.

CHAP. CIIII.

¶ The manuailes of fire and water ioiintly together, and of *Maltha*.

Now let vs relate some strange wonders of fire also, which is the fourth element of Nature. But first, out of waters. In a citie of Comagene, named Samofatis, there is a pond, yeelding forth a kinde of slimie mud (called *Maltha*) which will burne cleare. When it meeteth with any thing solide and hard, it sticketh to it like glew: also, if it be touched, it followeth them that flee from it. By this meanes the townesmen defended their walls, when *Lucullus* gaue the assault, and his souldiers fried and burned in their owne armours. Cast water vpon it, and yet it will burne. Experience hath taught, That earth onely will quench it.

CHAP.

CHAP. CV. ¶ Of *Naphtha*.

Of the like nature is *Naphtha*: for so is it called about Babylonia, and in the Aufacenes countrey in Parthia, and it runneth in manner of liquid Bitumen. Great affinitie there is betweene the fire and it; for fire is ready to leap vnto it immediatly, if it be any thing neere it. Thus (they say) *Media* burnt her husbands concubine, by reason that her guirland anointed therewith, was caught by the fire, after she approached neere to the altars, with purpose to sacrifice.

CHAP. CVI. ¶ Of places continually burning.

Vt amongst the wonderfull mountaines, the hill *Aetna* burneth alwaies in the nights: and for so long continuance of time yeeldeth sufficient matter to maintaine those fires: in winter it is full of snow, and couereth the ashes cast vp, with frosts. Neither in it alone doth Nature tyrannize and shew her cruelty, threatning as she doth a general consuming of the whole earth by fire. For in Phoselis the hill *Chimæra* likewise burneth, and that with a continuall fire night and day. *Ctesias* of Gnidos writeth, that the fire therof is inflamed and fed a burning with water, but quenched with earth. In the same Lycia the mountaines *Hephæstij*, being once touched and kindled with a flaming torch, do so burne out, that the very stones of the riuers, yea, and the sand in waters, are on fire withall, and the same fire is maintained with raine. They report also, that if a man make a furrow with a staffe that is set on fire by them, there follow gutters as it were of fire. In the Baetrians countrey, the top of the hill *Cophantus* burneth euery night. Amongst the Medians also, and the Cæstian nation, the same mountaines burneth: but principally in the very confines of Persis. At Susis verily, in a place called the white tower, out of fiftene chimnies or tunnels the fire issueth, and the greatest of them, euen in the day time carrieth fire. There is a plaine about Babylonia, in manner of a fish poole, which for the quantity of an acre of ground burneth likewise. In like sort neere the mountaine *Hesperius* in *Aethyopia*, the fields in the night time do glitter and shine like stars. The like is to be seene in the territorie of the Megapolitanes, although the field there within-forth be pleasant, and not burning the boughes and leaues of the thicke groue aboue it. And neere vnto a warme Spring, the hollow burning furnace called *Crater Nymphae* alwaies portendeth some fearefull misfortunes to the Apolloniates, the neighbours thereby, as *Theopompus* hath reported. It increaseth with showers of raine, and casteth out Bitumen to be compared with that fontaine or water of Styx that is not to be tasted, otherwise weaker than all Bitumen besides. But who would maruell at these things? in the mids of the sea, *Hiera* one of the *Ætolian* Islands neere to Italy burned together with the sea for certaine daies together, during the time of the allies war, vntill a solemne embassage of the Senat made expiation therefore. But that which burneth with the greatest fire of all other, is a certaine hill of the *Aethyopians* Thoeet Ochema, and sendeth out most parching flames in the hottest Sun-shine daies. Lo in how many places with sundry fires Nature burneth the earth.

CHAP. CVII.

¶ Wonders of fires by themselves.

Moreouer, since the Nature of this onely element of fire is to be so fruitfull, to breed it selfe, & to grow infinitely of the least sparks, what may be thought will be the end of so many funerall fires of the earth? what a nature is that which feedeth the most greedy voracitie in the whole world without losse of it selfe? Put thereto the infinit number of stars, the mighty great Sun; moreover, the fires in mens bodies, & those that are inbred in some stones, the attrition also of certain woods one against another; yea, and those within clouds, the verie original of lightnings. Surely, it exceedeth all miracles, that any one day should passe, & not all the world be set on a light burning fire, since that the hollow fiery glasses also set opposit against the Sun beams, sooner set things a burning than any other fire. What should I speake of innu-
merable

merable others, which beindeed little, but yet naturally issuing out in great abundance? In the Promontorie Nymphæum there commeth forth a flaming fire out of a rock, which is set a burning with rain. The like is to be scene also at the waters called Scantiæ. But this verily is but feeble when it passeth and remoueth, neither indureth it long in any other matter. An ash there is growing ouer his fiery fountain, and covering it, which notwithstanding is alwaies green. In the territorie of Mutina there riseth vp fire also, vpon certaine set holy daies vnto *Vulcan*. It is found written, That if a cole of fire fall down vpon the arable fields vnder Aricia, the very soile presently is on fire. In the Sabines territorie, as also in the Sidicines, stones if they be anointed or greased, will be set on a light fire. In a towne of the Salantines called Egnatia, if fire be laid vpon a certaine hallowed stone there, it will immediatly flame out. Vpon the alter of *Iuno Lacinia* standing as it doth in the open aire, the ashes lie vnmoueable and stir not, blow what stormy winds that will on euery side. Ouer and besides, there be fires scene suddenly to arise, both in waters and also about the bodies of men. *Valerius Antias* reporteth, That the lake Thrasymenus once burned all ouer: also that *Serv. Tullius* in his childehood, as he lay asleepe, had a light fire shone out of his head: likewise, as *L. Marius* made an oration in open audience to the army, after the two *Scipios*, were slain in Spain, and exhorted his soldiers to reuenge their death, his head was on a flaming fire in the same sort. More of this argument, and in better order, will we write soone hereafter. For now we exhibit and shew the maruells of all things huddled and intermingled together. But in the mean while, my mind being passed beyond the interpretati. on of Nature, hasteneth to leade as it were by the hand the minds also of the readers, through- out the whole world.

CHAP. CVIII.

¶ The measure of the whole earth in length and breadth.

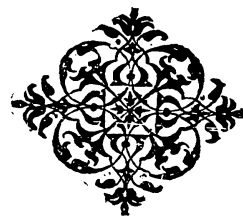
THIS our part of the earth whereof I speak, floting as it were within the Ocean (as hath bin said) lieth out in length most from the East to the West, that is to say from India to *Hercules* pillars consecrated at Gades: and as mine Author *Artemidorus* thinketh, it containeth 85 hundred, & 78 miles. But according to *Isidorus*, 98 hundred, and 18. *M. Artemidorus* addeth moreouer, from Gades within the circuit of the sacred Promontorie, to the Cape Attabrum, where the front and head of Spain beareth out farthest in length 891 miles. This measure runneth two waies. From the riuer Ganges and the mouth thereof, whereas he dischargeth himself into the East Ocean, through India and Parthyene vnto Myriandrum a city of Syria, scituare vpon the gulfe or Firch of Issa, 52 hundred & 15 miles. From thence taking the next voyage to the Island Cyprus, to Patara in Lycia, Rhodes and Astypataa (Islands lying in the Carpathian sea) to Tanarus in Laconia, Lilybæum in Sicilie, Calaris in Sardinia, 34 hundred & 50 miles. Then to Gades 14 hundred and 50 miles. Which measures being put al together, make in the whole from the said sea, 85 hundred 78 miles. The other way, which is more certain, lieth most open and plain by land, to wit, from Ganges to the riuer Euphrates 50 hundred miles and 21. From thence to Mazaca in Cappadocia 244 miles, & so forward through Phrygia and Caria, to Ephesus, 400 miles, 98. From Ephesus through the Ægean sea to Delos 200 miles. Then to Isthmus 212 miles. From thence partly by land, and partly by the Laconian sea and the gulfe of Corinth, to Patræ in Peloponnesus 202 miles and an halfe: so to Leucas 86 miles & a halfe, and as much to Corcyra. Then to Acrocerania 132 miles and a halfe: to Brundisium 86 miles and a halfe: so to Rome 3 hundred miles and 60. Then to the Alpes as far as the village Cincomagus 518 miles. Through France to the Pyrenæan hills, vnto Illiberis 556 miles, to the Ocean and the sea coast of Spaine 332 miles. Then the cut ouer to Gades seven miles and a halfe. Which measure by *Artemidorus* his account, maketh in all 86 hundred 85 miles. Now the bredth of the earth, from the Meridian or South-point, to the North, is collected to be lesse almost by the one halfe, namely, 54 hundred and 62 miles. Whereby it appeareth plainly, how much of the one side heate of fire, and on the other side frozen water hath stolne away. For I am not of minde that the earth goeth no farther than so, for then it should not haue the forme of a globe, but that the places on either side be vnhabitable, and therefore not found out and discovered. This measure runneth from the shore of the Æthiopian Ocean, which now is habited, vnto Meroe, 550 miles. From thence to Alexandria 1200 and 40 miles. So, to Rhodes 583 miles;

A miles; to Gnidus, 84 miles and a halfe; to Cos, 25 miles; to Samus, 100 miles; to Chius, 84 miles; to Mitylene, 65 miles; to Tenedos, 28 miles; to the cape Sigæum, 12 miles and a halfe; to the mouth of Pontus, 312 miles and a halfe; to Carambis the promontorie, 350 miles; to the mouth of Mæotis, 312 miles and a halfe; to the mouth of Tanais, 265 miles: which voiage may be cut shorter (with the vantage of sailing directly) by 89 miles. From the mouth of Tanais, the most curious Authors haue set downe no measure. *Artemidorus* was of opinion, that all beyond was vnfound and not discovered; confessing, that about Tanais the Sarmatian Nations do inhabit, who lie to the North pole. *Isidorus* hath added hereto twelue hundred miles, as far as to Thule: which is a iudgement of his grounded vpon bare guesse and coniecture. I take it, that the borders of the Sarmatians are knowne to haue no lesse space of ground than this last mentioned commeth vnto. And otherwise, how much must it be, that would containe such an innumerable company of people shifting their seats euer and anon, as they doe. Whereby I guesse, that the ouer-measure of the clime inhabitable is much greater. For I know certainly, that Germany hath discovered mightie great Islands not long since. And thus much of the length and breadth of the earth, which I thought worth the writing. Now the vniuersall compasse and circuit thereof, *Erastosthenes* (a great Clerke verily for all kinde of literature, & in this knowledge aboue all others doubtlesse most cunning, and whom I see of all men approued and allowed) hath set downe to be 252000 stadia. Which measure, by the Romanes account and reckoning, amounteth to 300 hundred and 15 hundred miles. A wonderous bold attempt of his! but yet so exquisitely calculated and contriued by him, that a shame it were not to beleue him. *Hipparchus*, a wonderful man both for conuincing him, and all his other diligence besides, addeth moreouer little lesse than 25000 stadia.

CHAP. CIX.

¶ The Harmonicall measure, and Circumference of the World.

Dionysidorus in another kind would be beleued: (for I will not beguile you of the greatest example of Grecian vanitie.) This man was a Melian, famous for his skill in Geometrie: he dyed very aged in his owne countrey: his neere kins-women (who by right were his heires in remainder) solemnized his funerals, & accompanied him to his graue. These women (as they came some few daies after to his sepulchre for to performe some solemn obsequies thereto belonging) by report, found in his monument an Epistle of this *Dionysidorus*, written in his owne name, To them aboue, that is to say, To the liuing: and to this effect, namely, That he had made a step from his sepulchre to the bottome and centre of the earth, and that it was thither 42000 stadia. Neither wanted there Geometricians, who made this interpretation, that he signified that this Epistle was sent from the middle centre of the earth, to which place downward from the vppermost aloft, the way was longest; and the same was iust halfe the diametre of the round globe: whereupon followed this computation, That they pronounced the circuit to be 255000 stadia. Now the Harmonicall proportion, which forceth this vniuersalitie and nature of the World to agree vnto it selfe, addeth vnto this measure 7000 stadia, and so maketh the earth to be the 96000 part of the whole world.



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THE



THE THIRD BOOKE OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIUS SECVNDVS.

The Proeme, or Preface.

Hitherto haue we written of the position and wonders of the Earth, Waters, and Starres: also we haue treated in generall termes of the proportion and measure of the whole world. Now it followeth, to discourse of the parts thereof: albeit this also be iudged an infinite piece of worke, nor lightly can be handled without some reprehension: and yet in no kinde of enterprise pardon is more due; since it is no maruell at all, if he who is borne a mortall man, knoweth not all things belonging to man. And therefore I will not follow one Author more than another, but every one as I shall thinke him most true in the description of each part. Forasmuch as this hath been a thing common in manner to them all, namely, to learn or describe the situations of those places most exactly, where themselves were either borne, or whch they had discovered and seene: and therefore neither will I blame nor reprove any man. The bare names of places shall be simply set downe in this my Geographic, and that with as great breuitie as I can: the excellency, as also the causes and occasions thereof, shall be deferred to their severall and particular treatises: for now the question is as touching the whole earth in generalitie, which mine intent is to represent unto your eyes: and therefore I would haue things thus to be taken, as if the names of countries were put downe naked, and void of renowne and fame, and such onely as they were in the beginning, before any acts there done; and as if they had indeed an indument of names, but respectiue onely to the World and vniuersall Nature of all.

Now the whole globe of the earth is diuided into three parts, Europe, Asia, and Africa. The beginning we take from the West and the Firth of Gades, even whereas the Atlantick Ocean breaking in, is spread into the Inland and Mediterranean Seas. Make your entrance there, I meane at the Streights of Gibraltar, and then Africa is on the right hand, Europe on the left, and Asia before you iust betweene. The bounds confining these, are the riuers Tanais and Nilus. The mouth of the Ocean at Gades (whereof I spake before) lyeth out in length 15 miles, and stretcheth forth in breadth but fiew, from a village in Spaine called Mellaria, to the promontorie of Africke, called the VWhite, as Turannius Gracula born thereby, doth write. T. Liuius, and Nepos Cornelius haue reported, that the breadth thereof where it is narrowest, is fiew miles ouer, but ten miles where it is broadest. From so small amouth (a wonder to consider) spreadeth the sea so huge and so vast as we see, and withall, so exceeding deepe, as the maruell is no lesse in that regard. For why? in the verie mouth thereof, are to be seen many barres and shallow shelles of white sands (so ebbe is the water) to the great terror of shippes and sailers passing that way. And therefore many haue called those Streights of Gibraltar, The entrie of the Mediterranean Sea. Of both sides of this gullet, nere vnto it, are two mountaines set as frontiers and rampiers to keepe all in: namely, Abila for Africke, Calpe for Europe, the vtmost end of Hercules Labours. For which cause, the inhabitants of those parts call them, the two pillars of that God, and doe verily beleuee, that by certaine draines and ditches digged within the Continent, the maine Ocean before excluded, made way and was let in, to make the Mediterranean Seas, where before was firme land: and so by that meanes the very face of the whole earth is cleane altered.

CHAP.

CHAP. I.

¶ Of Europe.



And first, as touching Europe, the nource of that people which is the conqueror of all nations; and besides, of all lands by many degrees most beautifull: which may for right good cause, haue made not the third portion of the earth, but the one halfe (diuiding the whole globe of the earth into two parts): to wit, from the riuier Tanais vnto the Streights of Gades. The Ocean then, at this space abovesaid, entreth into the Atlantick sea, and with a greedie current drowneth those lands which dread his coming like a tyrant; but where he meeteth with any that are like to resist, those he passeth iust by, and with his winding turns and reaches he eateth and holloweth the shore continually to gaine ground, making many noukes and creekes euery where: but in Europe most of all, wherein foure especiall great gulfes are to be seene.

Of which, the first, from Calpe the vtmost promontorie (as is aboue said) of Spaine, windeth and turneth with an exceeding great compass, to Locri, and as far as the promontorie Brutium. Within it lieth the first land of all others, Spaine; that part I meane, which in regard vs at Rome, is the farther off, and is named also Boetia. And anon from the Firth Virgitanus, the hither part, otherwise called Tarraconensis, as far as to the hills Pyrenæi. That farther part of larger Spaine is diuided into two prouinces in the length thereof: for on the North side of Boetia, lyeth Lusitania afront, diuided from it by the riuier Ana.

This riuier beginneth in the territorie Laminitanus of the hither Spaine, one while spreading out it selfe into broad pooles or meeres, otherwhiles gathering into narrow brooks: or altogether hidden vnder the ground, and taking pleasure to rise vp oftentimes in many places, falleth into the Spanish Atlantick Ocean. But the part named Tarraconensis, lying fast vpon Pyrenæus, & shooting along all the side thereof, and withal, stretching out it selfe ouerthwart & crosse from the Iberian sea to the Gauls Ocean, is separated from Boetia & Lusitania, by the mountaine Salarius, and the cliffes of the Orcanes, Carpetanes, and Asturians.

Boetia, so called of the riuier Boëtis, that cutteth in the mids, out-goeth all other prouinces for rich furniture, and a certaine plentifull trimnesse and peculiar beautie by it selfe. Therein are held foure solemne Iudiciall great assizes and Parliaments, according to foure Counties or shires; to wit, the Gaditane, Cordubian, Astigitane, and Hispalensis. Townes in it are all in number 175; whereof there are colonies eight, free Boroughes, eight; townes indued with the antient franchises of Latium 29; with freedome six; Confederate, foure; Tributarie paying custome, 120. Of which, those that be worth the naming, and are more currant in the Latine tongue, be these vnder written: to wit, on the riuier Ana side and the Ocean coast, the citie Ossonoba, furnished also Lusitania. There run between, Luxia and Vrium, two riuers. The hills Ariani, the riuier Boëtis: the shore Corense with a winding creek.ouer against which, lyeth Gades, to be spoken of among the Ilands. The cape or head of Iuno; the haven Besippo. Townes, Belon, and Mellaria. The Streights or Firth out of the Atlantick sea. Carteia, called Tertessos by the Greekes; and the mountaine Calpe. Then, within the firm land, the towne Barbefula, with the riuier. Item, the towne Salbula, Suel-Malacha vpon the riuier of our Confederates. Next to these, Menoba with a riuier: Sexi-firmum, furnished Iulium: Selaubina, Abdera, and Murgis the frontier towne of Boetia. All that whole coast, M. Agrippa thought to haue had their beginning and descent from the Carthaginians. From Ana, there lyeth against the Atlantick Ocean, the region of the Bastuli and the Turduli.

M. Varro saith, that there entered into all parts of Spaine, the Herians, Persians, Phœnicians, Celtes, and Carthaginians or Africans: for *Lusus*, the companion of Father *Liber* or *Liba* (which signifieth the frantick furie of those that rageth with him) gaue the name to Lusitania; and *Pun* was the gouernour of it all. But those things which are reported of *Hercules* and *Pyrene*, or of *Saturne*, I thinke to be as vaine and fabulous tales as any other. As for Boëtis, in the Tarraconensis prouince, rising, not as some haue said, at the towne Mentesa, but in the chafe or forrest Tugrenis, which the riuier Tader watereth, as it doth the Carthaginian pale also at Ilorcum, shunneth the funerall fire and sepulchre of *Scipio*: and turning into the West, maketh toward

the Atlantick Ocean, adopting the prouince and giuing it his owne name, is at first but small, G howbeit receiueth many other riuers into it, from which it taketh away both their name and their waters. And first being entred from Ossigitania into Boetia, running gently with a pleasant channel, hath many townes both on the left hand & the right, seated vpon it. The most famous and populous between it & the sea coast in the Mediterranean part thereof, are Segeda, furnamed Augurina: Iulia, which is also called Findentia: Virga, otherwife Alba, Ebura, otherwife Cereolis: Illiberi, which is also Liberini: Ilipua, named likewise Laus. Artigi or Iulienfes: Vesci the same that Fautia: Singilia, Hegua, Arialdunū, Agla the lesse, Bæbro, Castra Vinaria, Epistibum, Hipponoua, Illurco, Oſca, Eſcua, Succubo, Nuditatum, Tucci the old, all which belong to Baſtitania, lying toward the sea. But within the countie or iurisdiction of Corduba, about the very riuier standeth the towne Offigi, which is furnamed Laconicum: Illiturgi called also Forum Iulium. Ipaſturgi the same that Triumphale, Sitia: & 14 miles within the country Obulco, which is named Pontificense. And anon (you shall see) Ripepora, a town of the confederate, Sacili, Martialum, Onoba. And on the right hand Corduba, furnamed Colonia Patritia: and then beginneth Boetis to be nauigable, & not before. As you go lower, you shall find towns Carbulco, Decuma, the riuier Singulis, falling into the same side of Boetis. The townes of the country Hispalensis be these, Celtica, Axatiara, Arruci, Menoba, Ilipa, furnamed Italica. And on the left hand, Hispalis a colony, furnamed likewise Romulensis. But right forward opposit to it, the town Offet, which hath a name besides, Iulia Constantia: Vergentum, which also is the same that Iulij Genitor, Hippo Caurasium, the riuier Menoba, which also entreth into Boetis on the right side. But within the washes & downs of Boetis there is the town Nebrissa furnamed Veneria & Colobona: also colonies, viz. Alſa, which is called Regia: & in the mid-land part, Aſido, which is the same that Caſariana. The riuier Singulus breaking into Boetis in that order as I haue said, runneth hard by the Colony Aſtigintania, furnamed also Augusta Firma, & so forward it is nauigable. The rest of the Colonies belonging to this Countie are free, & enjoy immunitie of tribute, namely, Tucci, which is furnamed Augusta Gemella: Itucci, the same that Virtus Iulia, Artubi all one with Claretas Iulia [i. excellencie of Iulius.] Vrſo, which is Genua Vrbanorum: & among these, Munda, which together with Pompeius ſon, was taken. Free towns, Aſtigi the old, & Ostippo: tributarie, Callet, Calucula, Castra Gemina, Ilipula the lesse Merucra, Sacrana, Obulcula, Oningis. As a man commeth from the coast, neere to the riuier Menoba, which also will beare a ship, there dwel not far off the Alontigicili, & Aloſtigi. But all that region which without the forenamed, reacheth from Boetis to the riuier Ana, is called Beturia: diuided into two parts, & as many sorts of people: to wit, the Celtici, who meet with Lusitania, and are within the diuision or county Hispalensis: and the Turduli, who inhabit fast vpon Lusitania and Tarraconensis: and they owe seruice to the County-court of Corduba: as for the Celtici, manifest it is, That they came from the Celtiberians out of Lusitania, as appeareth by their religion, tongue, & names of towns, which in Bætica are distinguished by their additions or surnames, to wit, Seria, which is called Fama Iulia: Vcultuniacum, which now is Curiga: Laconimurgi, Constantia Iulia, Terresibus is now Fortunales, & Callensibus, Emanici. Besides all these, in Celtica Acinippo, Arunda, Arunci, Turobrica, Laſtigi, Alpeſa, Sæpona, Serippo. The other Beturia, which we said contained the Turduli, & belonged to the countie of Corduba, hath towns of no base account, Arſa, Mellaria and Mirobrica: and regions or quarters Oſrutigi, and Siſapone. Within the Countie of Gades there is of Romane citizens a town called Regina: of Latines there are Læpia, Vlia, Carſa furnamed Aurelia, Vrgia, which is likewise named Castrum Iulium: also, Caſaris Salutarienſis. But tributaries there be these, Beſaro, Beſippo, Berbeſula, Lacippo, Beſippo, Callet, Cappagum, Oleastro, Itucci, Prana, Lacibi, Saguntia, Andoriſippo. The whole length of it, M. Agrippa hath set down 463 miles, & the breadth 257. But for that the bounds reached forward as far as to Carthage, which cause breedeth oftentimes errors in the taking of the measures, whiles in one place the limits of the prouinces were changed, and in another the paces in iourning were either more or lesse, also, considering the seas in so long continuance of time haue incroched here vpon the land, and the banks again gotten there of the sea, and beare farther in; also, for that the reaches of the riuers haue either turned crooked or gone streight & direct: ouer and besides, for that some haue begun to take their measure from this place, others from that, and gon diuers waies: it is by these means come to passe, that no twain accord together in one song, as touching their measure & Geographic.

CHAP.

CHAP. II.

¶ The length and breadth of Bætica.

THE length of Boetia at this day from the bound of the town Castulo vnto Gades, is 475 miles: and from Murgi the maritime coast or lands end, more by 22 miles. The breadth from the edge or border of Carteia, is 224 miles. And verily, who would beleue, that Agrippa, a man so diligent, and in this worke principally, so curious, did erre, when he purposed to set out a map of the whole world openly to be seene of the whole city, and namely, when Augustus Caesar of happy memorie, joined with him: For he it was that finished the Porch or gallerie begun by Agrippa's sister, according to his will, appointment, and direction, which contained the laid pourtraict.

CHAP. III.

¶ The hither or higher Spaine.

THE old forme of the hither Spaine is somewhat changed, like as of many other prouinces: considering that Pompey the great in his triumphant trophies which he erected in Pyreneus, restifieth, That 846 townes between the Alps and the marches of the farther or lower Spain, were subdued by him and brought to obedience. Now, is the whole prouince diuided into 7 counties, the Carthaginian, the Tarraconian, Caſar Auguſtani, Cluniensis, Aſturia, Lucensis, & Bracarum. There are besides Islands, setting aside which, without once naming them, and excepting the cities that are annexed to others, the bare prouince containeth 294 townes. In which there be 12 colonies, townes of Roman citizens thirteen, of old Latines ſeuenteen, of allies within the league, one, tributarie, 136. The first in the very frontiers thereof, be the Baſtuliens: behind them in such order as shall be said, namely, those Inlanders that inhabit within-forth, the Mentefanes, Oretanes, and the Carpetanes vpon the riuier Tagus. Neere to them, the Vaccæans, Vætones, Celtiberians, and Arrebaci. The townes next to the marches, Vrci, and Barea laid to Boetia: the countrey Mauritania, then Deitania: after that Contestania, and new Carthage, a colony. From the promontorie whereof called Saturnes cape, the cut ouer the sea to Caſaria a citie in Mauritania, is of 187 miles: In the residue of that coast is the riuier Tader: the free colonie Illici, of which, a frith or arme of the sea tooke the name Illicitanus. To it owe seruice and are annexed the Icositanes. Soon after, Lucentum a towne of the Latines. Dranium a tributarie, the riuier Sucro, which was sometime the frontier towne of Contestania. The region Edetania, which retireth inward to the Celtiberians, hauing a goodly pleasant poole bordering along the front of it. Valentia, a colony lying three miles from the sea. The riuier Turium: and iust as far from the sea, Saguntum, a towne of Roman citizens, renowned for their fidelitie. The riuier Idubeda, and the region of the Illegæones. The riuier Hebre, yeelding such riches of trafficke and commerce, by reason that it is nauigable: which beginneth in the Cantabrian countrey, not far from the towne Inliobrica, and holdeth on his course 430 miles: and for 260 of them, euen from the towne Varia, carrieth vessels of merchandise: in regard of which riuier, the Greekes named all Spaine Iberia: the region Coſſetania, the riuier Subi, the colonie Tarraco, built by the Scipios, like as Carthage by the Africans. The countrey of the Illegætes, the towne Subur: the riuier Rubricatum, and from thence the Lacetanes and Indigætes. After them in this order following, within-forth at the foot of Pyreneus, the Auſetanes, Itanes, & Lacetanes: and along Pyreneus the Cerretanes, and then the Vascones. In the edge or marches thereof, the colony Barcino, furnamed Faudentia. Towns of Roman citizens, Bætulo, Illuro, the riuier Lanum, Blandæ: the riuier Alba, Emporia: two there be of these, to wit, of the old inhabitants, and of the Greeks, who were the off-spring descended from the Phocæans. The riuier Tichus. From whence to Pyrenæa Venus, on the other side of the promontorie, are fortie miles. Now besides the forenamed, shall be related the principall places of marke as they lie in euery countie. At Tarracon there plead in court foure and fortie States. The most famous and of greatest name among them, be of Roman citizens the Dertufanes, and Bisgargitanes: of Latines, the Auſetanes and Cerretanes furnamed Iulianes: they also who are named Auguſtanes, the Sedetanes, Gerundenſes, Geſſarians, Tearians, the same that Iulienſes. Of Tributaries,

F 3

Tributaries,

aries, the Aquicaldenses, Onenses, and Batulonenses. Cæsar Augusta, a free colony, on which the riuer Iberus floweth: where the towne before was called Salduba: these are of the region Sedetania, and receiue 52 States: and among these, of Roman citizens the Bellitanes and Celsenses: and out of the Colonie, the Calaguritanes surnamed also Nascici. The Iberdians of the Surdaons Nation, neere vnto whom runneth the riuer Sicoris. The Oficians of the region Vescetania, and the Turiafionenses. Of old Latins, the Cascantenses, Erganicenses, Gracchuritanes, Leonices, Offigerdenses. Of confederats within the league, the Tarragenenses. Tributaries besides, the Arcobricenses, Andologenses, Arocelitans, Buriafionenses, Calaguritanes surnamed Fibularenenses, Complutenses, Carenenses, Cincenses, Gortonenses, Dammanitanes, Larrenenses, Iturisenenses, Ispalenses, Ilumbetitanes, Lacetanes, Vibienenses, Pompelonenses and Segienenses. There resort to Carthage for law 62 severall States, besides the Islanders. Out of the colonie Accitana, the Gemellenses, also Libisofona surnamed Foraugustana: which two are indue with the franchises of Italy: out of the colonie Salariensis, the Oppidans of old Latium, Castulonenses, whom Cæsar calleth *Vandales*. The Setabitanes, who are also Augustanes, and the Vallerienenses. But of the Tributaries, of greatest name be the Babauenses, the Bascianes, the Confaburenenses, Dianenses, Egelestanes, Ilorcitanis, Laminitanis, Mentefami, the same that Oritani, and Mentelani who otherwise are Bastuli: Orcitanes who also are called Germani, the chiefe of the Celtiberians, the Segobrigenses, and the Tolitanes of Carpetania, dwelling vpon the riuer Tagus. Next to them the Viacienses and Virgilienses. To the assises or law court Clunienensis, The Varduli bring 14 nations, of which I list to name none but the Albanenses: but the Turmodigi foure, among whom are the Segisamonenses, Sagisameiulienenses. To the same assises, the Carietes & the Vennenses do go out of five cities, of which the Velienenses are. Thither repaire the Pelendones, with 4 states of the Celtiberians, of whom the Numantins were famous: like as in the 18 cities of the Vaccæans, the Intercarienses, Pallantini, Lacobricenses, & Caucentenses: for in the foure states of the Cantabrigi, only Iuliobrica is named: in the 10 states of the Autrigones, Tritium, & Vironesca. To the Arouaci the riuer Aroua gaue name. Of them there be 7 townes; to wit, Saguntia and Vxama, which names be often vsed in other places: besides Segonia, and Noua-augusta, Termes, and Clunia it selfe the very vtmost bound of Celteberia. all the rest lie toward the Ocean, & of the abouenamed the Varduli together with the Cantabrigi. To these there are ioined 12 nations of the Astures, diuided into the Augustanes & Transmontans, hauing a stately city Asturica: among these are reckned, Giguri, Pefici, Lanfenses, & Zocla. The number of the whole multitude ariseth to 240000 pols of free men, besides slaues. The county or iurisdiction Lucensis compriseth 16 townes (besides the Celticks and Lebunians) of base condition, and hauing barbarous names; howbeit, of free-men to the number welneere of 166000: in like maner 24 cities, which affoord 275000 pols, owe seruice to the court of Bracarum: of whom besides the Bracarians themselues, the Vibili, Celerini, Gallæci, Equifilici & Quinquerni, may be named without disdain and contempt. The length of the hither Spain, from Pyrenæus to the bound of Castulo is 607 miles, & the coast therof somewhat more. The bredth from Tarracon to the shore of Alarfon, 307 miles: & from the foot of Pyrenæus, where, between two seas it is pointed with the streights, & so opening it selfe by little & little from thence, till it come to touch the farther Spain, it is as much, and addeth somewhat more. to the bredth: all Spain throughout in manner is full of metall mines, as lead, yron, brasse, siluer, and gold: the hither part thereof aboundeth besides with stone glasse, or glasse stones: and Bœtica particularly with vermilin. There be also there quarries of Marble. Vnto all Spaine throughout, *Vespasianus Augustus* the Emperour, tossed with the tempests and troubles of the commonweale, granted the franchises of Latium. The mountaines Pyrenæi do confine Spaine and France one from the other, lying out with their promontories into two contrary seas.

CHAP. IIII.

¶ The Prouince Narbonensis.

That part of Gallia which is washed and beaten vpon with the Mediteranean sea, is called the prouince Narbonensis, named afore-time Braccata, diuided from Italy by the riuer Varus and the Alpes, most friendly mountaines to the Romane Empire: and from the other parts of Gaule, on the North side, by the hills Gebenna & Iura. For tillage of the ground

- A for reparation of men, regard of ciuilitie and manners, and for wealth, worthy to be set behinde no other prouinces whatsoeuer: and in one word, to be counted Italy, more truly than a prouince: in the edge or marches thereof lyeth the countrey of the Sardaons; & within the region of the Confluarones. The riuers be Tecum and Vernodubrum: the townes, Illiberis (a poore relique and simple shew of a citie to that it was in old time) & Ruscio, inhabited by the Latines. The riuer Atax springing out of Pyrenæus, runneth through the lake Rubrensis, & floteth ouer it. *Narbo Martius* a colonie inhabited by the Legionaries of the tenth legion, twelue miles distant from the sea. Rivers, Araris and Liria. Townes in the other parts, scattering here and there by reason of pooles and meeres lying before them: namely, Agatha, in times past belonging to the Massilians, and the region of Volsæ Tectofages. Also, where Rhoda of the Rhodians was, whereof Rhodanus tooke name, the most fruitfull riuer by far of all Gallia, running swiftly out of the Alps through the lake Lemanus, & carrying with it the dead and slow riuer Araris; and Isara running as fast as it selfe, together with Druentia. The two smal mouths or passages therof are called Lybica: of which, the one is Hispanienum, the other Metapinum: a third there is besides, and the same most wide and large, named Massalioticum. There be that write, how the towne Heraclea likewise stood vpon the mouth of Rhodanus. Beyond the ditch out of Rhodanus, which was the work of *C. Marius*, & bearing his name, there was a notable poole or meere. Moreouer the town Astromela, and the maritime tract of the Auaticci: and aboue it, the stonie plains, carrying the memoriall of *Hercules* his battels. The region of the Anatilians, and within forth, of the Desuuiates and Cauians. Againe, from the sea, Tricorum, and inward, the region of the Tricolliuocantians, Segouellaunes, and anon of the Allobroges: but in the marches, Massilia of Greeke Phocæans: within the league. The promontorie Citharista, Zaopatus, and the region of the Camatullici. After them, the Suelteri; and aboue them, Verucines: But in the coast along still, Athenopolis vnder the Massilians, Forum Iuij a Colonie of the ninth legion fouldiers, which also is called Parenfis and Classica: in it is the riuer Argenteus: the region of the Oxubij and Ligaunians; aboue whom, are the Suetri, Quarieres, and Adunicates: but in the borders, a Latine towne Antipolis. The region of the Deciates, the riuer Varus gushing out of an hil of the Alpes, called Acema. In the middle part thereof the Colonies, Arelate of the sixth legion fouldiers, Bliteræ of the seuenth, and Arausia of those belonging to the second. In the territorie of the Cauians, Valentia and Vienna of the Allobroges. Latine townes, Aquæ Sextiæ of the Salyans, and Auenio of the Caviens, Apta Iulia of the Vulgientians, Alebecerriorum of the Apollinares, Alba of the Heluans, Augusta of the Tricostines; Anatilia, Aeria, Bormanni, Comacina, Cabellio, Carcasum, of the Volsæ Tectofages: Cessero, Carpentoraeste, of the Menenses: the Cenices, Cambolesti, who are named besides Atlantici, Forum Voconij, Glanum, Livij, Lutevani, who are the same that Foro-neronienenses. Nemausum of the Arecomici, Piscenæ, Ruteni, Sanugenses, and Tolosani, of the Tectofages: The neighbor borderers vpon Aquitane, Tasco-dumetari, Canonienenses, Vmbranici. Two capitall townes of the confederat state of the Vocontians, Vasco and Lucus Augusti. But base townes of no importance nineteene, as 24 more annexed to the Nemausiens, and vnder their Seignorie. To this charter or instrument inrolled, *Galba* the Emperour added of the Alpine inhabitants, the Auaticci and Eproduntij; whose town is named Dima. *Agrippa* saith, that the length of this prouince Narbonensis is 270 miles, and the breadth 248.

CHAP. V.

¶ Italy, Tiberis, Rome, Campania.

Next to them is Italy, and the first of all, the Ligurians: then Hetruria, Vmbria, Latium; where be the mouthes of Tiberis and Rome the head citie of the whole earth, 16 miles distant from the sea: after it is the maritime countrey of the Volsians, and Campania: then Picentium, Lucanum, and Brutium, the furthest point in the South, vnto which from the crooked mountaines of the Alpes, like in mannervnto the Moone croissant, with some parts higher, other lower, Italie shooteth out in length to the seas: from it is the sea coast of Græcia, and soone after, the Salentines, Pediculi, Apuli, Peligni, Ferentani, Marrucini, Vestines, Sabines, Picentes, Gaules, Vmbrians, Thuscans, Venetians, Carnians, Iapides, Istrians, and Liburnians.

Neither

Neither am I ignorant, that it might be thought and that iustly, a point of an vnthankfull G mind and idle withall, if briefly in this sort, and as it were by the way, that land should be spoken of which is the nource of all lands. She also is the mother, chosen by the powerfull grace of the gods, to make euen heauen it selfe more glorious; to gather into one the scattered empires, to soften and make ciuill the rude fashions of other countries; and whereas the languages of so many nations were repugnant, wilde, & sauage, to draw them together by commerce of speech, conference, and parley; to indue man with humanitie; and briefly, that of all nations in the world, there should be one onely country. But here, what should I do? so noble are all the places that a man shal come vnto, so excellent is euery thing, and each state so famous and renowned, that I am fully possessed with them all, and to seeke what to say. Rome citie, the only faire face therein, worthy to stand vpon so stately a necke and pair of shoulders, what worke would it aske thinke you, to bee set out as it ought? the very tract of Campaine by it selfe, so pleasant and goodly, so rich and happie, in what sort should it be described? So as it is plaine and manifest, that in this one place there is the workmanship of Nature wherein she ioieth and taketh delight. Now besides all this, the whole temperature of the aire is euermore so vitall, healthy, and wholesome, the fields so fertile, the hills so open to the Sun, the Forrests so harmlesse, the groues so coole and shadie, the woods of all sorts so bounteous and fruitfull, the mountaines yeelding so many breaching blasts of winde; the corne, the vines, the oliues so plentifull; the sheep so enriched with fleeces of the best wooll, the bulls and oxen so fat and well fed in the necke; so many lakes and pooles, such store of riuers and springs watering it throughout; so many seas and hauens, that it is the very bosom lying open and ready to receiue the commerce of all lands from all parts; and yet it selfe full willingly desireth to lie far into the sea to helpe all mankind. Neither do I speake now of the natures, wits, and fashions of the men; ne yet of the nations abroad subdued with their eloquent tongue, and strong hand. Euen the Greekes (a nation of all other most giuen to praise themselves beyond measure) haue giuen their iudgement of her, in that they called some small part thereof, Great Greece. But in good faith, that which we did in the mention of the heauen, namely, to touch some knowne planets and a few stars, the same must we likewise do in this one part: only I would pray the Readers to remember and carry this away, That I hasten to rehearse euery particular thing through the whole round globe of the earth.

Well then, to begin, Italy is fashioned like for all the world to an Oke leafe, and much larger in length than breadth: to the left side bending with the top, and ending in the figure and fashion of an Amazonian shield; and where that tract of Calabria lyeth which is called Cocinthus, it putteth forth into those two promontories or capes like the moones two hornes; the one, Leucopetra on the right hand; the other Lacinium on the left. In length it reacheth from the foot of the Alps, through Ostia or Prætoria Augusta, directly to the citie of Rome, and so forward to Capua, with a direct course leading to Rhegium a towne situate vpon the shoulder thereof: from which beginneth the bending as it were of the necke; and beareth 1000 and 20 miles. And this measure would grow to be far more, if it went as far as Lacinium, but that such an obliquitie and winding might seem to decline and beare out too much vnto one side. The breadth thereof is diuersly taken, namely, 410 miles between the two seas, the higher and the lower, and the riuers Varus and Arfia. The mids of which breadth (and that is much about the citie of Rome) from the mouth of the riuier Aternus running into the Adriaticke sea, vnto the mouthes of Tiberis, 136 miles, and somewhat lesse: from Novum Castrum by the Adriaticke sea, to Alsum, and so to the Tuscan sea: and in no place exceedeth it in breadth 300 miles. But the full compasse of the whole from Varus to Arfia, is 2004.9 miles. Distant it is by sea from the lands round about, to wit, from Istria and Liburnia in some places 100 miles; from Epirus and Illyricum 50 miles; from Africk lesse than 200, as Varro affirmeth; from Sardinia, an hundred and 20 miles; from Sicilie, a mile and a halfe: from Coreyra lesse than 70; from Issa 50. It goeth along the seas, to the Meridional line verily of the heauen; but if a man examine it exactly indeed, it lyeth betwene the Sun rising in mid-winter, and the point of the Noone-stead.

Now will we describe the compasse and circuit thereof, and reckon the cities; wherein I must needs protest by way of Preface, that I will follow for mine Authour *Augustus* the Emperour of famous memorie, and the description by him made of all Italy, which be diuided into 11 Regions

- A Regions or Cantons. As for the maritime townes, I will set them downe in that order, as they stand, according to their vicinity one to another. But forasmuch as in so running a speech and haffie pen, the rest cannot possibly be so orderly described: therefore in the inland part thereof, I will follow him as he hath digested them by the letters of the Alphabet: but mentioning withall, the colonies or chiefe cities by name, which he hath deliuered in that number. Neither is it an easie matter to know thoroughly their positions and foundations, considering the Ingaune Ligurians (to say nothing of all the rest) were indowed with lands thirtie times, and changed their seats. To begin with the riuier Varus therefore, there offereth to our eie, first the towne Nicæa, built by the Massilians: the riuier Po; the Alpes; the people within the Alpes of many names, but of most marke Capillati, with long haire: the towne Vediantiorum, the Citie Cemelion, or, a towne belonging to the State of the Vediantians, called Cemelion: the port of *Hercules* and *Monachus*, and so the Ligurian coast. Of the Ligurians, the most renowned beyond the Alpes, are the Sallij, Deceates, and Oxubij: on this side, the Veneti, and descended from the Caturiges, the Vagienni, Staryelli, Vibelli, Magelli, Euburates, Casmônates, Veliates, and those, whose townes we will declare in the next coast. The riuier Rutuba, the towne Albium Intemelium, the riuier Merula, the towne Albium Ingaunum, the port or haue towne Vadum Sabatium, the riuier Porciferia, the towne Genua, the riuier Feritor, the Port Delphini, Tigulia: within, Segesta Tiguliorum: the riuier Macra which limiteth Liguria. Now on the back side behind all these townes aboue named, is Apenine, the highest mountain of all Italy, reaching from the Alpes with a continuall ridge of hills, to the streights of Cicilie.
- C From the other side thereof to Padus, the richest riuier in all Italy, all the countrey shining with goodly faire townes, to wit, Liberna, Dertona a Colonie, Iria, Barderates, Industria, Pollentia, Carrea, which also is named Polentia, Foro Fuluij the same that Valentinum, Augusta, of the Vagienni: Alba, Pompei Asta, and Aquæ Staryellorum. And this is the ninth Canton after the Geographie of *Augustus*. This coast or tract of Liguria containeth betwene the riuers Varus and Macra 211 miles. To it is adioined the 7 wherein is Hetruria from the riuier Macra: and it oftentimes changed the name. In old time the Pelasgians chased the Vmbrians from thence: and by them the Lydians did the like, of whose king, named they were Tyrheni: but soon after, of their ceremonies in sacrificing, in the Greeks language *Tyrsi*. The first towne of Hetruria is Luna, famous for the haue; then the Colonie Luca, lying from the sea: and neerer vnto it is Pisa, between the riuier Aufer and Arnus, which took the beginning from *Pelops* and the Pisians, or Atintanians a Greeke nation. Vada Volateranea, the riuier Cecinna. Populonium of the Tuscans in times past, situate only vpon this coast. After these the riuier Prille, and anon after Vmbro, nauigable, and of itooke name: so forward the tract of Vmbria, and the port towne Talamon: Costa Volscientium, a Colonie planted there by the people of Rome, Grauisca, Castrum Novum, Pyrgi, the riuier Carretanus, and Cære it self, standing foure miles within, called Agylla by the Pelasgians who built it: Alsum and Frugena. The riuier Tiberis, distant from Macra 284 miles. Within forth are these Colonies, Falisca descended from Argi, as *Cato* saith, and for distinction is called Hetruscorum. Lucus Feronia, Russellana, Senensis and Sutriua. As for the rest, these they be, Aretini the old, Aretini Fidentes, Aretini Iulieneses, Amitinenfes, Aquesenfes, surnamed Taurini: Vlerani, Cortonenfes, Capenates, Clusines the old, Clusines the new, Fluentini, fast vpon the riuier Arnus that runs before them, Fesula, Ferentinum, Fescennia, Hortanum, Herbanum, Nepet, Nouempagi [i.e. the nine villages] the Shire-wick called Prefecture Claudia, or Foro Clodij: Pistorucin, Perugia, Suanenfes, Saturnini, who beforetime were called Aurinini, Sudertani, Statones, Tarquinienfes, Tuscanienfes, Vetulonienfes, Veientani, Vesentini, Volaterrani surnamed Hetrusci and Volfinienfes. In the same part lie the territories Crustuminius and Caletanus, bearing the names of the old townes. Tiberis, beforenamed Tybris, and before that Albula, from the middest well nere of Apenine, as it lies in length, runs along the marches of the Aretines: small and shallow at the first, and not able to beare a vessell without being gathered together, as it were, by fish-pooles into a head, and so let goe at fluell:
- F as Tina and Glanis which run into him, the which are at the same passe, and require 9 daies for collection of waters, and so are kept in for running out: in case they haue no helpe of rain at all. But Tiberis by reason of the rough, stony, and rugged channell, for all that deuise, hold, on no long course together, but only for troughes, to speake more truly, than boats: & thus it doth for a hundred and fifty miles, not far from Tifernum, Perugia and Orriculum: diuiding as it passeth Hetruria

Hetruria from the Vmbrians and Sabines: and so forth vntill anon, within thirteen miles of the citie [Rome] it parts the Veientian countrey from the Crustumine: and soone after the Fidenate and Latine territories from the Labicane. But besides Tinia and Glanis, he is augmented with two and forty riuers, and especially with Nar and Anio: which riuers being also it selfe nauigable, enclofes Latium behind: and neuerthelesse so many waters and fountaines are brought thereby into the citie, whereby it is able to receiue any ships, be they neuer so great, from the Italian sea; and is the kindest marchant to conueigh all commodities growing and arising in any place of the whole world: it is the onely riuier of all others, to speake of, and more villages stand vpon it and see it, than al other riuers in what land soeuer. No riuier hath lesse liberty than it, as hauing the sides therof enclosed on both hands, & yet he is no quarreller, nor much harm doth he, albeit he hath many and those suddain swellings, and in no place more than in the very citie of Rome do his waters overflow: yet is he taken to be a prophet rather, and a Counsellor to giue warning, yea, and in smelling, more religious and breeding scruple, to speake a truth, than otherwise cruell and doing any great harme. Old Latium from Tiberis to Circeios, was obserued to be in length 50 miles. So small roots at the first took this Empire. The inhabitants thereof changed often, and held it, some one time, some another; to wit, the Aborigenes, Pelasgi, Arcadians, Sicilians, Auruncanes, and Rutilians. And beyond Circeios, the Volscians, Offians, Aufonians, from whence the name of Latium did reach soone after, as farre as to the riuier Liris. In the beginning of it stands Ostia, a Colonie, brought thither and planted by a Roman king: the towne Laurentum, the groue of *Iupiter Indiges*, The riuier Numicius, and Ardea, built by *Danië* the mother of *Perseus*. Then the Colonie Antium, sometimes Aphrodisium: Astura, the riuier and the Island. The riuier Nymphæus, *Clastra Romana* Circeij, in times past an Island, yea and that verily enuioured with a mighty sea (if we beleue *Homer*) but now with a plain. A wonder it is what we are able to deliuer concerning this thing to the knowledge of men. *Theophrastus*, who of strangers was the first that writ (any thing diligently) somewhat of the Romans (for *Theopompus*, before whom no man made mention at all, said only, That the citie was woon by the Gauls: and *Clitarchus* next after him, spake of nothing elle but an embassage sent vnto *Alexander*) this *Theophrastus*, I say, vpon a better ground and more certaintie now than bare hearesay, hath set downe the measure of the Island Circeij to be eightie Stadia, in that booke which he wrote to *Nicodorus* the chiefe Magistrate of the Athenians, who liued in the 460 yeere after the foundation of Rome citie. Whatsoeuer land therefore aboue tenne miles compass lie neere about it, hath beene annexed to the Island. But after that, a yeere, another strange and wonderfull thing fell out in Italy: for not far from Circeij, there is a meere called Pomptina, which *Mutianus*, a man who had beene thrice Consull, reporteth to haue been a place wherein stood 23 cities. Then there is the riuier Vfers, vpon which standeth the towne Tarracina, called in the Volscian tongue Anxur, & where sometime was the citie Amycle, destroyed by serpents. After it is there the place of a caue or peak, the lake Fundanus, & the hauen Cajeta. The town Formia named also Hormia, the ancient seat (as men thought) of the Læstrigones. Beyond it was the towne Pyrae, the Colonie Minturne, diuided asunder by the riuier Liris, called Clanius. The vtmost frontier towne in this part of Latium laid to the other, is Sinuessa, which as some haue said, was wont to be called Sinope. Thence comes to shew it selfe that pleasant and plentifull countrey Campania. From this vale begin the hills full of vineyards, and famous for drunkenness, proceeding of strong wine and the liquor of the grape, commended so highly in all countries: and (as they were wont to say in old time) there was the exceeding strife between father *Liber* and dame *Ceres*. From hence the Setine and Cecubine countries spread forth: and to them ioine the Falerne and Caline. Then arise the mountaines, Maffici, Gaurani and Surrentine. There the Laborium Champaine fields lie along vnder their feet, and the good wheat haruest to make fine frumentie for dainties at the table. The sea-coasts here are watered with hot fountaines, and among other commodities throughout all the sea, they beare the name for the rich purple shell fish, and other excellent fishes. In no place is there better or more kind oyle pressed out of the Oliue. And in this delightfull pleasure of mankind, the Oficians, Grecians, Vmbrians, Tuscanes, and Campanes haue strived who could yeeld best. In the skirt and edge thereof is the riuier Saur, Vulturum the town and riuier both, Liturnum, and Cumo inhabited by Chalcidians, Misenum, the hauen Bajæ, Baule, the pooles Lucrinus and Avernus, neer vnto which was sometime the town Cimmerium. Then Puteoli, called also the Colonie *Dicæarchia*:

After

- A After that, the plaines Phlegraei, and the meere or fenne Acherusia neere to Cumes. And vpon the very stord by the sea side Naples, a citie also of the Chalcidians, the same that Parthenope so called of the tombe of a Sirene or Meermaid: *Herculanum*, *Pompeij*: and where not farre off the mountaine Vesuvius ouerlooketh, and the riuier Sernus runneth vnder the territory of Nuceria, and within nine miles of the sea, Nuceria it selfe. Surrentum with the promontory of *Minerva*, the seat sometime of the Meermaids. From the cape Circeij lies the sea open for faile 78 miles. This is counted the first region of Italy, next Tiberis, according to the description of *Augustus*. Within it are these Colonies, Capua, so called of the Champaine country, *Aquinum*, *Suessa*, *Venafrum*, *Sora*, *Teanum*, named withall *Sidicinum* and *Nola*: the Townes be, *Abellinum*, *Aricia*, *Alba Longa*, *Acerrani*, *Allifani*, *Atinates*, *Aletrinate*, *Agagnini*, *Atellani*, *Afulani*, *Arpinates*, *Auximates*, *Auellani*, *Alfaterni*; and they who of the Latine, Hernick, and Albicane territories, are furnamed accordingly: *Bouillæ*, *Calatia*, *Casinum*, *Calenum*, *Capitulum*, *Cerneturum*, *Cernetani*, who be called also *Mariani*. *Corani* descended from *Dardanus* the *Trojan*; *Cubulterini*, *Castrimonienses*, *Cingulani*, *Fabienfes*, and in the mount Albane, *Foro populienses*. Out of the Falarne territory, *Fusinate*, *Ferentinate*, *Freginate*, *Faraterni* the old, *Fabraterni* the new, *Ficolenfes*, *Fricolenfes*, *Foro-Appi*, *Forentani*, *Gabini*, *Interramnes*, *Succasani*, called also *Lirinate*, *Ilionenses*, *Lauinij*, *Norbani*, *Nementani*, *Preneftini*, whose citie was in times past named *Stephanus*, *Priuernates*, *Setini*, *Signini*, *Suessulani*, *Telini*, *Trebutini* furnamed *Balinienfes*, *Tribani*, *Tusculani*, *Verulani*, *Veliterni*, *Vlurenfes*, *Vluernates*: and aboue also Rome her selfe: the * other name whereof to vtter, is counted in the secret misteries of ceremonies an impious and vnlawfull thing: which after that it was abolished, and so faithfully obserued to right good purpose and for the safetie thereof, *Valerius Soranus* blurted out, and soone after abid the smart for it. I think it not amisse nor impertinent, to insert there in this very place an example of the ancient religion instituted especially for this Silence: for the goddesse *Angerona*, whose holiday is solemnly kept with sacrifices the 2 day before the Kalends of Ianuary, is represented by an Image hauing her mouth fast faled and tied vp. This citie of Rome had 3 gates when *Romulus* left it, or rather foure (if we beleue the most men that write thereof) The wals thereof, when the two *Vespasian*s, Emperors and Censors both, to wit, the Father and *Titus* his son, took the measure, which was in the yere after the foundation of it 828, were in circuit * 13 miles and almost a quarter. It containeth within it, seuen Mountaines, and is diuided * in 14 regions, and 265 crosse streets or carfours, called *Compita Larium*. The measure of the same equall space of ground, running from the gilden pillar *Milliarium*, erected at the head or top of the Rom. Forum, to euery gate which are at this day 37 in number, so ye reckon once the 12 gates alwaies open, and ouerpasse 7 of the old, which are no more extant, maketh 30 miles 3 quarters and better, by a straight line: but if the measure be taken from the same *Milliarium* before said, through the suburbs to the vtmost ends of the houses, and take withall the *Castra Prætoria*, and the pourprise of all the streets, it comes to somewhat about 70 miles: whereunto if a man put the height of the houses, hee may conceiue verily by it, a worthy estimate of the excellency thereof, and confesse that the statelineffe of no citie in the world could be comparable to it. Enclosed it is and fenced on the East-side with the bank or rampier of *Tarquinius* the Proud; a wonderfull piece of worke as any other, and as excellent as the best: for he raised it full as high as the wals, in that side where the aduenue to it was most open and plaine. In other parts, defended it was and fortified with exceeding high wals, or else steepe and craggy hills, but only whereas there are buildings lye out abroad, and make as it were many petty cities. In that first region of Italy there were besides, first for Latium these faire townes of marke, *Satricum*, *Pometia*, *Scaptia*, *Pitulum*, *Politorium*, *Tellene*, *Tifata*, *Cæmina*, *Ficana*, *Crustumium*, *Ameriola*, *Medullia*, *Corniculum*, *Saturnia*, where now Rome standeth. *Antipolis*, which now is *Laniculum*, in one part of Rome: *Antemne*, *Camerium*, *Collatia*: *Amiternum*, *Norbe*, *Sulmo*: and with these, the States that were wont to receiue a dole of flesh in mount Albane, to wit, *Albenses*, *Albani*, *Aefolani*, *Acienfes*, *Abolani*, *Bubetani*, *Bolani*, *Casertani*, *Coriolani*, *Fidenates*, *Forretij*, *Hortenses*, *Latinenfes*, *Longulani*, *Manates*, *Marales*, *Mutucumenses*, *Munienfes*, *Numinienfes*, *Osticulani*, *Ostulani*, *Pedani*, *Pollustini*, *Querquetulani*, *Sicani*, *Sifolenfes*, *Tolerienfes*, *Tutienfes*, *Vimitellarij*, *Vulienfes*, *Venetulani*, *Vicellenfes*. Thus yee see, how of the old Latium, there be 53 States perished and cleane gone, without any token left behinde. Moreouer, in the Campaine countrey, the towne *Stabia* continued vnto the time that *Cn. Pompeius* and *L. Carbo* were

* Valentia

* Somerreade

10.

were

were Consuls, euen vntill the last day of Aprill; vpon which day, *L. Silla* a lieutenant in the Allies war, destroyed it vtterly: which now at this day is turned into graunges and ferme-houses. There is decaied also there and come to finall ruine, *Taurania*. There be also some little relikes left of *Capilinum*, lying at the point of the last gaspe. Moreover *Antius* writes, that *Apollonia* towne of the Latines, was woon by *L. Tarquinius* the King, with the Pillage whereof he began to found the *Capitol*. From *Surrentum*, to the riuer *Silarus*, the *Picentine* country lay for the space of 30 miles, reowned for the *Tuscanes* goodly temple built by *Iason* in the honor of *Iuno Argiva*. Within it, stood the townes *Salernum*, and *Picentia*. At *Silarus*, the third region of Italy, begins together with the *Lucane* and *Brutian* countries: and there also the inhabitants changed not a few times. For held and possessed it was by the *Pelasgi*, *Oenotri*, Italy, *Morgetes*, *Sicilians*, people all for the most part of great Greece: and last of all by the *Lucanes* descended from the *Samnites*, who had to their leader and gouernour, *Lucius*. In which standeth the town *Pæstum*, called by the Greeks *Posidonia*: the Firth or creeke *Pæstanus*, the town *Helia*, now *Velia*. The promontory *Palinurum*, from which creeke retired within-forth, there is a direct cut by water to the columnne regia, 100 miles ouer. Next vnto this, the riuer *Melphes* runneth: also there standeth the towne *Buxentum*, in Greeke, *Pyxus*, and hard by is the riuer *Laus*: a towne there was likewise of the same name. And from thence beginneth the sea coast of *Brutium*, where is to be seen the towne *Blanda*, the hauen *Parthenius* belonging to the *Phocæans*: the Firth *Vibonensis*, the groue *Clampetia*, The towne *Temsa*, called of the Greeks *Temese*: and *Terina* held by the *Croronians*, and the mighty arme of the sea, called the gulfe *Terinæus*: the towne *Consentia*. Within-forth in a demy Island, the riuer *Acheron*, whereof the townesmen are called *Acherontium*. *Hippo*, which now we call *Viboulentia*; the Port of *Hercules*, the riuer *Metaurus*, the towne *Taurentum*, the hauen of *Orestes*, and *Medua*: the towne *Scylleum*, the riuer *Cratais*, mother (as they say) to *Scylla*. Then after it, the columnne *Rhegia*: the *Sicilian* freights or narrow seas, and two capes one ouer-against the other, namely, *Cænis* from Italy side, and *Pelorum* from *Sicily*, hauing a mile and a halfe betweene them: from whence to *Rhegium* is 12 miles and a halfe: and so forward to a wood in the *Apennine*, called *Sila*; and the promontorie or cliffe called *Leucopetra*, 12 miles off. From which, *Locri* (carrying the name also of the promontorie *Zephyrium*) is from *Silarus* distant 303 miles. Here is determined the first gulfe of Europe, wherein be named these seas. First, *Atlantickum* (from which the Ocean sea breaketh in) called of some *Magnum*: the passage whereas it entrencheth, is of the Greeks called *Porthmos*; of vs, *Fretum Gaditanum*. [The freights of *Gebralter*] when it is once entred the *Spanish* sea, so farre as it beareth vpon the coasts of *Spaines*: *Ofothers*, *Ibericum*, or *Balearicum*: and anon it taketh the name of *Gallicum*, or the *French* sea, right before the prouince *Narbonensis*: and after that, *Ligusticum*: from whence all the way to the Island *Sicilie*, it is called *Tuscum*; which some of the *Grecians* terme *Notium*, others *Tyrrhenum*, put most of our countrimen *Inferum*. [The nether sea.] Beyond *Sicily* as farre as to the *Salentines*. *Polybius* calleth it *Aufonium*: but *Erato* *ilbenes* nameth all the sea *Sardonum*; that is between the mouth of the Ocean and *Sardinia*: and from thence to *Sicilie*, *Tyrrhenum*; and from it as far as to *Creta*, *Siculum*: from which it is hight *Creticum*. The Islands discovered along these seas, were these: The first of all, those which the Greeks named *Pityusæ*, of the Pine shrub or plant; but now, *Ebusus*: they are both a State confederate, and a narrow arme of the sea runneth between them; they are 42 miles ouer. From *Dianium*, they lie 70 *stadia*: and so many are there betweene *Dianium* and *Carthage*, by the maine land: and as much distance from *Pityusæ* into the maine Ocean, lie the two *Balear* Islands; and toward *Suero*, *Colubaria*. These *Balears* in their warre-seruice vse much the sling, and the Greeks name them *Gymnesiæ*. The bigger of them is an hundred miles in length, and in circuit 380. Townes it hath of *Romane* citizens, *Palma* and *Pollentia*: of *Latines*, *Cintum* and *Cunicia*: as for *Bochri*, it was a towne confederate. From it, the lesser is thirtie miles off, taking in length 60 miles, and in compass 150. Cities in it, be *Iamno*, *Sanifera*, and *Mago*. From the bigger 12 miles into the sea, lieth the Isle *Capraria*, which lies in wait for all shipwrack: & ouer-against the city *Palma*, *Menaria*, and *Tiquadra*, and little *Annibalis*. The soile of *Ebusus* chafeth serpents away, but that of *Colubaria* breeds them: and therefore dangerous it is for all that come into it, vnlesse they bring with them some of the *Ebusian* earth. The Greeks call this Island, *Ophiusa*. Neither doth *Ebusus* breed any Conies; which are so common in the *Balears*, that they eate vp their come.

There

A There be as it were 20 more little ones among the sheldes of the sea. Now in the maritime coast of *Gallia* in the very mouth of *Rhodanus*, there is *Metina*; and soone after, that which is called *Blascon*; and the three *Stœchades*, called so of their neighbors the *Massilians*, for the order and ranke wherein they stand; and they giue them euery one a seuerall name, to wit, *Prote*, *Mese* (which also is called *Pomponiana*) and the third, *Hypea*. After them, are *Sturium*, *Phœnice*, *Phila*, *Lero*, and *Lerina* ouer-against *Antipolis*; wherein also is a token or memoriall of the towne *Vergaonum*.

CHAP. VI.

¶ Of Corsica.

B

I N the *Ligurian* sea is *Corsica* the Island, which the Greekes called *Cyrenos*, but nearer it is to the *Tuscan* sea; it lyeth out from the North into the South, and containeth in length an hundred and fiftie miles: in breadth for the most part it beareth fiftie: in circuit 322: distant it is from the *Washes* or *Downes* of *Volaterra* 62 miles. Cities it hath 35: and these colonies, to wit, *Mariana*, planted there by *C. Marius*: *Aleria*, by *Dictator Sylla*. On this side of it is *Oglasa*; but within 60 miles of *Corsica*, there is *Planaria*, so called of the forme thereof, so flat it is and leuell with the sea; and therefore deceiue many a ship that runneth aground vpon it. Bigger than it are *Virgo* and *Capraria*, which the Greekes called *Ægilos*. In like manner *Ægillum* & *Dianium*, the same that *Artemisia*, both lying ouer-against the coast *Cosanum*. Other small ones also, as *Mænaria*, *Columbrarie*, *Venaria*, *Ilua*, with the yron mines, in circuit an hundred miles (ten miles from *Populonia*) called of the Greeks, *Æthalia*: from it is *Planafia* 39 miles off. After them, beyond the mouthes of *Tybre* in the *Antian* creeke, is *Astura*, and anon *Palmaria*, *Sinonia*, and iust against *Formiæ*, *Pontiæ*. But in the *Puteolan* gulfe, *Pantadaria* and *Prochyta*, so called, not of *Æneæ* his nource, but because it was broken off by the gushing betweene of the sea from *Ænaria*. *Ænaria* it selfe tooke that name of *Æneæ* his ships that lay in rode there, called by *Homer* *Inarime*, of the Greeks *Pitheculus*, not for the number of Alps there, as some haue thought, but of the worke houses and furnaces of potters that made earthen vessels, as tunnes and such like, to furnish Italy with. Betweene *Pausilypus* and *Naples*, *Megariss*; and soone after, eight miles from *Surrentum*, *Capræ*, renowned for the castle there of *Prince Tyberius*; and it beareth in compass four hundred miles. Anon you shall see *Leucothea*: but without your kenning lyeth *Sardinia* fast vpon the *Africke* sea, but lesse than nine miles from the coast of *Corsica*: and still those freights are made more narrow by reason of small Islands, named *Cuniculariæ*. Likewise *Phintonis* and *Fossæ*, whereof the very sea it selfe is named *Taphros*.

CHAP. VII.

¶ Of Sardinia.

S ARDINIA on the East side beareth 188 miles, on the West, 170, Southward, 74, and Northward 122: so that in all, it taketh vp the compass of 560 miles. It is from the Cape of *Caraleis* to *Africke* 200 miles: from *Gades* it is distant 1400 miles. It hath two Islands on that side where the Promontorie *Gorditanum* standeth, which be called *Hercules* Islands: of *Sulfenses* cape side, *Enosis*; of *Caralitani*, *Ficaria*: some set not far from it the Islands *Belarides*, and *Collodes*: and another which they call *Heras Lutra*, i. *Innoes* lauer, or *Hieraca*. The States of greatest name therein, be the *Ilien*ses, *Balari*, and *Corfi*: and of the foure townes, the chiefe are inhabited by the *Sulcitanes*, *Valentines*, *Neapolitans*, *Bosenses*, and *Caralitani* who are *Roman* enfranchised citizens, and *Norenses*. One colonie there is in it and no more, which is called, *Ad Turrim Libysonis*. This island *Sardinia*, *Timæus* called (of the fashion of a shoer or slipper) *Sandalioris*: but *Myrsyllus*, for the resemblance of a foot-step, *Ichnusa*. Ouere-against the creeke *Pæstanum*, there is *Leucasia*, called so of a Mere-maid or *Sirene* there buried: against *Vestia*, there lie *Pontia* and *Issia*, both iointly called by one name *Oenotides*; a good presumption and argument that *Italie* was possessed by the *Oenotrians*. And against *Vibo*, other little ones, called *Ithacesiæ*, the watch townes of *Ulysses*.

G

CHAP.

is there the town Baſta, and Hydruntum in the ſpace of nineteen miles, to make a partition betweene the Ionian and Adriaticke ſeas, through which is the ſhortest cut into Greece ouer againſt the towne Apollonia, where the narrow ſea running between, is not aboue fiftie miles ouer. This ſpace between, *Pyrrhus* king of Epirus, was the fiſt, that intending to haue a paſſage ouer on foot, thought to make bridges there: after him *M. Varro*, at what time as in the Pyrates warre he was Admirall of *Pompeies* fleet. But both of them were let and ſtopped with one care or other beſides. Next to Hydrus there is Solotum, a citie not inhabited: then, Fratuertium: the hauen Tarentinus, the gariſon towne Lupia, Baſcium. Cælium, Brundisium fiſteene miles from Hydrus, as much renowned as any towne of Italy for the hauen, for the ſurer ſailing, although it be the longer, and the citie of Illyricum Dyrragium is ready to receiue the ſhips: the paſſage ouer is 220 miles. Vpon Brundutium bordereth the territory of the Pædiculi. Nine young men there were of them, and as many maids, deſcended from the Illyrians, who begat betweene them thirteen nations. The townes of theſe Pædiculi, be Rhudia, Egnatia, Barion, beſortime Iapyx of *Edalus* his ſonne, who alſo gaue the name to Iapygia. Riuer, Paſtius, and Aufidus iſſuing out of the Hirpine mountaines, and running by Canuſium. Then followes Apulia of the Daunians, ſurnamed ſo of their leader, father in law to *Diomedes*. In which is the towne Salapia, famous for the loue of an harlot that *Anniball* caſt a fancie vnto; then, Sipontum and Vria: alſo the riuer Cerbalus, where the Daunians take their end: the port Agafus, the cape of the mountaine Garganus, from Salentine or Iapygium 234 miles, fetching a compaſſe about Garganus: the hauen Garna, the lake Pantanus. The riuer Frento, full of Baies and Hauens, and Teanum of the Apulians. In like manner alſo, Larinum, Aliturnia, and the riuer Tifernus. Then cometh in the region Frentana. So there be three kindes of nations, Teani, of their leader, from the Greekes: the Lucanes ſubdued by *Calchas*, which quarters now the Atinates hold and occupie. Colonies of the Daunians beſides the abouenamed, Luceria, and Venusia: townes, Canuſium, Arpi, ſometime Argos Hippium, builded by *Diomedes*, but ſoon after called Argyrippa. There *Diomedes* vanquiſhed and deſtroied the whole generation of the Monadians and Dardians, together with two cities, which grew to a merry iſt by way of a by-word, Apina and Trica. The reſt be more inward in the ſecond region, to wit, one Colonie of the Hirpines called Beneuentum, changed into a more luckie name, whereas in times paſt it was cleaped Maleuentum: the Æculanes, Aquilonians, and Abellinates, ſurnamed Protropi: the Campanes, Caudines, and Ligurians, ſurnamed Cornelians: as alſo Bebianes, Veſcellanes, Deculanes, and Aletrines: Abellinates ſurnamed Marſi, the Atranes, Æcanes, Afellanes, Attinates, & Arpanes: the Borcanes, the Collatines, Corinenſes; and famous for the ouerthrow of the Romanes there, the Cannians: the Dirines, the Metintanes, the Genuſines, the Hardonians and Hyrines: the Latrates ſurnamed Frentanes, the matrines, and out of Garganus the Marcolanes, the Neritines, and Natines, the Rubuſtines, the Syluines and Strapellines, the Turmentines, the Vibinates, Venusines, and Vlurtines. Now the Inlanders of the Calabrians, the Ægirines, Apaneſines and Argentines. The Butuntines and Brumbeſtines, the Decians, the Norbanes, the Pations, Sturnines, and Turines. Alſo of Salentine midlanders, the Aletines, Baſterbines, Nere-
tines, Valentines, and Veretines.

CHAP. XII.

¶ The fourth Canton or region of Italy.

Now followeth the fourth region, euen of the moſt hardie and valiant nations of all Italy. In the coaſt of the Frentanes, next to Tifernus, is the riuer Tirinum, full of good hauens and harbours. The towns there, be Hiſtonium, Buca, and Ortona, with the riuer Aternus. More within the country, are the Anxanes ſurnamed Frentanes: the Carentines, both higher and lower, the Lanueneſes; of Marrucines, the Teatines: of Pelignians, the Corſinienſes, Super-Æquani and Sulmonenſes; of Marciants, the Anxantines and Atinates, the Fucentes, Lucentes, and Maruvij: of Albenſes, Alba vpon the lake Fucinus: of Æquiculanes, the Cliternines and Carſcolanes: of Veſtines, the Augulanes, Pinnenſes, Peleuinates, vnto whom are ioined the Auſinates on this ſide the mountaines: of Samnites, whom the Greekes called Sabellians and Saurites, The Colonie Bouianum, the old; and another ſurnamed Vndecumanorum, namely, inhabited by thoſe of the eleuenth legion: the Auſidenates, Eſernines, Fagiſulani, Ficolenſes, Sepi-
nates,

A nates, Treuentinates: of the Sabines, the Amiternines, Curenſes, Forum Decij, Forum Novum, the Fidenates, Interamnates, Nurſines, Nomentanes, Reatines, Trebulanenſes, ſurnamed Mutuſcæi, as alſo Suffenates, the Tiburtes, and Tarinates. In this quarter of the Æquiculæ there be periſhed and gone the Comines, Tadianes, Acedikes, and Alfaterni. *Gellianus* writeth, that Acippe, a towne of the Marſians, builded by *Marſus* a captaine of the Lydians, was drowned and ſwallowed vp by the lake Fucinus. Alſo *Valerian* reporteth, that a towne of the Vidicines in Picenum was vtterly ruined by the Romanes. The Sabines as ſome haue thought were for their religion and deuout worſhipping of the gods called Sevini: they dwell hard by the Veline lakes vpon moiſt and dewie hills. The riuer Nar draineth them dry with his hot waters of brimſtone: which riuer running from thence toward Tyberis filleth it, and gliding from the hill Fiſcellus, neere the groues of Vacuna and Reate, is hidden in the ſame. But from another ſide, the riuer Anio, beginning in the mountain of the Trebanes, bringeth with it into Tiberis three lakes of great name for their delectable pleaſantnes, which gaue the name to Sublaquensu. In the Reatine territorie is the lake Cutiliæ, wherein floteth an Iſland; and this lake, as *M. Varro* ſaith, is in the very midſt and centre of Italy. Beneath the Sabines lieth Latium; on the ſide Picenum; behinde, Vmbria; and the hills of the Apennine on either hand, do incloſe as with a rampier, the Sabines.

CHAP. XIII.

¶ The fifth Region.

C The fiſt region is Picene, a Nation in times paſt moſt populous, 360000 of the Picentes were reduced vnder the proteſtion of the people of Rome. They are deſcended from the Sabines, vpon a vow that they made to hold and ſolemnize a ſacred ſpring. They dwelt by the riuer Aternus, where now is the territorie Adrianus, and the Colonie Adria, ſeven miles from the ſea. There runneth the riuer Vomanum, and there lieth the Prætutiane and Palmenſis territorie: alſo Caſtrum novum, the riuer Batinum, Truentum with the riuer, the onely relique of the Liburnians remaining in Italy. More riuers there be, to wit, Alpulates, Suinum, and Heluinum, at which the Prætutian country endeth, and the Picentian beginneth. The towne Cupra, a caſtle of the Firmanes, and aboue it the colony Aſcum, of all Picenum the moſt renowned. Within ſtandeth Nouana. In the edge or marches without are Cluana, Potentia, and Numana, builded by the Sicilians. Next to thoſe is the colony Ancona, with the promontory Cumeum lying hard vnto it, in the very elbow of the edge thereof as it bendeth, being from Garganus 183 miles. Within-forth do inhabit the Auximates, Beregranes, Cingulanes, Cuprenſes ſurnamed the Mountainers, Falariens, Pauſulanes, Pleninenſes, Ricinenſes, Septempedani, Tolentinates, Triacenſes, the city Salua, and the Tollentines.

CHAP. XIII.

¶ The ſixth Region.

E TO theſe adioyneth the ſixt region, comprehending Vmbria and the French pale about Ariminum. At Ancona begin the French marches, by the name of Togata Gallia. The Sicilians and Liburnians poſſeſſed moſt part of that tract, and principally the territories, Palmenſis, Prætutianus, and Adrianus. Then the Vmbrians expelled: theſe againe Hetruria drane out: and laſtly the Gaules diſſeized it. The people of Vmbria are ſuppoſed of all Italy to be of greateſt antiquity, as whom men thinke to be of the Greekes named Ombri, for that in the generall deluge of the country by raine they only remained alieue. The Tuſcanes are knowne to haue by war forced and woon 300 townes of theirs. At this day in the frontier of it there are the riuer Æſus, and Senogallia; the riuer Metaurus, and the colonie Fanum Fortunæ. Piſaurum alſo with the riuer. In the parts within, Hiſpellum and Tuder. In the reſt, the Amerines, Attidiatres, Aſtricates, Arnates, and Æſinates, Camertes, Caſventillanes, and Carſulanes, Dolates, ſurnamed Salentines, Fulginates, Foro-flaminienſes, Foro-Iulienſes, named alſo Concubienſes, Foro-Bremitian, Foro-Sempronienſes, Iguini, Interamnates, ſurnamed Nartes, Meuanates, Meuanienſes, and Matilicates, Narnienſes, whoſe towne before-time was called Nequinum. Nucernines, ſurnamed Fauonienſes, and Camelani. The Orriculanes, and Oſtranes.

The Pitualnes, with the addition of Pisueris, as also others surnamed Mergentines, and the Pelestines, Sentinates, Sarfinates, Spoletines, Suarranes, Sestimates, and Suillates, Sadinates, Trebiates, Tufcanes, Tifernates, named withal Tribertines, as also other of them distinguished by the name of Metaurense. The Vesonicates, the Vrbinate, as well they that be surnamed Metaurense, as others Hortenses, the Vetricenenses, Vindenates, and Viuentanes. In this tract are extinct the Felignates, and they who possessed Clusiolum about Interamna: also the Saranates, with the towns Acerræ, called besides Vafriæ, and Turceolum, the same that Vetricolum. Semblably the Solinates, Suriates, Fallinates, Apiennates. There are gone also and cleane lost the Aricnates with Crinoulum, also the Vfidicanes and Plangonenses, the Pisinates, and Cælestines. As for Amica about written, *Cato* hath left in record, that it was built 964 yeres before the war against *Perseus*.

CHAP. XV.

¶ The eighth Region.

The eight region is bounded with Ariminum, Padus, and Apennine. In the borders thereof is the river *Crustumium*, the colony Ariminum, with the rivers Ariminum and Aprusa. Then the river Rubico, the utmost limit sometime of Italy. After it Sapis the river, Viris, and Anemo, Rauenna a towne of the Sabines, with the river Bedes, 102 miles from Ancona. And not far from the Vmbrians sea, Butrium. Within forth are these colonies, Bononie, usually called Felsina when it was the head city of Hetruria, Brixillum, Mutina, Parma, Placentia. Towns, Cæfena, Claterni, Forum Clodij, Liuij, and Popilij, pertaining to the Truentines: also [Forum] the Cornelij, Laccini, Fauentini, Fidentini, Otesini, Padinates, Regienfes a Lepido, Solonates: also the forrests Galliani, surnamed Aquinates, Tanetani, Veliates surnamed Vesterri, Regiates and Vmbranates. In this tract the Boij are consumed, who had 112 tribes or kindreds, as *Cato* saith. Likewise the Senones, they that took Rome.

CHAP. XVI.

¶ Of the river Padus.

Padus, issuing out of the bosome of the mountaine Vesulus, bearing vp his head aloft into a mighty height, runs from a marvellous spring worth the seeing, in the marches of the Ligurian Vagienni, and hiding it selfe within a narrow trench as it were vnder the ground and rising vp again in the territory of the Forovibians, is inferiour to no other rivers for excellencie. Of the Greeks it was called Eridanus, and is much spoken of and well knowne, for the punishment of *Phaeton*. It swelth about the rising of the Dog star, by reason the snow is then thawed: more vnruly and rough vnto the fields thereby, than to the vessels vpon it, howbeit it stealeth and carieth away nothing as his owne; but when he hath left the fields, his bountie is more seen by their plenty and fruitfulness: from his head he holdeth on his course 90 miles wanting twain about 300. In which his passage he taketh in vnto him not only the navigable rivers of the Apennine and the Alps, but huge main lakes also that discharge themselves into him: so as in all he carieth with him into the Adriaticke sea to the number of 30 rivers. The chiefe and most notorious of them all are these, sent out of the side of Apennine: Tanarus, Trebia, Placentine, Tarus, Nicea, Gabellus, Scultenna, Rhenus. But running out of the Alps, Stura, Morgus, Duria twaine, Sessites, Ticinus, Lambrus, Addua, Olius, and Mincius. And there is not a river againe that in so little a way groweth to a greater streame: for overcharged it is and troubled with the quantitie of water, and therefore worketh it selfe a deepe channell heauie and hurtfull to the earth vnder it, although it be deriued and drawne into other rivers and goles, betwene Rauenna and Atium, for an hundred and twenty miles; yet because hee belcheth and casteth them out from him in so great abundance, he is said to make 7 seas. Drawn he is to Rauenna by a narrow channel, where he is called Badusa, and in times past Messanicus. But the next mouth that he maketh carieth the bignesse of an haue, which is named Vatrei: at the which *Claudius Cesar* as hee came triumphant out of Britaine entred into Adria with that huge Vessell more like a mighty great house than a Ship. This mouth of it was before, time called Eridanum: of others, Spineticum, of the city Spina neere by, built by *Diomedes*, (as

A (as some thinke) with the treasures of Delphic. There the river Vatreus from out of the territory of Forum Cornelij, encreaseth Padus. The next moneth that it hath, is Caprasia, then Sagis, and so forth Volane, which before time was called Olane. All those rivers and trenches afore said, the Tufcanes began to make first out of Sagis, carrying the forceable streame of the river across into the Atrian meeres, which are called the feuen seas, and made the famous haue of Atria a towne of the Tufcanes, of which the Adriaticke sea tooke the name afore time, which now is called Adriaticum. From thence are the full mouthes there of Carponaria and the Fosse Phylistina which others call Tartarus, but all spring out of the overflowing of the Fosse Phylistina, holpen with Athesis comming out of the Tridentine Alpes, and Togifonus out of the territory of the Padouans: Part of them made also the next port Brundulum: like as the two Medoaci and the Fosse Clodia, make Edron. With these Padus mingleth it selfe, and by these he runneth ouer, and as it is said by most writers, like as in Egypt Nilus maketh that which they call Delta, so it shapeth a triangle figure between the Alpes and the sea coast, two miles in compass. A shame it is to runne to the Greekes for to borrow of them the Etymologie and reason of any thing in Italy: howbeit *Metrodorus Scepsius* saith, That forasmuch as about the spring and head of this river there grow many pitch trees, called in French Padus, therefore it tooke the name Padus. Also, that in the Ligurian language, the river it selfe is called Bodincus, which is as much to say, as bottomlesse. And to approue this reason and argument, there is a towne thereby called Industria, but by an old name Bodincomacum, where in very deed, beginneth the greatest depth thereof.

CHAP. XVII.

¶ Italy beyond Padus, the eleuenth Region.

Next to it, is the region called Transpadana, and the eleuenth in number: all whole in the mid-land part of Italy, into which the seas bring in all things with fruitfull channel. The townes therein, be Vibi, Forum, and Segusta. The colonies at the foot of the Alpes, Augusta of the Taurines, an ancient descent from the Ligurians: from whence Padus is navigable. Then, Augusta Prætoria, of the Salassi, neere vnto the two-fold gullets or passages of the Alpes, to wit, Graia and Peninæ: for men say, that the Carthaginians came through the one, and *Hercules* in at the other, named Graia. There standeth the towne Eporedia, built by the people of Rome, by direction and commandment out of the bookes of *Sibylla*. Now the Gauls in their tongue call good horse-breakers Eporedia. Also, Vercella of the Lybici, descended from the Sallij: Nouaria, from the Vertacomacores: which euen at this very day is a village of the Vocontij, and not as *Cato* thinketh, of the Ligurians: of whom, the Leui and Marici built Ticinum, not far from Padus: like as the Boij comming ouer the Alpes, founded Laus Pompeia; and the Insubrians, Millaine. That Comus and Bergomus, yea and Licini-Forum, with other nations thereabout, were of the Orobians race, *Cato* hath reported: but the first beginning and originall of that nation of Orobians, he confesseth that he knoweth not. Which notwithstanding *Cornelius Alexander* sheweth to haue descended from the Greekes; and this he guesseth by the interpretation of their name, which signifieth, Men liuing in mountaines. In this tract, Barra a towne of the Orobians is cleane destroyed, from whence, *Cato* saith, the Bergomates took their beginning; bewraying euen by their name, that they were seated more highly than happily. There are cleane gone and consumed also the Caturiges, banished persons of the Insubrians: likewise Spina, before named. In like sort, Melpum, a towne of speciall importance for wealth, which (as *Nepos Cornelius* hath written) was by the Insubrians, Doians, and Senones, raised on that very day, on which *Camillus* forced Veij.

CHAP. XVIII.

¶ Venice, the tenth Region.

Now followeth the tenth region of Italy, Venice, lying fast vpon the Adriaticke sea: the river whereof Silis, commeth forth of the mountaines Taurisani: wherein also is the Towne Altinum, the river Liguentia issuing from the mountaines Opitergeni; a haue of the same name: the colonie Concordia. Rivers and hauens, to wit, Romatinum, Tilautum, the

the greater and the lesse: Anassum, whereunto Varranus runneth downe: Alsa, Natifo, with Tur-
 rus, running fast by Aquileia, a colony situate 12 miles from the sea. This is the region of the
 Carni, ioyning vnto that of the Iapides: the riuer Timavus, and the castle Pucinum, so famous
 for good wine. The vale and Firth Tergestinus, taking name of the Coloeie Tergeste, 23 miles
 from Aquileia: beyond which six miles, is the riuer Formio, 189 miles from Rauenna: the an-
 cient bound or limit of Italy enlarged: but at this day of Istria, which was so named of the ri-
 uer Ister, flowing out of the riuer Danubius into Adria: and ouer against the same Ister, the
 gullet or mouth of Padus also entreteth thither: by the contrary rushing streames of which two
 riuers, the sea between both beginneth to be more milde, as many Authors haue reported, but
 vntuly: and *Cornelius Nepos* also, although he dwelt iust by Padus: for there is no riuer that
 runneth out of Danubius into the Adriaticke sea. Deceiued (I suppose) they were because the
 ship Argos went downe a riuer into the Adriaticke sea, not far from Tergeste; but what riuer it
 was, is yet vnkowne. They that will seeme to be more curious than their fellowes, say, That
 it was carried vpon mens shoulders ouer the Alpes: and that it was set into Ister, and so into
 Saus, and then Nauportus (which vpon that occasion tooke his name) which ariseth betweene
 Amona and the Alpes.

CHAP. XIX.

¶ Istria.

Istria runneth out like a demie Island. Some haue deliuered in writing, that it is 40 miles
 broad, and 122 miles about. The like they say of Liburnia adioyning vnto it, and of the hol-
 low gulfie Flanaticus. But others say, that the compasse of Liburnia is 180 miles. And some
 there be againe, who haue set out Iapidia, as far as to the said creeke Flanaticus, behind Istria
 130 miles: and so haue made Liburnia in circuit 150 miles. *Tuditanus*, who subdued the Istri-
 ans, vpon his owne statue there set this inscription; That from Aquileia to the riuer Titius,
 were 200 stadia. The townes in Istria of Romane citizens, be *Aegida* and *Parentium*. A Colony
 there is besides, *Pola*, now called *Pietas Iulia*, built in old time by the Colchians. It is from
 Tergeste 100 miles. Soone after, ye see the towne *Nesactium*, and the riuer *Arfia*, the vtmost
 bound now of Italy. From Ancona to Pola there is a cut ouer the sea of 120 miles. In the mid-
 land part of this tenth region, are these Colonies; *Cremona*, and *Brixia*, in the *Cenomanes*
 countrie: but in the Venetians countrie, *Ateste*. Also the townes, *Acelum*, *Parauium*, *Opitergi-
 um*, *Belunum*, *Vicetia*: *Mantua* of the Tuscans is only left beyond Padus. That the Venetians
 were the off-spring of the Trojanes, *Cato* hath set downe in writing: also, that the *Cenomanes*
 neere vnto *Massiles*, dwell in the Volcians countrie. *Fertines*, *Tridentines*, and *Parnenses*, are
 townes of Rhetia. As for Verona, it is of Rhetians, and Euganeans; but *Iulienses* be of the Car-
 nians. Then follow these, whom we need to vse no curiositie in naming; *Alutruenses*, *Afferi-
 ares*, *Flamonienfes*, *Vannienfes*, & others surnamed *Gulici*: *Foro Iulienfes* surnamed *Transpa-
 dani*: *Forelani*, *Venidates*, *Querqueni*, *Taurisani*, *Togienfes*, *Varuani*. In this tract there be peri-
 shed in the borders, *Itaminum*, *Pellaon*, *Palscium*. Of the Venetians, *Atina*, and *Caelina*: of
 the Carnians, *Segeste* and *Ocra*: and of the Taurisci, *Noreia*. Also from Aquileia 12 miles, there
 was a towne quite destroyed by *M. Claudius Marcellus*, euen maugre the Senate, as *L. Piso* hath
 recorded. In this region there be also ten notable lakes and riuers, either issuing forth of them
 as their children, or else fed and maintained by them, if so be they send them out againe, when
 they haue once receiued them: as *Larius* doth *Aena*, *Verbanus* *Ticinus*, *Benacus* *Mincius*, *Se-
 binus* *Ossius*, *Eupilius* *Lamber*, all inhabiting and seated in Padus. The Alpes reach in length
 ten miles from the vpper sea to the lower, as *Calius* saith: *Timogenes*, two and twenty: but *Corne-
 lius Nepos* draweth them out in breadth an hundred miles: *T. Livius* saith, three thousand stadia:
 both of them take measure in diuers places: for sometime they exceed a hundred miles, where
 they disioyne Germany from Italy, and in other parts they are so thin, that they make not full
 out threescore and ten miles; and that by the prouidence as it were of Nature. The breadth of
 Italy from Varus vnder the foot of them, through the shallowes or plasches of *Sabatia*, the
 Taurines, *Comus*, *Brixia*, *Verona*, *Vicetia*, *Opitergium*, *Aquileia*, *Tergeste*, *Pola*, and *Aristia*,
 maketh seuen hundred and two miles.

CHAP.

CHAP. XX.

¶ Of the Alpes, and Alpine Nations.

Many nations inhabit the Alps, but those of speciall name from Pola to the tract of Ter-
 gestis, are these, the Secuffles, Subocrices, Catili, Menocaleni; and neere to the Carnians
 those who in times past were called Taurisci, but now Norici. Vpon these there do con-
 fine the Rhetians and Vindelici, all diuided into many States. Men thinke that the Rheti are
 the Tuscans progenie, driuen out by the Gauls, with their leader *Rhetus*. But leauing these
 Rhoetians, turning our breast and visage to Italy, wee meet with the Euganean nations of the
 Alpes, who inioyed the liberty and franchises of the Latines, and whose townes *Cato* reckoneth
 to the number of 34. Of them, the Triumpilines, both people and lands were sold. After them
 the Camuni and many such were annexed to the next townships, and did seruice as homagers
 to them. The Lepontians and the Salassians, the same *Cato* thinketh to be of the Taurick race.
 But all others in manner suppose verily that the Lepontians were a residue left behinde of
 Hercules his traine and company, grounding vpon the interpretation of the Greek name, as ha-
 uing their bodies seaged with the Alpine snowes as they passed through: that the Graij like-
 wise were of the same retinue, planted in the very passage, and inhabiting the Alps Graiae: also
 that the Euganei were noblest of birth, whereupon they took their name. The head city of them
 is Stonos. Of those Rhoetians the Vennonetes and Sarunetes, inhabit neere the heads of the ri-
 uer Rhenus. And of the Lepontians, those who are called Viberi, dwell by the Spring of Rhoda-
 nus, in the same quarter of the Alpes. There be also inhabitants within the Alps, endowed with
 the liberty of Latium, namely, the O&odurenses, and their neighbor borderers the Centrones,
 as also the Cottian States. The Caturiges, and those from them descended, to wit, the Vagi-
 enni, Ligures, and such as be called the Mountainers: and many kindes of the Capillati, confin-
 ing vpon the Ligurian sea. It seemeth not amisse in this place to set down an inscription out
 of a triumphant Trophie erected in the Alps, which runneth in this forme: Vnto the Emperour
 Caesar, son of Augustus of famous memorie, Arch-Bishop, Generall foure times, and inuested in the sa-
 cred authoritie of the Tribunes: the Senate and people of Rome. For that by his conduct and happie for-
 tune, all the Alpine nations which reached from the vpper sea to the nether, were reduced and brought vnder
 the Empire of the people of Rome. The Alpine nations subdued, are these, Triumpilini, Camuni, Venno-
 netes, Isarci, Breuni, Nauntes & Focnates. Of the Vindelici foure nations, to wit, the Conuantes, Virucina,
 tes, Licates, and Catenates. The Abisantes, Suanetes, Calucones, Brixentes, and Lepontij. Viberi, Nantuates,
 Seduni, Yeragri, Salaci, Acitauones, Medulli, Vconi, Caturiges, Brigiani, Sugionti, Ebroadunij, Nemaioni,
 Edenates, Esubiani, Veamini, Gallia, Triulatti, Ectini, Vergunium, Egnituri, Nementuri, Oratelli, Nerusi-
 velauni, Suetri. Now there were not reckoned among these the twelue Cottian States which were not vpon
 any hostility, yet those which were assigned to the free townes to enioy the burgoisie of Rome, by vertue
 of the law Pompeia. Behold this is that Italy consecrated to the gods, these are her nations, and
 these be the townes of her seuerall States. And more than all this, that Italy, which when *L. A-
 mylius Paulus* and *Caius Atilius Regulus* were Consuls, vpon newes brought of a sudden rising
 and tumult of the Gauls, alone by it selfe, without any forrein aids, and euen them, without any
 nations beyond Padus, armed 80000 horsemen and 700000 foot. In plenty of all mettall mines
 it giueth place to no land whatsoeuer. But forbidden it is to dig any by an old act of the Senat,
 giuing expresse order to make spare of Italy.

CHAP. XXI.

¶ Illyricum.

The Nation of the Liburnians ioineth vnto Arfia, euen as farre as the riuer Titius. A part
 thereof were the Mentores, Hymani, Enchelex, Dudini, and those whom *Callimachus* na-
 meth Pucetiae. Now, the whole in generall is called by one name, Illyricum. The names
 of the nations are few of them either worthy or easie to be spoken. As for the iudiciall court of
 Assises at Scordona, the Iapides and foureteeen States besides of the Liburians resort vnto. Of
 which it grieueth me not to name the Lacinians, Stulpinians, Burnistes and Albonsenses. And
 in that Court these Nations following haue the libertie of Italians, to wit, the Alutae and
 Flanates.

Flanates, of whom the sea or gulfe beareth the name: Lopsi, Varubarini, and the Affesiates that are exempt from all tributes; also of Islands, the Fulfinates and Curiolæ. Moreover, along the borders and maritime coasts, beyond Nesactum, these townes; Aluona, Flauona, Tarfatica, Senia, Lopfica, Ortopula, Vegium, Argyruntum, Corinium, the city Ænona, the riuier Pausinus, & Tedanium, at which Iapida doth end. The islands lying in that gulfe, together with the townes, besides those towns aboue noted, Abirtium, Arba, Tragurium, Issa, Pharos beforetime Paros, Crexa, Giffa, Fortunata, Again, within the continent, the colony Iaderon, which is from Pola 160 miles. From thence 30 miles off, the island Colentum; and 18, the mouth of the riuier Titius.

CHAP. XXII

¶ Liburnia.

The end of Liburnia and beginning of Dalmatia is Scordona, which frontier towne is 12 miles from the sea, situate vpon the said riuier Titius. Then followeth the antient countrie of the Tariores, and the castle Tario, the Promontory Diomedis, or, as some would haue it the demy island Hyllis, taking in circuit a hundred miles: also Tragurium, inhabited by Roman citizens, well knowne for the marble there: Sicum, into which place, *Claudius* late *Cæsar*, sent the old souldiers: the Colony Salona, 222 miles from Iadera. There repaire to it for law those that are described into Decuries or tithings 382: to wit, Dalmatians 22, Decunum 239, Ditions, 69, and Mezæi 52, Sardiates: in this tract are Burnum, Mandetrium, and Tribulum, castles of name for the battels of the Romanes. There came also forth of the islands the Isthians, Collentines, Separians, and Epetines. Besides them, certaine castles, Piguntia and Rataneum, and Narona a colonie pertaining to the third Countie-court, 72 miles from Salona, lying hard to a riuier of the same name, and 20 miles from the sea. *M. Varro* writeth, that 89 States vsed to repaire thither for iustice. Now, these only in a manner be knowne, to wit, Cerauni in 33 Tithings, Daorizi in 17, Dekitiates in 103, Docleates in 34, Deretines in 14, Deremistes in 30, Dindari in 33, Glinditiones in 44, Melcomani in 24, Naresij in 102, Scirtari in 72, Siculote in 24: and the Vardæi, who sometime wasted and forraied Italy, in 20 decuries and no more. Besides these, there held and possessed this tract Oenei, Partheni, Hemaſini, Arthitæ & Armistæ. From the riuier Naron a hundred miles, is the colony Epidaurum. Townes of Roman citizens be these, Rhizinium, Aſcrinium, Butua, Olchinium, which beforetime was called Colchinium, built by the Colchi. The riuier Drilo, and the towne vpon it, Scodra, inhabited by Roman citizens, eighteen miles from the sea.ouer and besides, many other townes of Greece, yea & strong cities, out of all remembrance. For in that tract were the Labeates, Enderudines, Saffæi, Grabæi, and those who properly were called Illyrij, the Taulantij and Pyreæi. The Promontorie Nymphæum in the coast thereof, keepeth still the name: also Lyſſum a towne of Romane citizens, a hundred miles from Epidaurum.

C XXIII.

¶ Macedonia.

From Lyſſum is the prouince of Macedonia: the nations there, be the Partheni, and on their backe side the Daſſaretæ. Two mountaines of Candauia 79 miles from Dyrrhachium: but in the borders thereof, Denda, a towne of Roman citizens: also the Colonie Epidamnum, which for that vnluckie names sake was by the Romans called Dyrrhachium. The riuier Aous, named of some Æas. Apollonia, sometime a Colonie of the Corinthians, situate within the countrey, ſeuën miles from the sea, in the marches wherof is the famous Nymphæum. The borderers inhabiting thereby, are the Amantes and Buliones. But in the very edge thereof, the town Oricum built by the Colchi. Then beginneth Epirus, the mountaines Acroceraunia, at which we haue bounded this sea of Europe: as for Oricum, it is from Salentinum (a promontorie of Italy) 85 miles.

CHAP. XXIII ¶ Noricum.

Behind the Carni and Iapides, whereas the great riuier Iſter runneth, the Norici ioine to the Rhariti. Their townes be Virunum, Celcia, Teurnia, Aguntum, Viana, Æmora, Claudia, Flavium,

A vium, Tolvenſe. Vpon the Norici there lie fast the Lake Peiſo, the deserts of the Boij. Howbeit, now by the colonie of the late Emperor *Claudius* of famous memorie, Salaria and the towne Scarabantia Iulia, they be inhabited and peopled.

CHAP. XXV.

¶ Pannonia.

Hence beginneth Pannonia so fruitfull in Maſt: whereas the hills of the Alps, waxing more mild and ciuill, turning through the miſt of Illyricum from the North to the South, settle lower by an easie descent both on the right hand and the left. That part which regardeth the Adriatick sea, is called Dalmatia, and Illyricum aboue named. Pannonia bendeth toward the North, and is bounded by the riuier Danubius. In it are these Colonies, Æmonia, Siscia. And these riuers of ſpeciall name, and nauigable, run into Danubius, Draus with more violence out of the Noricke Alps; and Saus out of the Carnicke Alpes more gently, 115 miles between. As for Draus, it paſſeth through the Serretes, Serrapilles, Iafians, & Sandrozetes: but Saus through the Colapians and Bruci. And these be the chiefe States of that countrey. Moreover, the Ariuates, Azali, Amantes, Belgites, Catari, Cornicates, Araviſci, Hercuniates, Latovici, Oſeriates, and Varciani. The mount *Claudius*, in the front whereof are the Scordisci, and vpon the back, the Taurisci. The island in Saus, Metubarris, the biggest of all the riuier islands. Besides, notable good riuers, Calapis running into Saus neere Siscia, where with a double channel it maketh the island called Segeſtica: another riuier Bacuntius, running likewise into Saus, at the towne Sirmium: where is the State of the Sirmians and Amantines. Fiue & forty miles from thence Taurunum, where Saus is intermingled with Danubius. Higher aboue there run into it Valdanus and Vrpanus, and they ywis be no baſe and obſcure riuers.

CHAP. XXVI.

¶ Maſia.

Vnto Pannonia ioineeth the Prouince called Maſia, which extendeth along Danubius vnto Pontus. It beginneth at the confluent aboue named: in it are the Dardaniens, Celegeri, Triballi, Trimachi, Moſi, Thranes, and the Scythians bordering vpon Pontus. Faire riuers, out of the Dardaniens countrey, Margis, Pingus, and Timachis. Out of Rhodope, Oeſſus: out of Hæmus, Vtus, Eſſamus, and Ieterus. Illyricum where it is broadest, taketh vp 325 miles: it lieth out in length from the riuier Arſia to the riuier Drinius, 800 miles. From Drinium to the cape Acroceraunium, 182 miles. *M. Agrippa* hath ſet downe all the whole ſea comprehending Italy and Illyricum, in the compaſſe of 1300 miles. In it are two ſmaller ſeas or gulfs bounded as I haue ſaid: namely, The lower, otherwiſe called the Ionian, in the fore-part: the inner, called Adriaticum, which alſo they name the vpper: in the Auſonian ſea there be no iſlands worth the ſpeaking, but thoſe aboue named: in the Ionian ſea there are but few, to wit, vpon the Calabrian coaſt before Brundiuſum, by the obiect ſite whereof, the haven is made: and againſt the Apulian coaſt Diomede, famous for the tombe and monument of *Diomedes*: another alſo of that name, called by ſome Teutria. As for the coaſt of Illyricum, it is peſtered with more than a thouſand, ſuch is the nature of the ſea, full of ſhelues and waſhes, with narrow chanelles running between. But before the mouthes of Timavus, there be iſlands famous for hot waters, which ebbe and flow with the ſea: and neere vnto the territorie of the Iſtrians, Ciſſa, Pullaria, and thoſe which the Greekes name Abſyrtides, of *Medeus* brother *Abſyrtis* there ſlaine. Neere vnto them, they called the iſlands Eleſtrides, wherein is ingendred Ambre, which they call Eleſtrum, a moſt aſſured argument to proue the vanity of the Greekes; for that which of them they meant, was neuer known: againſt Iader, there is Liſſa; and certain other ouer againſt the Liburnians, called Creteæ: and as many of the Liburnians, Celaduſæ: againſt Surium, there is Brattia, Next to theſe, Coreyra, ſurnamed Melæna, with the towne of the Gnidians, diſtant 22 miles aſunder: between which and Illyricum, is Melita; whereof (as *Callimachus* teſtifieth) the little dogs Melitæi tooke their name: and 12 miles from thence, the three Elaphites. In the Ionian ſea from Oricum 1000 miles, is Saſonis, well knowne for the Pirats harbor there.

THE



THE FOUVRTH BOOKE OF
THE HISTORIE OF NATURE,
WRITTEN BY C. PLINIUS
SECVNDVS.

From whence first arose all the fabulous lyes, and the excellent Learning of the Greekes.

The third Sea of Europe beginneth at the mountaines Acrocerania, and endeth in Hellespont: it containeth besides nineteene smaller gulfes or creekes, 25 thousand miles. Within it, are Epirus, Acarnania, Ætolia, Phocis, Locris, Achaia, Messania, Laconia, Argolis, Megaris, Attica, Bœotia. And againe from another sea the same Phocis and Locris, Doris, Phthiotis, Thesalia, Magnesia, Macedonia, Thracia. All the fabulous weine, and learning of Greece, proceeded out of this quarter. And therefore we will therein stay somewhat the longer. The countrey Epirus, generally so called, beginneth at the mountaines Acrocerania. In it, are first the Chaones, of whom Chaonia taketh the name: then the Thesprotians, and Antigoneses: the place Aornus, and the aire arising out of it so noisome and pestiferous for birds. The Cestines, and Perrhæbians with their mountaine Pindus: the Cassiopes, the Dryopes, Selli, Helopes, and Molossi, among whom is the temple of Iupiter Dodonæus, so famous for the Oracle there: the mountaine Tomarus, renowned by Theopompus for the hundred fountaines about the foot thereof.

CHAP. I.

¶ Epirus.

Epirus it selfe reaching to Magnesia and Macedonia, hath behinde it the Dassaretians about named, a free nation, but anon the sauage people of the Dardani-ans. On the left side of the Dardani-ans, the Trebellians and nations of Mœsia lye ranged: afront there ioine vnto them, the Medi and Denthelates: vpon whom the Thracians border, who reach as farre as to Pontus. Thus enuironed it is and defenced round, partly with the high hill Rhodope, and anon also with Hamus. In the vtmost coast of Epirus among the Acrocerania, is the castle Chimæra, vnder which is the spring of the kings water. The townes are, Mæandria and Cestria: the riuer of Thesprotia, Thyamis: the colonie Buthrotium: and the gulfes of Ambracia, about all others most famous, receiuing at his mouth the wide sea; 39 miles in length, and 15 in breadth. Into it runneth the riuer Acheron, flowing out of Acherusia, a lake of Thesprotia 36 miles from thence: and for the bridge ouer it 1000 foot long, admirable to those that admire and wonder at all things of their owne. In the very gulfes is the towne Ambracia. The riuers of the Molossians, Aphas and Arachthus. The citie Anaetoria, and the lake Pandosia. The townes of Acarnania, called before time Curetus, be Heraclea and Echinus: and in the very entrance and mouth thereof, Artium a Colonie of Augustus, with the goodly temple of Apollo, and the free citie Nicopolis. When ye are gone out of the Ambrecian gulfes into the Ionian sea, yee meet with the Leucadian sea coast, and the promontorie of Leucate. Then the creeke, and Leucadia it selfe, a demie Island, sometime called Neritis, but by the labour of the inhabitants thereby, cut quite from the Continent, but annexed to it again by meanes of the winds blowing together heapes of

A of sand, which place is called Dioryctus, and is in length almost halfe a mile. A town in it there is called Leucas, sometime Neritum. Then the cities of the Acarnanians, Halyzæa, Stratos, Argos surnamed Amphiloichicum. The riuer Achelous running out of Pindus, & diuiding Acarnania from Ætolia, and by continuall bringing in of earth, annexing the island Artemita to the firme and maine land.

CHAP. II.

¶ Ætolia.

The Ætolian nations, be the Athamans, Tymphæi, Ephiri, Ænienfes, Perrhœbi, Dolopes, Maraces and Atraces, from whom the riuer Atrax falleth into the Ionian sea. The Towne Calydon in Ætolia is seuen miles and an halfe from the sea, neere to the riuer Euenus: then followeth Macynia and Molychia, behind which Chalcis standeth, and the mountaine Taphiasus. But in the very edge and borders thereof, the Promontorie Antirrhium, where is the mouth of the Corinthian gulfes, not a mile broad where it runneth in, & diuideth the Ætolians from Peloponnesus. The promontorie that shooteth out against it, is named Rhion: but vpon that Corinthian gulfes are the townes of Ætolia, Naupaetum and Pylene: but in the mid-land parts, Pleucon, Halyarna. The mountaines of name: in Dodone, Tomarus: in Ambracia, Grania: in Acarnania, Aracynthus: in Ætolia, Acanthon, Panætolum and Macinium.

CHAP. III.

¶ Locri.

Next to the Ætolians are the Locri, surnamed Ozolæ, free States and exempt: the towne Oeanthe: the haue of Apollo Phæstus: the creeke Crissaus. Within-forth are these towns, Argyna, Eupalia, Phæstum, and Calamissus. Beyond them are Cithræi, the plaines of Phocis, the towne Cirrha, the haue Chalæon: from which, seuen miles within the land, is the free citie Delphi, vnder the hill Parnassus, the most famous place vpon earth for the Oracle of Apollo. The fountaine Castalius, the riuer Cephissus running before Delphos, which ariseth in a citie, sometime called Lileæa. Moreouer, the towne Crissa, and together with the Bulenses, Anticyra, Naulochum, Pyrrha, Amphissa an exempt State, Trichone, Tritea, Ambrysus, the region Drymæa, named Daulis. Then in the inmost nouke of the creeke, the very canton and angle of Bœotia is washed by the sea, with these townes Siphæ and Thebæ, which are surnamed Corsicæ neere to Helicon. The third towne of Bœotia from this sea is Page, from whence proceedeth and beareth forth the necke or cape of Peloponnesus.

CHAP. IV.

¶ Peloponnesus.

Peloponnesus, called beforetime Apia and Pelasgia, is a demy Island, worthie to come behinde no other land for excellency and name, lying betwene two seas, Ægeum and Ionium: like vnto the leafe of a plane tree, in regard of the indented creekes and cornered nouks thereof: it beareth a circuit of 563 miles, according to Isidorus. The same, if you comprise the creekes and gulfes, addeth almost as much more. The streight where it beginneth to passe on and go forward, is called Isthmos. In which place the seas a bouenamed gushing and breaking from diuers waies, to wit, from the North and the East, do deuoure all the breadth of it there: vntill by the contrary running in of so great seas, the sides on both hands being eaten away, and leauing a space of land betwene, siue miles ouer, Hellas with a narrow necke doth meet with Peloponnesus. The one side thereof is called the Corinthian gulfes, the other, the Saronian. Lecheum of the one hand, and Cenchræa of the other, do bound out and limit the said streights where the ships are to fetch a great compass about with some danger, such vessels I meane as for their bignesse cannot be conueighed ouer vpon wains. For which cause, Demetrius the king, Cæsar the Dictator, prince Caius, and Domitius Nero, assaied to cut through the narrow foreland, and make a channell nauigable with ease: but the attempt and enterprife was vnhappy, as appeared by the issue and end of them all. In the midst of this narrow streight which we

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haue called Isthmos, the colonie Corinthus, beforetime called Ephyra, scituate hard to a little hill, is inhabited, some 60 stadia from both sea sides: which from the top of the high hill and castle there, which is named Acrocorinthus, wherein is the fountaine Pirene, hath a prospect into both those contrarie seas. At this Corinthian gulfe there is a passage or cut by sea from Leucas to Patrae of 87 miles. Patrae a Colonie, built vpon the promontorie of Peloponnesus, that shooteth farthest into the sea, ouer-against Aetolia and the riuer Euenus, of lesse distance, as hath bin said, than fise miles in the very gullet and enterance, do send out the Corinthian gulfe 85 miles in length, euen as far as Isthmos.

CHAP. V.

¶ Achaia.

Achaia, the name of a prouince, beginneth at Isthmus, aforetime called it was Aegialos, because of the cities, scituate so orderly vpon the strand. The principal and first there is Lechea abouenamed, a port towne of the Corinthians. Next to it Oluros, a castle of the Peleneans. The townes Helice, Bura, and (into which the inhabitants retired themselves, when these beforenamed were drowned in the sea) Sicyon, Aegira, Aegion, and Erineos. Within the country was Cleone and Hyfie. Also the haven Panormus, & Rhium described before: from which promontorie fise miles off standeth Patrae aboue mentioned, & the place called Pherae. of 9 hills in Achaia, Scioessa is most knowne, also the Spring Cymothoe. Beyond Patrae is the towne Olenum, the colonie Dymae. Certain faire places called Buprasium and Hirmene: & the promontorie Araxum. The creeke of Cyllene, the cape Chelonates: from whence to Cyllene is two miles. The castle Phlius. The tract also by Homer named Arethyrea, and afterwards Asopis. Then the country of the Elians, who before were called Epei. As for Elis the city it selfe, it is vp higher in the mid-land parts, 12 miles from Pylos. Within it standeth the Chappell of *Iupiter Olympius*, which for the fame of the games there, containeth the Greekes and Chaldeans account of yeares. Moreover, the town sometime of the Piseans, before which the riuer Alpheus runneth. But in the borders and coast therof the promontorie Isthys. Vpon the riuer Alpheus, there is passage by water in barges to the townes Aulos and Lepreon. The promontory Plataneus; all these lie Westward. But toward the South, the arme of the sea called Cyparissius, and the city Cyparissa, 72 miles in circuit. The townes vpon it, Pylos, Methone, a place and Forrest called Delos: the promontorie Acritas: the creeke Asineus of the towne Asinum, & Coroneus of Corone; and these are limited with Tenarus the promontorie. There also is the region Messenia with 22 mountains. The riuer Paomifus. But within, Messene it selfe, Ithome, Oechalia, Arene, Pteleon, Thyron, Dorion, Zancum, famous townes all for many occurrents at sundry times. The compass of this arme of the sea is 80 miles, the cut ouer-crosse 30 miles. Then from Tenarus, the Laconian land pertaining to a free people, and an arme of the sea there in circuit about 206 miles, but 39 miles ouer. The townes Tenarum, Amiclae, Pherae, Leuctra, and within-forth Sparta, Theranicum: and where stood Cardamyle, Pitane, and Anthane. The place Thyrea, and Gerania. The hill Taygetus: the riuer Eurotas, the creeke Aegylodes, and the towne Psammathus. The gulfe Gytheates, of a towne thereby (Gytheum) from whence to the Island Crete, there is a most direct and sure cut: all these are inclosed within the promontorie Maleum. The arme of the sea next following is called Argolicus, and is 50 miles ouer, and 172 miles about. The towns about it Boea, Epidaurus, Limera, named also Zarax. Cyphanta, the haven. Riuer, Inachus, Erasinus: betweene which standeth Argos surnamed Hippium vpon the Lake Lerne, from the sea two miles, and nine miles farther Mycenae: also where they say Tiryntha stood, and the place Mantinea. Hills, Artemius, Apefantus, Asterion, Parparus, and eleuen others besides. Fountaines, Niobe, Amymon, Psammothoe. From Scylleum to Isthmus 177 miles. Towns, Hermione, Troezen, Coryphasium and Argos, called of some Inachium; of others, Dipsum. The haven Cenites, the creeke Saronicus, beset round about in old time with woods of Oake, whereupon it had the name, for so old Greece called an Oake. Within it stood the towne Epidaurum, much resorted vnto for the temple of *Aesculapius*, the promontorie Spiraenum, the hauens Anthedon, and Bucephalus: and likewise Cenchea which we spake of before, being the other limit of Isthmus, together with the chappell of *Neptune*, famous for the games there represented euery fise yerres. Thus many creekes doth scorch and cut Peloponnesus: thus many

A many seas I say do rore and dash against it. For on the North side the Ionian sea breaketh in: on the West it is beaten vpon with the Sicilian. From the South the Cretian sea driueth against it: Aegium from the Southeast, and Myrtoum on the Northeast, which beginning at the Megarian gulfe, washeth all Attica.

CHAP. VI.

¶ of Arcadia.

The midland parts thereof, Arcadia most of all taketh vp, being euery way far remote from the sea: at the beginning it was named Drymodis, but soone after Pelasgis. The towns in it be Psophis, Mantinea, Stymphalum, Tegea, Antegonea, Orchomenum, Pheneum, Palatium, from whence the mount Palatium at Rome tooke the name. Megalepolis, Catina, Bocallium, Carmon, Parrhasia, Thelphusa, Melanæa, Heræa, Pile, Pellana, Agræ, Epium, Cynætha, Lepreon of Arcadia, Parthenium, Alea, Methydrium, Enepe, Macistum, Lampe, Clitorium, Cleone: betweene which townes is the tract Nemea, vsually called Berubinadia. Mountains in Arcadia, Pholoe with a towne so named. Item, Hyllene, Lyceus, wherein was the chappell of *Iupiter Lyceus*, Mænalus, Artemisus, Parthenians, Lampeus, and Nonacris: & eight besides of base account. Riuer, Lado, issuing out of the meeres and fens of Pheneus, Erymanthus out of a mountaine of the same name, running both downe into Alpheus. The rest of the cities to be named in Achæa, Aliphiræi, Abeatæ, Pyrgenses, Pareatæ, Paragenitia, Tortuni, Typanæi, Thryasii, Tritenses. All Achæa generally throughout, *Domitius Nero* endowed with freedom. Peloponnesus from the promontorie of Malea to the towne Lechaum vpon the Corinthian gulfe, lyeth in bredth 160 miles: but ouer crosse from Elis to Epidaurum 125 miles: from Olympia to Argos through Arcadia 63 miles. From the same place to Phlius is the said measure. And all throughout, as if Nature made recompence for the irruptions of the seas, it riseth vp in 76 hills.

CHAP. VII.

¶ Greece and Attica.

At the streights of Isthmus beginneth Hellas, of our countrymen called Græcia: the first tract thereof is Attica, in old time named Acte. It reacheth vnto Isthmus on that part thereof which is called Megaris of the colony Megara, or against Pagæ. These 2 townes as Peloponnesus lieth out in length, are seated on either hand, as it were vpon the shoulders of Hellas. The Pageans, and more than so, the Aegosthenienfes lie annexed to the Magarensians, and owe seruice to them. In the coast therof is the haven Schoenus. Townes, Sidus, Cremyon, Scironia rocks for three miles long, Geranea, Megara, and Eleusin. There were besides, Oenoe and Probalinthus, which now are not to be seen, 52 myles from Isthmus. Pyraeus and Phalera, two hauens ioined to Athens by a wall, within the land fise miles. A free citie this is, and needeth no more any mans praise: so noble and famous it is otherwise, beyond all measure. In Attica be these fountaines, Cephissia, Larine, Callirhoe, and Enneacreunos. Mountains, Brilessus, Megalcus, Icarus, Hymettus, & Lyrabetus: also the riuer Ilissos. From Pyraeum 42 miles off, is the promontorie Sunium, likewise the promontorie Doriscum. Also Potamos and Brauron, townes in times past. The village Rhamnus, and the place Marathon, the plain Thriaftius, the town Melita and Oropus, in the confines or marches of Boeotia. Vnto which belong Anthedon, Onchestos, Thepre a free town Lebadea: and Thebes surnamed Boeotia, not inferior in fame and renown to Athens, as being the native country, & as men would haue it, of two gods, *Liber* and *Hercules*. Also they attribute the birth of the Muses in the wood Helicon. To this Thebes, is assigned the forest Cithæron, and the riuer Ismenus. Moreover fountaines in Boeotia, Oedipodium, Psammate, Dirce, Epigranea, Arethusa, Hippocrene, Aganippe, and Gargaphia. Mountains ouer and besides the forenamed, Mycalestus, Adylisus, Acontius. The rest of the towns betweene Megara & Thebes, Eleuthera, Haliartus, Platea, Pheræ, Aspledon, Hyle, Thisbe, Erythrae, Glissas, and Copæ. Neere to the riuer Cephissus, Lamia, and Anichia: Medeon, Phligone, Grephis, Coronæa, Charonia. But in the outward borders, beneath Thebes, Ocale, Elæon, Scolos, Scænos, Pteleon, Hyrie, Mycalestus, Hyrecon, Pteleon, Olyros, Tanagia, a free State; and in the

the very mouth of Euripus, which the Island Eubœa maketh by the opposite site thereof, Aulis, so renowned for the large haven that it hath. The Boeotians in old time were named Hyantes. The Locrians also are named withall Epiclemidij, in times past Letegetes, through whom the riuer Cephissus runneth into the sea. Townes, Opus (whereof commeth the gulfe Opuntinus) and Cynus. Vpon the sea coast of Phocis, one & no more, to wit Daphnus. Within forth among the Locrians, Elatæ, and vpon the bank of Cephissus (as we haue said) Lilea: & toward Delphos, Cnenius and Hiampolis: again, the marches of Locri, wherein stand Larymna and Thronium, neere vnto which the riuer Boagrius falleth into the sea. Townes, Narycion, Alope, Scarphia: after this, the vale called of the people there dwelling, Maliacus Sinus, wherein bee these townes, Halcyone, Econia, and Phalara. Then Doris, wherein are Sperchios, Erineon, Boion, Pindus, Cytinum. On the back-side of Doris is the mountain Oeta. Then followeth Æmonia that so often hath changed name. For one and the same hath bin called Pelagicum, Argos, and Hellas, Thessalia also, and Dryopis, and euermore tooke name of the kings. In it was borne a king called *Græcus*, of whom Greece bare the name: there also was *Hellen* borne, from whence came the Hellenes. These being but one people, *Homer* hath giuen three names vnto, that is to say, Myrmidones, Hellenes, and Achæi. Of these, they be called Phthiotæ who inhabit Doris. Their towns be Echinus, in the very gullet & entrance of the riuer Sperchius: and the streights of Thermopylæ, so named by reason of the waters: and foure miles from thence Heraclea, was called Trachin. There is the hill Callidromus: and the famous townes, Hellas, Halos, Lamia, Phthia, and Arne.

CHAP. VIII.

¶ Thessalie.

Moreover in Thessalie, Orchomenus, called before-time Minyeus, and the towne Almon, or after some Elmon, Atrax, Pelinna, and the fountaine Hyperia. Townes, Pheræ, behind which Pierius stretcheth forth to Macedonie: Larissa, Gomphi, Thebes of Thessalie, the wood Pteleon, and the creeke Pagaficus. The towne Pagasa, the same named afterwards Demetrias; Tricca, the Pharsalian plains with a free city; Cranon and Iletia. Mountains of Phthiotis, Nymphæus, most faire and slightly for the naturall arbors and garden works there: Buzigæus, Donacefa, Bermius, Daphissa, Chimerion, Athamas, Stephane. In Thessaly there be 34, whereof the most famous are, Cerceti, Olympus, Pierus, Ossa: iust against which, is Pyndus and Othrys, the seat and habitation of the Lapithæ; and those lie toward the West: but Eastward, Pelios, all of them bending in manner of a theatre: and before them stand raunged wedge-wise, 72 cities, Riueres of Thessalie, Apidanus, Phoenix, Enipeus, Onochomus, Pamisus: the fountain Messeis, the people Boebeiis: and about all the rest the most famous riuer Peneus, which arising neere Gomphi, runneth for 500 stadia in a wooddie dale between Ossa and Olympus, and halfe that way is nauigable. In this course of his, are the places called Tempe, 5 miles in length, and almost an acre and a halfe broad, where on both hands the hills arise by a gentle ascent about the reach of mans sight. Within forth glideth Peneus by, in a fresh green groue, cleare as chrystall glasse ouer the grauelly stones, pleasant to behold for the grasse vpon the banks, and resounding again with the melodious consent of the birds. It taketh in the riuer Eurotus, but entertaineth him not, but as he floweth ouer the top of him like oile (as *Homer* saith:) within a while after that he hath carried him a small way, letteth him goe againe and rejecteth him, as refusing to mingle with his owne siluer streams, those poenall and cursed waters engendred for the infernall Furies of hell.

CHAP. IX.

¶ Magnesia.

To Thessaly, Magnesia is annexed: the fountaine there is Libethra. The townes, Iolchos, Hirmenium, Pyrrha, Methone, Olizon. The promontorie Sepias. Townes moreover, Castana, Sphalattæ, and the promontory Ænantium. Towns besides, Melibœa, Rhifus, Erymne. The mouth of Peneus. Towns, Homolium, Orthe, Thespiæ, Phalanna, Thaumacie, Gyrtion, Cranon, Acarne, Dorion, Melitæa, Phylace, Potinæ. The length of Epirus, Achæia, Attica and Thessalie, lying straight out, is by report 480 miles; the breadth 287.

CHAP.

CHAP. X.

¶ Macedonie.

Macedonie, so called afterwards (for before-time it was named Emathia) is a kingdome consisting of 150 feuerall States, renowned for two kings about the rest, and ennobled sometime for the Monarchie and Empire of the world. This countrie lying farre in behind Magnesia and Thessaly toward the nations of Epirus Westward, is much troubled and infested with the Dardanians. The North parts therof are defended by Pæonia and Pelagoia, against the Triballi. The townes be these, Aege, wherein the maner was to interre their kings: Berœa, and Æginium, in that quarter which of the Wood is called Picria. In the outward borders Heraclea, and the riuer Apilas: more townes, Phina, and Oloros: the riuer Haliacmon. Within forth are the Halorita, the Vallei, Phylacei, Cyrrestæ, Tyriffæi: Pella the Colonie: the town Stobi of Romane citizens. Anon, Antigonæ, Europus vpon the riuer Axios, and another of the same name through which Rhædias runneth: Heordeæ, Scydra, Mieza, Gordinia. Soone after in the borders, Ichna, and the riuer Axios. To this bound the Dardani: Treres, and Pieres border vpon Macedony. From this riuer, are the nations of Pæonia, Parorei, Heordenes, Almopij, Pelagones, and Mygdones. The mountaines Rhodope, Scopius, and Orbelus. The rest is a plaine countrie, wherein Nature seemes to set out her riches: in the lap whereof are the Arethusij, Antiochenses, Idomenenses, Doberienenses, Trienses, Allantenses, Andaristenses, Moryllij, Garefci, Lyncestæ, Othriencei, and the free states of the Amanrines and Orestæ. Colonies, Bulledenis & Dienis. Xilopolitæ, Scotuffæi free; Heraclea, Sintica, Timphæi, and Coronei. In the coast of the Macedonian sea, the towne Calafra, and within forth, Phileros, and Lete: and in the middle bending of the coast, Thessalonica, of free estate and condition. To it from Dyrrachium, it is 114 miles, Therma. Vpon the gulfe Thermaicus, be these townes, Dicæa, Pydna, Derrha, Scione: the promontory Canastæum. Townes, Pallene, Pherga. In which region these mountaines, Hypfizorus, Epirus, Alchione, Leuomne. Townes, Nissos, Brygion, Eleon, Mendæ, and in the Isthmos of Pallene, the Colonie sometime called Potidæa, and now Cassandria, Anthemus, Holophyxus the creeke, and Mecyberna. Townes, Phiscella, Ampelos, Torone, and Singos: the Frith (where *Xerxes* king of the Persians cut the hill Athos from the Continent) in length a mile and a halfe. The mountaine it selfe shooteth out from the plaine into the sea, 75 miles. The compass of the foot thereof takes 150 miles. A towne there was in the pitch of it, Acroton. Now there be Vranopolis, Palæotrium, Thyssus, Cleone, Apollonia, the inhabitants whereof be named Macrobij. The towne Cassera, and a second gullet or creeke of the Isthmus, Acanthus, Stagira, Sitone, Heraclea, and the region lying vnder Mygdonia, wherein are seated farre out from the sea, Apollonia and Arethusa, againe in the coast, Posidium, and a creeke with the towne Cermorus: Amphipolis a free state, and the people Bifaltæ. Then the riuer Strimon, which is the bound of Macedonia, which springeth in Hæmus: of which this is worthy to be remembred, that it runneth into seuen lakes before it keepeth a direct course. This is that Macedonie, which sometime conquered the dominion ouer all the earth: this ouer-ran Asia, Armenia, Iberia, Albania, Cappadocia, Syria and Ægypt; yea and passed ouer Taurus and Caucasus: this ruled ouer the Bastrians, Medians, and Persians, and possessed all the East: this hauing the conquest of India, raunged after the tracts of Father *Liber* and *Hercules*. This is the very same Macedonie, of which in one day *Paulus* *Emilius* our Generall, sacked and sold 72 cities. See the difference of fortune in two men.

CHAP. XI.

¶ Thracia.

Now followeth Thracia, among the most valiant nations of Europe, diuided into 52 regiments of souldiers. Of those States in it, the Denefletes and Medi, whom it grieues me not to name, doe inhabit neere to the riuer Strymon on the right side, as farre as to the Bifaltæ about named: on the left, the Digeri, and many townes of the Bessi, euen to the riuer Nestus, which inuironeth the bottome of the hill Pangæus, between the Eleti, Diobesi, and Carbilesi, and so forward to the Bryse and Capæi. Odomanta a towne of the Odrysians, fendeth

deth out the riuer Hebrus to the neighbour-borderers, the Carbiletes, Pyrogeris, Drugeris, Cæ-
 nicks, Hypsalts, Beni, Corpilli, Boræi, and Edons. In the same tract the Sellætæ, Priautæ, Di-
 lonæ, Thyni, Celctæ, the greater vnder Hæmus, the lesse vnder Rhodope: between whom, run-
 neth the riuer Hebrus. The towne scituat beneath Rhodope, was before-time named Ponero-
 polis; soone after by the founder, Philippopolis: but now of the site thereof Trimontium. The
 ascent of Hæmus vp to the top, taketh six miles: the backe-side and hanging thereof downe to
 Ister, the Mæfians, Getes, Aoti, Gaudæ, and Clariæ, and vnder them the Arræi, Sarmata whom
 they call Areatæ, and Scythians: and about the sea coast of Pontus, the Moriscenes and Sitho-
 nians, from whom the Poet *Orpheus* descended, doe inhadite. Thus Ister boundeth it on the
 North: in the East, Pontus and Propontus: Southward, the sea Ægæum, in the coast whereof
 from Strimon, stand Apollonia, Oestima, Neapolis, and Polis. Within-forth, the Colonie of
 Philip, and 325 miles from Dyrrachium, Scotusa, Topiris, and the mouth of the riuer Nestus.
 The hill Pangæus, Heraclea, Olynthos Abdera a free citie, the meere and nation of the Bisons.
 There, stood the town Tinda, terrible for the horses of *Diomedes* that stabled there. Now at this
 day, Diceæ, Ismaron, the place Parthenion, Phalesina, Maronea called Ortageura before-time.
 The mountaine Serrium and Zonæ: then, the plaine Doriscus able to receiue * 10000 men: for
 so *Xerxes* took a iust account of his armie and numbred it. The mouth of Hebrus: the haue of
 Stentor: the free towne Aenea, together with the tombe of *Polydorus*, the region sometime of
 the Cicones. From Doriscus, the coast bendeth crookedly to Macron-Tichos, for 122 miles.
 About which place the riuer Melas, whereof the creeke beareth name. Townes, Cypfella, Bi-
 fanthe, and that which is called Macron-Tichos, what way as stretching forth the walls along
 from Propontis to the Creeke Melanes betweene two seas, it excludes Chersonesus as it run-
 neth out. For, Thracia of one side beginning at the sea coast of Pontus, where the riuer Ister is
 discharged & swallowed vp, hath in that quarter passing faire and beautifull cities, to wit, Ithro-
 polis of the Milesians, Tomi, and Calatis which before was called Acernetis. It had sometime
 Heraclea and Bizon, which funke and was lost in a gaping chinke of the earth; but now in stead
 thereof Dionysopolis, called before Crunos. The riuer Ziras runneth hard by it. All that tract,
 the Scythians named besides Arotres, possessed. There townes were, Aphrodisius, Libistis,
 Zigerc, Borcobe, Eumenia, Parthenopolis, Gerania, where it is reported that the nation of the
 Pygmæans kept, whom the barbarous people call Catizi, and they are of beliefe that they were
 chased away and put to flight by cranes. In the edge thereof next to Dionysopolis, there is O-
 deffus of the Milesians, the riuer Pomiscus, the towne Tetranaulocos: is the mountaine Hæmus
 bearing forth with a huge top into Pontus had in the pitch thereof the towne Aristæum. Now
 in the coast is Mesembria and Anchialum, where Messa was. The region Astice. There was the
 towne Anthium, now there is Apollonia. The riuers Panissa, Rira, Tæarus, Orofines. Townes,
 Thynnias, Almedeffos, Deuelton with the poole which now is called Deultum, belonging to
 the old souldiers. Phinopolis, neere vnto which is Bosphorus. From the mouth of Ister to the
 entrance of Pontus, some haue made it 555 miles. *Agrippa* hath set to 40 miles more. And from
 thence to the wall about named 150: and so from it to Chersonesus 126. But neere to Bospho-
 rus is the arme of the sea Gathenes. The haue surnamed of old men, and another likewise of
 women. The promontory Chrysoceras, whereupon standeth the town Bizantium of free estate,
 called before-time Lygos. From Dyrrachium it is 711 miles. Thus much lies out the main in
 length between the Adriatick sea and Propontis. Riuers, Bathynias, Pydaras, or Atyras. Towns,
 Selymbria, Perinthus, annexed to the Continent 200 pases broad. Within-forth, Byzia, the
 castle of Thracian kings, hated of Swallows, vpon the horrible and cursed fact of *Tereus*. The
 region Camica: the colonie Flauopolis, where before-time the town was called Zela. And 50
 miles from Byria the Colony Apros, which is from Philippi 188 miles. But in the borders, the
 riuer Erginus, where was the town Gonos. And there you leaue the citie Lyfimachia, also now
 in Chersonesus. For another land passage or Isthmus there is of like streightnes, al one in name,
 and of equall breadth with that of Corinth. Likewise on both sides two cities do beautifie and
 set out the stronds, which they take vp not vnlike to the other, to wit, Padia from Propontis
 and Cardia from the gulfe Melane: as for this, it taketh the name of the forme and proportion
 of the place made like a heart: and both, afterwards, where inclosed within Lyfimachia 3 miles
 from the * long walls abovesaid. Chersonesus from Propontis side, had Tiristasis & Crithotes,
 also Cissa fast vpon the riuer Ægos: now it hath from the colony Apros 32 miles Resistos, ouer-
 against

* Or 100000.

* Macron-
Tichos.

- A against the colony Pariana. And Hellespontus, diuiding Europe from Asia, seuē stadia asui-
 der (as we haue said) hath foure cities there opposite one against another, to wit, in Europe,
 Calippolis and Sestos; in Asia, Lampficum and Abydos. Then, is the promontory of Cherso-
 nesus Mastia, iust contrary to Sigeum, in the crooked front whereof is Cynossema: for so is
Hecubaes tombe named, the very rode of the Athenians nauie. The towne and chappell of *Prote-
 flaus*: and in the very vmoost forefront of Cherronesus, which is called Æbolum, the towne
 Elæus. After it, as a man goeth to the gulfe Melane, the hauens Cælos, Panhormus, and the a-
 boue-named Cardia. The third sea of Europe, is in this manner bounded and limited. Moun-
 taines of Thracia ouer and about those afore rehearsed, Edonus, Gigemorus, Meritus, and Me-
 lamphyllon. Riuers falling into Hebrus, be Bargus, and Suemus. The length of Macedonie,
 Thracia and Hellespontus, is set downe before. Some make it seuē hundred and twenty miles.
 B The breadth is three hundred and eighty miles. The sea Ægium rooke that name of a rocke,
 betweene Tenedos and Chios, more truly than of an Island named Aex, resembling a goat, and
 therefore so called of the Greekes; which all at once appeareth to rise out of the mids of the
 sea. The sea-men that faile from out of Achaia to Andros, discover it on the right hand, and to
 them it presageth some dreadfull and mischieuous accident. Part of the Ægean sea is laid to
 the Myrtoum, and so called it is of a little Island, which sheweth it selfe to them that set saile
 from Gereffus to Macedonie, not farre from Charitlos in Eubœa. The Romanes comprehend
 all these seas in two names: namely, Macedonicum, all that which toucheth Macedonia and
 Thracia: and Græcienum where it beateth vpon Greece. As for the Greekes, they diuide euen
 the Ionian sea into Siculum and Creticum, of the Islands. Also Icarus they call that between
 Samos and Mycione. All the other names are giuen by gulfs and creekes, whereof we haue
 spoken. And thus much verily as touching the seas and nations contained in this manner with-
 in the third section or gulfe of Europe.

CHAP. XII.

¶ The Islands betweene those lands, among which, Creta, Eubœa, Cyclades,
 and Sporades: also of Hellespont, Pontus, Maotis, Da-
 cia, Sarmatia and Scythia.

- D Islands ouer against Threspotia, Corcyra: 12 miles from Buthrotus, and the same from the
 cliffes Acrocerania 50 miles, with a citie of the same name, Corcyra of free condition, also
 the towne Cassiope, and the temple of *Iupiter Cassiopeus*: it lieth out in length 97 miles. *Homer*
 called it Scheria and Phæacia: *Callimachus* also, Drepane. About it are some others: but ben-
 ding toward Italy, Thoronos: and toward Leucadia the two Paxæ, five miles diuided from
 Corcyra. And not farre from them before Corcyra, Ericusa, Marate, Elaphusa, Malthace, Tra-
 chia, Pytionia, Prychia, Tarachie. And from Pholachrum a promontory of Corcyra, the rocke
 into which their goeth a tale, that the ship of *Ulysses* was turned, for the resemblance it hath of
 such a thing. Before Leucadia, Sybota. But between it & Achaia there be very many: of which
 Teleboides the same that Taphia: but of the inhabitants before Leucadia, they be called Ta-
 phias, Oxie, and Prinoessa: and before Ætolia, the Echinades, Ægialia, Cotonis, Thyatira, Geo-
 aris, Dionysia, Cyrtus, Chalcis, Pinara & Myrtus. Before them in the deep sea, Cephalenia and
 Zacynthus, both free states: Ithaca, Dulichium, Same, Crocylea, and Paxos. Cephalenia some-
 time called Melæna, is 11 miles off, and 44 miles about. As for Same, it was destroyed by the
 Romanes: owbeit, still it hath three townes: between it and Achaia is Zacynthus with a town,
 a stately Island, & passing fertile. In times past it was called Hyrie, and is 22 miles distant from
 the South coast of Cephalenia. The famous hill Elarus is there. The Isle it self is in circuit 25
 miles. Twelue miles from it is Ithaca, wherein stands the mountain Neritus. And in the whole
 it takes vp the compasse of 25 miles. From it 12 miles off is Araxum a cape of Peloponnesus.
 Before this Island in the maine sea there appeare Asteris and Prote, before Zacynthus 35 miles
 full East, are the two Strophades, called by others Plotæ: and before Cephalenia, Leroia. Be-
 fore Pylos three Sphagie, and as many before Messene, called, Oenusse. In the gulfe Alineus
 three Thyrides: in the Laconian gulfe, Teganusa, Cothon, Cythera with the towne, named be-
 foretime Porphyris. This lies five miles from the promontorie Malea, dangerous for ships to
 come about it, by reason of the streights there, in the Argolick sea are Pityusa, Irine & Ephyre
 and

and against the territory Hermonium, Typareus, Epiropia, Colonis, Aristera: ouer against Troezenium Calauria, halfe a mile from Platea: also, Belbina, Lacia and Baucidias. Against Epidaurus, Cecryphalos, and Pytioneos, six miles from the Continent. Next to it is Ægina a free state, 17 miles off, and for 20 miles they saile by it. The same is distant from Pyraeum the port of the Athenians, 12 miles, and beforetime was vsually called Oenone. Against the promontory Spiræum, there lie onposite Eleusa, Dendros, two Craugia, two Cæcia, Selachusa, Cencreis and Aspis. Also in the Megarian gulfe, there be foure Methurides. As for Ægilia, it is 15 miles from Cythera, and the same is from Phalaferna a towne in Creet 25 miles. And Creet it selfe, lying of one side to the South, and the other to the North, stretcheth forth in length East and West; a famous and noble Island for a hundred cities in it. *Dosiades* saith it tooke that name of the nymph *Creta* daughter of *Hesperis*: but according to *Anaximander*, of a king of the Curetes. *Philistides*, *Mallotes*, *Cyates*, haue thought it was called first *Æria*, and afterwards *Curetis*: and some haue thought it was named *Macaros* for the blessed temperature of the aire. In bredth it exceedeth in no place 50 miles, and in the middle part broadest it is: but in length it is full 270 miles: in circuit 589 miles: and winding it selfe into the Creticke sea, so called of it, where it stretcheth out farthest Eastward, it puts forth of it the promontory Samonium iust against Rhodos, and Westward Criu-Metopon, toward Cyrenæ. The principall townes of marke, be Phalaferne, Elæa, Cyfamum, Pergamum, Cydon, Minoum, Apteron, Pantomatrium, Amphymalla, Rhythimna, Panhormum, Cyteum, Apollonia, Matium, Heraclea, Miletos, Ampelos, Hyera-pytina, Lebena, Hierapolis. And in the midland parts, Cortyna, Phæstum, Gnosus, Potyrrhenium, Myrina, Lycastus, Rhamnus, Lyctus, Diu, Asum, Pyloros, Rhytion, Clatos, Phæx. Holopyxos, Lasos, Eleutherna, Therapne, Marathusa, Mytinos. And other townes about the number of 60, stand yet vpon record. The hills be Cadiscus, Idæus, Dictæus, and Morycus. The Isle it selfe, from the promontory in it called Criu-Metopon, as *Agrippa* reports, is distant from Phycus, a promontory of the Cyrene 225 miles. Likewise from Capesum point, it is from Malca in Peloponnesus 80 miles. From the Island Carpathus, which lies Westward from the cape Sammonia, 60 miles. This Island aforesaid lyeth between it and Rhodos. The rest about it be these: before Peloponnesus two Coricæ, and as many Mylæ: and on the North side, when a man hath Creet on the right hand, there appeares Leuce iust against Cydonia, together with the two Budoræ, against Matium, Cia: against the promontory Itanum Onisa and Leuce: against Hierapytna, Chrysa, and Caudos. In the same coast are Ophiussa, Butoa, and Rhamnus: and when men haue fetched about and doubled the point Criu-Metopon, K appeare the Isles called Musagores. Before the promontory Sammonium, Phocæ, Platia, Sironides, Naulochos, Armedon and Zephire. But in Hellas, yet still in Ægium, Lichades, Scarphia, Marefa, Phocaria, and very many more ouer against Attica, but townelless, and therefore obscure and of no reckoning: but against Eleusin, the noble Salamis, and before it Psytalia: and from Sunium, Helene fise miles off: and Ceos from thence as many, which our countymen haue named Cæa: but the Greekes Hydrussa, cut off and dismembred from Eubœa. In times past it was 500 stadia long: but soone after, foure parts almost, namely those that butted vpon Bœotia, eaten vp by the same sea: so as now the towne remaining that it hath, be Iulis and Carthæa. For Coreffus and Pæcessa are perished & gone. From hence as *Varro* saith, came the fine linen cloath that women vse: yea, and Eubœa it selfe hath been plucked from Bœotia, and di- L uided with so little an arme running betwene, that a dridge ioineth the one to the other: euidēt it is to the eie, and well seen, by reason of two promontories in the South side, to wit, Genestum, bending toward Attica, and Capharens to Hellespontus: and one vpon the North-side, to wit, Cæneus. In no part thereof doth it extend broader than 40 miles: and no where doth it gather in narrower than 20. But in length from Attica as far as Thessalie, it lies along Bœotia 150 miles: and containeth in circuit 365. From Hellespont, on Caphareus side, it is 225 miles. In times past renowned it was for these cities, Pyrrha, Porthmos, Nefos, Cerinthus, Oreum, Diu, Ædepsum, Ocha, Oechalia, now Chalcis, ouer against which stands Aulis in the main: but now, for Gereftum, Eretria, Carystus, Oritanum, Artemisium, the fountain Arethusa, the riuer Lelantum, the hot waters called Hellopia, it is of great name: but yet in more request for the marble of Carystus. In former time it was called commonly Chalcodontis or Macris, as *Dio- M nyfius* and *Ephorus* doe say: but Macra, according to *Aristides*: and as *Callidemus* would haue it, Chalcis, for the brasse there first found: and as *Menæmus* saith, Abantia: and last of all Afo-
pis,

A pis, as the Poets commonly name it. Without in the Myrtoum sea be many Isles, but of grea-
test marke be Glauconensis and Ægilia: and neere to the promontory Gereftum about Delos
certain lying round together, whereupon they tooke their name Cyclades. The first and chiefe
of them, Andrus with a towne, is from Gereftum 10 miles, and from Ceum 39. *Myrsilus* saith it
was called Caros, and afterwards Antandros. *Callimachus* nameth it Lasia: others Nonagria,
Hydrussa and Epagris: it takes in compasse 93 miles. A mile from the same Andros, and 15
from Delos, lieth Tenos, with a town fifteen miles in length: which for the plenty of water *A-
ristotle* saith was called Hydrussa, but others name it Ophiussa. The rest be these, Myconos
with the hill Dimastus, 15 miles from Delos. Scyros Syphnus, before-time named Heropia
and Acis, in circuit 28 miles about: Seriphus 12 miles, Præpesinthus, Cyrrhus, and Delos it
selfe, of all others most excellent by far, as being the midst of all the Cyclades, much frequen-
B ted for the temple of *Apollo*, and for merchandise and trafique. Which hauing a long time flo-
ted vp and downe, as it is reported, was the only Island that neuer felt earthquake vnto the time
of *M. Varro*. *Mutianus* hath recorded that it was twice shaken. *Aristotle* giueth a reason of the
name in this sort, because it was discovered and appeared on a sudden. *Æglossenes* termeth it
Cynthia: others Otygia, Aferia, Lagia, Chlamydia, Cynethus, and Pyrpile, for that in it fire
was first found out. It is but 5 miles about, and riseth vp by the ascent of the hill Cinthus. Next
it is Rhene, which *Anticlidus* called Celadussa, and *Helladius* Artemite. Moreover, Syros, which
antient writers haue said to be in circuit 28 miles, and *Mutians* 160. Oliaros, Paros, with a
C towne, 38 miles from Delos, of great name for the white marble there, which at first men called
Pactia, but afterwards Minois. From it seuen miles and a halfe is Naxos (18 miles from De-
los) with a towne which they called Strongyle, afterwards Dia, within a while Dionysias, of
the plentifull vines, and others, Sicily the lesse, and Callipolis. It reacheth in circuit 75 miles,
and is halfe as long again as Paros. And thus far verily they obserue & note for the Cyclades;
the rest that follow for the Sporades. And these they be, Helenum, Phocussa, Phæcacia, Schi-
nussa, Phalegandros, and 17 miles from Naxos, Icaros: which gaue name to the sea, lying out as
far in length with two townes, for the third is lost: before-time it was called Dolichum, Macris,
and Ichtyoessa. It is scituate Northeast from Delos 50 miles: and from Samos it is distant
35 miles. Between Eubœa and Andros there is a firth 12 miles ouer. From it to Gereftum is
112 miles and a halfe: and then no order forward can be kept: the rest therefore shall be set
D downe huddle by heapes. Ios from Naxos 24 miles, venerable for the sepulchre of *Homer*: it
is in length 25 miles, and in former time called Phænice. Odia, Letandros, Gyaros with a town,
12 miles about. It is from Aneros 62 miles. From thence to Syrnus 80 miles. Cynethussa, Te-
los, famous for costly ointment. *Callimachus* calls it Agathussa. Donyfa, Pathmos, in circuit 30
miles. Corassia, Lebinthus, Leros, Cynara, Sycinus, which before-time was Oence, Heratia the
same that Onus, Casus otherwise Astræbe, Cimolus, alias Echinussa, Delos with a towne, which
Aristides nameth Byblis, *Aristotle* Zephyria, *Callimachus* Himallis, *Heracides* Syphnus and Acy-
tos, and this of all the Islands is the roundest. After it Machia, Hypere sometime Patage, or af-
ter some Platage, now Amorgos, Potyrgos. Phyle, Thera, when it first appeared it was called
E Calliste. From it afterwards was Therasia plucked: and between those twain soone after arose
Automate, the same that Hiera: and Thia, which in our daies appeared new out of the water
neere Hiera. Ios is from Thera 25 miles. Then follow Lea, Afcania, Anaphe, Hippuris, Hip-
purissusa. Astipalæa, of free estate, in compasse 88 miles: it is from Cadiscus a promontory of
Creta, 125 miles. From it is Plarca, distant 60 miles. And from thence Camina, 38 miles: then
Azibnitha, Lanise, Tragia, Pharmacusa, Techidia, Chalcia, Calynda, in which are the townes
Coos and Olymna. From which to Carpathus, which gaue the name to the Carpathian sea is
25 miles, and so to Rhodes with a Southerne winde. From Carpathus to Casos 7 miles: from
Casos to Samonium a promontorie of Crete, 30 miles. Moreover, in the Euboike Euripe, at
the first entrance wel-neere of it are the foure Islands Petalix, and at the end thereof, Atalante,
Cyclades, and Sporades: confined and enclosed on the East with the Icarian sea coasts of A-
F sia: on the West with the Myrtoum coasts of Attica. Northward with the Ægean sea: and
South with the Creticke and Carthaginian seas; and take vp in length two hundred myles.
The gulfe Pegaseus hath before it, Eutychia, Cicynethus, and Scyros about said: but the
vtmost of all the Cyclades and Sporades, Gerontia, Scadira, Thermeusis, Irrhesia, Solin-
nia, Eudemia, Nea, which is consecrate vnto *Minerva*. Athos before it hath foure, Pepare-
thus

thus with a town sometime called Euonos, 9 miles off, Scyathus 5 miles, and Iulios with a town 88 miles off. The same is from Mastusia in Corinthos 75 miles, & is it self in circuit 72 miles. Watered it is with the riuer Ilissus, from thence to Lemnos 22, and is from Athos 87. in compass it containeth 22 miles and a halfe. Townes it hath, Hephæstia and Marina, into the Market place wherof the mountain Athos casteth a shadow in the hottest season of sommer. Thafos a free State is from it five miles: in times past it was called Æria or Æthria. From thence Abdera in the continent is 20 miles: Athos 62: the Isle Samo-Thrace as much, being a free priuiledged state, and lying before Hebrus. From Imbrus 32 miles: from Lemnos 22 miles and a halfe: from the coast of Thracia 28 miles: in circuit it is 32 miles, and hath the rising of the hill Saoces for the space of ten miles, and of all the rest is fullest of hauens and harbors. *Callimachus* calleth it by the old name Dardania. Betwixt Cherrhonesus and Samo-Thrace is Halomesus, about 15 miles from either of them: beyond lieth Gethrone, Lamponia, Alopeconefus not farre from Cœlos, an haue of Cherrhonesus: and some other of no name or regard. In this sea let vs rehearse also the desert and vnpeopled Isles, such as we can finde names for, to wit, Desticos, Larnos, Cyssicos, Carbrusa, Celathusa, Scylla, Draconon, Arconesus, Dithusa, Scapos, Capheris, Mesate, Æantion, Phaterunefos, Pateria, Calete, Neriphus and Polendus.

The fourth of those great seas in Europe, beginning at Hellespont, endeth in the mouth of Mœotis. But briefly we are to describe the forme of the whole sea, to the end the parts may be sooner and more easily known. The vast and wide Ocean lying before Asia, and driuen out from Europe in that long coast of Cherfonesus, breaketh into the maine with a small and narrow issue, and by a Firth of 7 stadia, as hath been said, diuideth Europe from Asia. The first streights they call Hellespontus: this way *Xerxes* the King made a bridge vpon ships, and so led his armie ouer. From thence there is extended a small Euripus or arme of the sea for 86 miles space to Priapus a city of Asia, whereas *Alexander* the great passed ouer. From that place the sea grows wide and broad, and again gathereth into a streight: the largeness thereof is called Propontis, the streights Bosphorus, halfe a mile ouer; and that way *Darius* the father of *Xerxes* made a bridge ouer and transported his forces. The whole length of this from Hellespont is 239 miles. From thence the huge main sea called Pontus Euxinus, and in times past Axenus, takes vp the space between lands far distite and remote asunder, and with a great winding and turning of the shores bendeth back into certain horns, and lieth out-stretched from them on both sides, resembling evidently a Scythian bow. In the very mids of this bending it ioineth close to the mouth of the lake Mœotis, and that mouth is called Cimmerius Bosphorus, 2 miles and a halfe broad. But between the two Bosphori, Thracius and Cimmerius, there is a direct strait course between, as *Polybius* saith, of 500 miles. Now the whole circuit of all this sea, as *Varro* and all the old writers for the most part do witness, is 2150 miles. *Nepos Cornelius* addes thereto 350 miles more. *Artemidorus* maketh it 2919 miles. *Agrippa*, 2360 miles. *Mutianus*, 2865 miles. In like sort some haue determined and defined the measure on Europe side to be 4078 miles and a halfe: others, 1172 miles. *M. Varro* taketh his measure in this manner: from the mouth of Pontus to Apollonia 188 miles and a halfe: to Calatis as much. Then to the mouth of Ister 125: to Boristhenes 250: to Cherrhonesus a towne of the Heraclætes, 375 miles. To Panticapæus, which some call Bosphorus, the vtmost coast of Europe, 222 miles and a halfe, which in all makes 1336 miles and a halfe. *Agrippa* measureth thus: From Byzantium to the riuer Ister 560 miles: then to Panticapæum 630: from thence the very lake Mœotis taking into it the riuer Tanais, running out of the Rhiphæan hills, is supposed to beare the compass of 1306 miles, being the farthest bound betweene Europe and Asia. Others again make 11025 miles. But surely from his mouth to the mouth of Tanais, and take a streight course, it is 375 miles without question. The inhabitants of that coast haue bene named in the description and mention of Thrace, as farre as to Istropolis: now from thence the mouthes of Ister. This riuer arising among the hills of Abnoba a mountaine of Germanie, ouer against Rauricum a towne in Gaule, passing many a mile beyond the Alpes, and through innumerable Nations vnder the name of Danubius, with a mightie encrease of waters, and where hee first beginneth to wash Illyricum, taking the name of Ister after he hath receiued three score riuers, and the one halfe of them well neere nauigable, rolleth into Pontus with six huge streames. The first mouth of it is Peuces, soone after the Island it selfe Peuce, of which the next Channell

tooke

A tooke name, and is swallowed vp of a great miere of 19 miles. Out of the same channell and about Astropolis, a poole is bred of 63 miles compass, which they call Halmyris. The second mouth is called Naracustoma: the third Calostoma, neere the Island Sarmatica: the fourth Pseudostoma, and the Island Conopon Diabasis. After that, Boreostoma, and Spiroostoma. Each of these are so great, that by report the sea for 40 miles length within it is ouer-marched with the same, and the fresh water may so far be evidently tasted. From it, into the inland parts of the country, the people verily be all Scythians: but diuers other nations there be that inhabit the coasts next to the sea: in some places the Gete, called of the Romanes Daci: in others Sarmatæ, of the Greekes Sauromatæ; and among them, the Hamaxobij or Aorti. Elsewhere, the bastard and degenerate Scythians, who are come from base slaues, or else the Troglodites, and anon the Alani and Rhoxalani. But the higher parts betweene Danubius and the forest Hercynius, as farre as to the Pannonian wintering harbours of Carnuntum, and the confines there of the Germans, the fielden countrie also & plains of Iazegæ, the Sarmatians possesse. But the hills and Forrests, the Dakes who were expelled by them, do inhabit as farre as to the riuer Pythylus from Marus, or peradventure it is Duria, diuiding them from the Sueuians & kingdom of Vannians. The parts against these, the Bastarnæ doe keepe; and from thence, other Germans. *Agrippa* hath set downe that whole tract from Ister to the Ocean, to mount vnto 2000 miles, and 400 lesse in bredth, to wit, from the desarts of Sarmatia to the riuer Vistula. The name of Scythians euery where continually runs into Sarmatians and Germans. Neither hath that old denomination remained in any others but those, who (as I haue said) liue farthest off, and in the edge of these nations, vnkowne in manner to all men besides. But the townes next to Ister are Creniniscos, and Æpolium: the mountaines Macrorenij: the noble riuer Tyra, giuing name to the towne, whereas before-time it was called Ophiusa. Within the same there is a spacious Island, inhabited by the Tyragetæ. And it is from Pseudostomum, a mouth of Ister, 130 miles. Soone after be the Axiacæ, bearing the name after the riuer: beyond whom are the Crobzyti: the riuer Rhodæ: the creeke Sagaricus, and the haue Ordesus. And 120 miles from Tyra, is the great riuer Borysthenes; also a lake and people of that name: yea and a towne 15 miles within from the sea, called by ancient names Olbropolis, and Miletopolis. Again, in the sea side, the haue or harbour of the Achæans: the Island of *Achilles*, famous for the tombe of that worthy wight. And from it 135 miles, there is a demy Island lying out acrosse in fashion of a sword, called Dromos Achilleos, vpon occasion of his exercise there of running: the length whereof *Agrippa* hath declared to be 80 miles. All that tract throughout, the Taurisci, Scythians, and Sarmatians do inhabit. Then the wilde woodland countrie gaue the name vnto the sea Hylæum, which beates hard vpon it: the inhabitants are called Enaccloræ. Beyond, is the riuer Panticapes, which diuideth the Nomades and Georgians asunder: and soone after Accesus. Some writers doe shew, that Panticape together with Borysthenes, runne together in one confluent beneath Olbia, but they that write more exactly, doe name Hypanis. See how much they erred, who haue described it in a part of Asia. It entreth into the sea with a mighty great ebbe and returne of the water, vntill it be within five miles of Mœotis, compassing as it goeth a mighty deale of ground, and many nations. Then there is a gulfe or arme of the sea called Corcinites, and a riuer Pacyris. Towns, Naubarum and Carcine. Behind, is the lake Buges, let out into the sea by a great ditch. And Buges is self from Coretus (an arme or branch of the lake Mœotis) is disioyned, with a backe part full of crags and rocks. Riuers it receiue, Buges, Gerrhus, Hypanis, comming all from diuers quarters: for Gerrhus parteth the Basilides and Nomades. Hypanis, through the Nomades and the Hyleans, falleth into Buges by a channell made by mans hand, but in his owne naturall channell into Coretus. The region of Scythia is named Sendica. But in Carcinites, Taurica beginneth: which also in times past was enuironed all about with the sea, wherefoer now there lie plains and flat fields. But afterwards it mounteth vp with huge hills. Thirtie nations there be in it: and of them 24 be Inlanders. Six townes, Orgocyni, Caraseni, Assyriani, Traçari, Archilachitæ, and Caliodi. The very pitch and crest of the hill, the Scytotauri do hold. Bounded they are Westward, with Cherronesus; Eastward with the Scythian Satarchi. In the coast next to Carcinites are these townes, Taphra, in the very streights of the demy Island: then, Heraclea, Cherronesus, endowed with franchises by the Romans. A foretime it was called Megarice, and is the most ciuel & fairest of all the rest of that tract, as retaining still the names and fashions of the Greekes, and is besides compassed with a wall.

wall of five miles about. Then, the promontory Parthenium. A citie of the Tauri, Placia. The hauen Symbolon: the promontory Criu-metopon, ouer against Charambes a promontorie of Asia, running through the middle of Euxinus, for the space of 170 miles, which is the cause especially that maketh the forme abouesaid of a Scythian bow. Neere to it, are many hauens and lakes of the Tauri. The towne Theodosia, distant from Criu-metopon 122 miles, and from Chersonesus 165 miles. Beyond, there haue been towne, Cyte, Cephyrium, Acre, Nymphem, and Dia. And the strongest of them all by many degrees, standeth yet still in the very entry of Bosphorus, namely, Pantecapium of the Milesians, from Theodosia 1035 miles: but from Cimmerum a town scituate beyond the Firth, a mile and a halfe as we haue said. And this is al the bredth there that diuideth Asia from Europe: which sometime is passeable ouer most-what on foot, namely, when the Firth is frozen and all on yce. The breadth of Bosphorus Cimmerius is 12 miles and a halfe. It hath vpon it these townes, Hermisium, Myrmecium; and within it, an Island Alopecce. But along Mæotis, from the farthest narrow land passage, which place is called Taphræ, vnto the mouth of Bosphorus, it contains 260 miles. On Taphræ side, the Continent within-forth is inhabited by the Anchetæ, among whom Hypanis springeth: and Neuri, where Borysthenes hath his head. Moreover, the Geloni, Thussageræ, Budini, Basilidæ, and the Agathyrsi, with blew haire on their heads. Aboue them, the Momades, and the Anthropophagi. On Buges side aboue Mæotis, the Sauromates and Essedones dwell, but along the borders enen as far as Tanais, the Mæotæ, of whom the lake was so called, and the vtmost on their backs the Arimaspi. Within a little appeare the Rhiphæan hills, and a cuntry called Prephoros, for the resemblance of certain wings or feathers, occasioned by the continuall fall of snow. A part of the world thus is condemned by dame Nature, and drowned in deepe and thick darkenes, dwelling within no other houses but the workes of frozen cold, and the ycie harbors of the chilling Northerne wind. Behind those hills and beyond the North pole, there is a blessed and happy people (if we may beleuee it) whom they call Hyperborei, who liue exceeding long, and many fabulous and strange wonders are reported of them. In this tract are supposed to be the two points or poles about which the world turns about, and the very ends of the heauens reuolution. For 6 moneths together they haue one entire day; and night as long, when the Sunne is cleane turned from them: but their day beginneth not at the spring Equinoctiall (as the leaud and ignorant common people do imagine) and so continueth to the Autumne: for once in the yeere, and namely at our mid-sommer when the Sun entrench into Cancer, the Sun riseth with them: and once likewise it setteth, euen in the mid-winter with vs, when the Sun entrench Capricorne. The cuntry is open vpon the Sunne, of a blissefull and pleasant temperature, void of all noisome wind & hurtfull aire. Their habitations be in woods and groues, where they worship the gods both by themselves, and in companies and congregations: no discord know they; no sicknes are they acquainted with. They neuer die, but when they haue liued long enough: for when the aged men haue made good cheere, and annointed their bodies with sweet ointments, they leape from off a certain rocke into the sea. This kind of sepulture, of all others is most happy. Some Writers haue seated them in the first part of the sea coasts in Asia, and not in Europe, for that indeed some be there resembling the like manners and customes, and euen so scituate, named Atocori. Some haue set them iust in the mids between both Sunnes to wit, the setting of it with the Antipodes, and the rising of it with vs: which cannot possibly be, considering so vast and huge a sea comming betweene. As for those that haue placed them no where but in the six moneths day-light, haue written thus much of them, That they sow in the morning, reape at noone, at sun-setting gather the fruits from the trees, and in the nights lie close shut vp within caues. Neither may we make doubt of that nation, since that so many Authors doe testifie, That they were wont to send the first fruits of their corne, as far as Delos to Apollo, whom aboue all others they honour. And virgins they were that had the carriage of this present, who for certaine yeeres were venerable, and courteously entertained of all nations, vntill such time as vpon breach of faithfull hospitalitie, they took vp an order to bestow those sacred oblations in the next marches of their neighbour borderers: and they againe to conueigh the same to their neighbours that confined vpon them, and so forward as far as Delos. But soone after, this custome was for-let and cleane giuen ouer. The length of Sarmatia, Scythia, and Taurica, and of all that tract from the riuier Borysthenes, is 980 miles, the breadth 717, as M. Agrippa hath cast it. But I for my part suppose, that the measure of this part of the earth is vncertaine,

A vncertaine: but after the order which we haue begun, let vs go forward with the rest behind of all this diuision: as for the petty seas thereof we haue truly shewed them already.

CHAP. XIII.

¶ The Islands Pontus.

HELLESPONT hath no Islands to be spoken of, in Europe. In Pontus are two, a mile and halfe from Europ, and 14 miles from the mouth of the riuier, to wit, Cyaneæ, of others called Symplegades; and by report of fables they ran one into another: the reason was, because they being seuered by a small space betweene, to them that enter the sea full vpon them, they seemed twaine: but if they turned their eye a little aside from them, they made a shew as if they met together. On this side Ister there is one, pertaining to the Apolloniates, 80 miles from Bosphorus Thracius, out of which M. Lucullus brought Apollo Capitolinus. What are within the mouths of Ister we haue declared already. Before Borysthenes is the aboue named Achillea, called Leuce and Macaron. This, our moderne Cosmographers in these daies doe set 140 miles from Borysthenes, from Tyra 120: from the Island Peuce 50. It is in compasse about ten miles. The rest be in the gulfe Carcinites, namely Cephalonnefos, Rhosphodusa, and Macra. I cannot passe by the opinion of many writers, before we depart from Pontus, who suppose all the inland seas or Mediterranean arise from that head, and not from the streights of Gades: and they lay for their ground an argument not without some good probabilitie, because out of Pontus the sea alwaies floweth, and neuer ebbeth againe.

But now we are to depart from thence, that other parts of Europ may be spoken of: & when we are gone ouer the Rhiphæan hills, we must passe along close by the North Ocean, and keepe the left hand vntill we come to Gades. In which tract there are reported to be very many Isles without name: of which, as Tymæus reporteth, there is one before Scythia called Bannomanna, distant from Scythia one daies sailing: into which, in the temperate season of the spring, Amber is cast vp to the shore by the waues of the sea. All the other coasts are no otherwise marked and known but by vncertain heare-say. The North Ocean from the riuier Paropamisus, where as it dasheth vpon Scythia, Hecataeus nameth Amarchium, which word in the language of that nation signifieth, Frozen. Philemon writeth, that the Cymbrians call it Morimarusa, i. mortuum Mare, the dead sea, euen as far as to the promontorie of Rubæ: but all beyond forward, Cronium. Xenophon Lampfacenus saith, That three daies sailing from the Scythian coast there is the Island Baltia, of exceeding greatnesse. The same doth Pythias name Basylia. There be also named the Isles Oonæ, wherein the Inhabitants liue of birds egges and otes. Others also, wherein men are born with horse feet, called thereupon Hippopades. Others againe of the Panoti, who being otherwise naked, haue mighty great cares that couer their whole bodies. And now forward we begin at the nation of the Ingeuoni, the first of all the Germanes in those parts, to discover all vpon more sure and euident report. There is the exceeding great mountain Sevo, not inferior to the high hills Rhiphæi, which maketh a mighty huge gulfe, euen as far as the Cimbrians promontory, called Codanus: it is full of Islands, of which the goodliest of all is Scandinavia, the bignesse whereof is not yet discovered. A part only thereof, as much as is knowne, the nation of Heleuones doth inhabit in 500 villages, who call it a second world. And as it is thought, Enigia is no whit lesse. Some say that these parts, as far as to the riuier Vistula, is inhabited by the Sarmatians, Venetians, Soyrians, and Hirrians: also that the gulfe of the sea is called Clylipenus: and that in the mouth or entrance of it is the Island Latris. Also that not far from it there is another arme of the sea bounding vpon the Cimbrians. The promontory of the Cimbrians shooting far into the seas, maketh a demy Island, which is called Cartris: from which coast 23 Islands haue been discovered and known by the Roman armies; the noblest of them are Burchana, called of our cuntry men Fabaria, of the plenty of a pulse called Beans, growne there of it selfe vnsworne. Likewise Glesaria, so called by the soldiers, of Amber: but of the barbarous people Austrania; and besides them Adania. Along this sea coast, vntill you come to the riuier Scaldis, the German nations do inhabit, but the measure of that tract cannot easily be declared, such vnmeasurable discord and difference there is amongst Writers. The Greeks and some of our owne cuntry haue deliuered the coast of Germanie to be 2500 miles about. Agrippa again ioyning with it Rhetia and Noricum, saith that it is in length 886 miles,

and in bredth 268. And verily of Rhœtia alone, the bredth well-neere is greater, at leastwise at the time that it was subdued, and the people departed out of Germanie: for Germany many yeares after was discovered, and yet not all of it known throughly. But if it be lawful to gesse, there will not be much wanting in the coasts & compasse, according the opinion of the Greeks; nor in the length set down by Agrippa.

CHAP. XIV.

¶ Germanie.

OF Germanes there be five kindes: the Vindili, part of whom be the Burgundians, Varini, Carini, and Gurtones. A second sort, the Ingaevones, part of whom be the Cimbri, Teutoni, and people of the Cauchi. The next to them be the Istævones, and part of them be the Cimbri. Then the midlanders, the Hermiones, among whom are the Suevi, Hermunduri, Chatti, and Cherusci. The fifth are the Peucini, the Basternæ, bordering vpon the aboue-named Dacæ. Faire rivers that run into the Ocean, to wit, Guttalus, Vistillus, or Vistula, Albis, Visurgis, Amisus, Rhenus, Mosa. And within-forth the Hircynium hill, inferiour to none in estimation, standeth to gard and inclose them.

CHAP. XV.

¶ Islands in the Gaules Ocean.

Vpon the very Rhene it selfe, for 100 miles almost in length, lieth the most noble Island of the Batavi and Cannenufates: as also others of the Frisians, Cauchians, Frisiabones, Sturij, and Marsalij, spread within Helius and Flevus, for so be the mouthes into which Rhenus gushing, diuideth it selfe; and is discharged from the North into certain lakes: from the West into the riuer Mosa. But in the middle mouth between, hee beareth a small current and channell, and keepeth his owne name.

CHAP. XVI.

¶ England and Ireland.

OVER against this tract lieth Britannia, betweene the North and West, being an Island renowned both in Greeke and Roman records: opposite it is vnto Germanie, Gaule, and Spaine, the greatest parts by far of all Europe, and no small sea betweene. It was sometime named Albion, when all the Isles were called Britannia, of which anon we wil speak. This Island is from Gessoriacum, a coast towne of Morini, fifty miles, taking the next and shortest cut. In circuit, as *M. Pitheas* and *Isidor* report, it containeth 3825 miles. And now for these thirtie yeares well-neere, the Romane Capitaines grow into farther knowledge thereof, and yet not beyond the Forrest of Caledonia, as neere as it is. *Agrippa* supposeth that it is in length 800 miles, and in bredth 300. Also that Ireland is as broad, but not so long by 200 miles. This Isle is seated aboue it, and but a very short cut or passage distant from it, to wit, 30 miles from the people Silures. Of other Islands in this Ocean there is none by report in circuit more than 125 miles. Now there be Orcades 40, diuided asunder by small spaces betweene: *Acmodæ* 7, and 30 *Hæbudes*. Also betweene Britaine and Hibernia, *Mona*, *Monapia*, *Ricnea*, *Veëtis*, *Silimnus*, and *Andros*: but beneath them, *Siambis* and *Axantos*: and on the contrary side towards the Germane Sea there lie scattering the *Glessaria*, which the later Greeke Writers have named *Electrides*, for that Amber was there ingendred or bred. The farthest of all knowne or spoken of, is *Thule*, in which there be no nights at all, as we haue declared, about Midsummer, namely when the Sun passeth through Cancer: and contrariwise no daies in mid-winter: and each of these times they suppose do last six moneths, all day or all night. *Timæus* the Historiographer saith, that farther within-forth, and six daies sailing from Britain, there lieth the Island *Mëtis*, in which white lead grows; and that the Britans do saile thither in winter vessels, covered with leather round about, and well fowed. There be that make mention of others beside, to wit, *Scandia*, *Dumna*, *Bergos*, and *Nerigos* the biggest of all the rest, from the which men saile to *Thule*. Within one daies sailing from *Thule* is the frozen sea, named of some *Cronium*.

CHAP.

CHAP. XVII.

¶ Gallia.

ALL Gallia, by one name called *Comata*, is diuided into three kindes of people, and those seuered one from the other by riuers especially: to wit, Belgica, from *Scaldis* to *Sequana*: Celtica, from it to *Garumna*; and this part of Gallia is named *Lugdunensis*. From thence to the lying out of the mountaine *Pyrenæus*, *Aquitania*, formerly called *Aremorica*, *Agrippa* hath made this reckoning and computation of all Gaul generally, to wit, lying between *Rhene*, *Pyrenæus*, the Ocean, and the hills *Gebenna* and *Iura*; whereby hee excludeth *Narbonensis Gallia*, that is in length 420 miles, and in bredth 313. Next to *Scaldis* there inhabited the vtmost borderers, the *Toxandri*, vnder many names: then the *Menapij*, *Morini*, and *Oromanfici*, ioyning vpon the tract or territorie called *Gessoriacus*: the *Brinnani*, *Ambiani*, *Bellonici*, and *Hassi*. But farther within-forth, the *Castologi*, *Atrebatii*, and *Neruij*, free states: the *Veromandui*, *Sueroni*, and *Suessiones*, likewise free: the *Treviri* free before-time: the *Lingones* confederates, the *Remi* confederats also: the *Mediomotricæ*, the *Sequani*, the *Raurici*, & *Helverij*. Colonies two, *Equestris* and *Rauriaca*. Moreouer, of Germane nations in the same Province that dwell neere *Rhene*, the *Nemetes*, *Trivochi*, and *Vangiones*: then the *Vbij*, *Colonia*, *Agrippensis*, *Gugerni*, *Batavi*, and those whom we spake of in the Islands of *Rhene*.

CHAP. XVIII.

¶ Lugdunensis Gallia.

Lugdunensis Gallia containeth the *Luxovij*, *Velocasses*, *Galleti*, *Veneti*, *Abricatui*, *Osismij*, and the noble riuer *Ligeris*: but a more faire and goodly demy Island, running forth into the Ocean, from the very marches of the *Osismij*, hauing in circuit 625 miles, with the necke thereof 125 miles broad. Beyond it dwell the *Nannites*. Within-forth, the *Hædni* confederats, the *Carnuti* likewise confederats, the *Boij*, the *Senones*, the *Aulerici*, surnamed *Eburovices*, and the *Cenomannes* and *Meldi*, free States. *Parrhisij*, *Trecasses*, *Andegani*, *Viducasses*, *Vadicasses*, *Vnelli*, *Cariovelites*, *Drabhudi*, *Rhedones*, *Turones*, *Itefui*, and *Secusiani*, free States, in whose countrey standeth the Colonie *Lugdunum*.

CHAP. XIX.

¶ Aquitania.

That province of Gaule which is called *Aquitania*, belong the *Ambilatri*, *Anagnutes*, *Pictones*, the *Santones*, *Bituriges*, named also *Vibisci Aquitani*, whereof the Province tooke name, and the *Sediboniatæ*. Then such as were enrolled into townships from diuers parts, to wit, *Begerri*, *Tarbeli*, who came vnder foure ensignes, *Cocossati* vnder 6 ensignes, *Venami*, *Onobriates*, *Belendi*, and the forest *Pyrenæus*. Beneath them, *Monesi*, *Osquidiales*, *Mountainers*, *Sibillates*, *Camponi*, *Bercorates*, *Bipedimui*, *Sassumini*, *Vellates*, *Vornates*, *Conforanni*, *Aufci*, *Elufates*, *Sotriates*, *Osquidates* in the champion and plaine country, *Succasses*, *Iatufates*, *Bafabocates*, *Vassei*, *Sennates*, *Cambolestri*, *Agefinales*, ioyning to the *Pictones*. Then the *Bituriges* free, called also *Cubi*. Next to them, *Lemovires*, *Arverni* free, and *Gabales*. Again, those that confine and border vpon the province *Narbonensis*, the *Ruthenes*, *Cadumii*, *Autobroges*, & the *Petrogori*, diuided from the *Tolosanes* by the riuer *Tarme*. Seas about the coasts, vpon *Rhene* the North Ocean: between it and *Sequana* the Britan ocean: between it and *Pyrenæus*, the Gaule Ocean. Islands many, to wit of the *Veneti*, called also *Venetici*; and in the gulfes of *Aquitane*, *Vliarus*.

CHAP. XX.

¶ The hither Province of Spaine.

AT the Promontorie of *Pyrenæus* beginneth *Spain*, narrower not only than *Gaule*, but also so than it selfe (naturally) so huge a quantitie is wrought into it, while the Ocean of one coast, the *Iberian* sea on the other, do cling and presse the sides together. The very hills

of Pyrenæus, which from the East spread all the way to the Southwest, make Spaine shorter on the North side than the South. The next marches of this higher prouince is the same that the tract of Tarracon, namely from Pyrenæus along the Ocean, the Forrest and mountains of Vafcones. And first in this part you finde these townes: namely in the country of the Varduli, O-larso, Morofgi, Menofca, Velperies, the port towne Amanum, where now is Flaviobriga, and a colony of nine cities. The region of the Cantabri, the tiuer Sada, the port town of Viftoria, inhabited by the Iuliobrigenses. From that place the fountaines of Iberus, 40 miles. The haue Biendum, the Origeni entermingled with the Cantabri. Their hauens Vefci and Veca: the country of the Astures, the rowne Noega, in the demy Island Peficus. And then the countie Lucensis, and so from the riuer Navilubio, the Cibarci, Ego varri fynamed Namarini, Iadoni, Arrotiebræ, the promontorie Celticum. Riuer, Florius and Nelo. Celtici fynamed Nerix: and aboute them the Tamarici, in whose demy Island are 3 Altars called Sestianæ, dedicated to *Augustus*, Cœpori, and the towne Nœla. The Celtici, fynamed Præfamarci, and Cileni. Of Isles worth the naming, Corticata and Aunios. From the Cileni, the county town of the Bracæ, Heleni, Graviij, the castle Tyde, all disceded from the Greekes: the Islands Cicæ, the faire town Abobrica, the riuer Minius, with a broad mouth 4 miles ouer, the Leuni, Seurbi, *Augusta* a town of the Bracæ: and aboute them also, Gallæcia, the riuer Limia. Also the riuer Durius, one of the greatest in Spaine, springing in the Pelendones country, & running hard by Numan-tia, and so on, through the Arevaci and Vaccaï, diuiding the Vetones from Asturia, and the Gallæcians from Lusitania: and there also it keepeth off the Turduli from the Bracari. All this region aboute said from Pyrenæus, is full of mettall mines, to wit, gold, siluer, iron, lead, as well blacke as white, *i. tinne*.

CHAP. XXI.

¶ *Lusitania.*

AT the riuer Durius begins Lusitania, wherein are Turduli the old, Pefuri, the riuer Vacca, the towne Talabrica, the towne and riuer Minium. Townes, Conimbrica, Olisippo, Ebu-ro, Britium: from whence there runs out into the sea with a mighty cape, the promontorie which some haue called Artabrum; others, the Great; and many, Olisipponense, of the towne, making a diuision of land, sea, and aire aboute. In it is the side of Spaine determined and bounded, and from the compass of it beginneth the forefront thereof.

CHAP. XXII.

¶ *Islands in the Ocean.*

ON the one hand is the North and the Gauls Ocean: on the other, the West and the Atlantic Ocean. The shooting forth of the promontorie afore said some haue reported to be 60 miles, others 90. From thence to Pyrenæus there be writers not a few, who say it is 1250 miles, and that there is a nation of the Atabri, which neuer was, with a manifest error. For they haue set in this place by exchanging some letters, the Artotrebæ, whome wee named before the promontorie Celticum. They haue erred also and missed in certain famous riuers. From Minius aboute named, as *Varro* saith, Æminius is 200 miles distant (which some men take to be elfewhere, and call it Limæa) named of men in old time Oblivionis, and wherof goeth many a tale. From Durius to Tagus is 200 miles, and comes between. This Tagus is a riuer much renowned for the sand that yeelds gold. 160 miles from it the promontory Sacrum runs out from the middle front in manner of Spain: and 14 miles *Varro* saith it is from it to the mids of Pyrenæus. But from Ana, by which we haue separated Lusitania from Bætica, 126 miles, adding therto from Gades 102 miles. Nations, Celtici, Varduli, and about Tagus, the Vettones. From Ana to Sacrum the Lusitanes. Memorable townes, from Tagus in the coast side, Olisippo, of good note for the Mares that conceiue there by the West wind. Salatia, with addition of Vrbs Imperatoria, and Merobrica: the promontory Sacrum, & another called Cæneus: towns, Ossonoba, Balsa, and Myrtius. The whole prouince is diuided into three counties or iudiciall courts of Affises, Emeritenfis, Pacensis, and Scalabitanus. It containeth in all fine and forty States, wherein be fide Colonies, one Borough Towne of Romane Citifens, three enfranchised

A chified with the liberties of old Latium. Stipendiaries or Tributaries 36. Moreover, the Colonies be thus named, *Augusta Emerita*: and vpon the riuer Ana, *Metallinensis*, *Pacensis*, *Norbertis*, named also *Cæfariana*. To it are layed and inrolled *Castra Iulia* and *Castra Cæcilia*. The fift is *Scalabis*, called *Præsidium Iulium*. The free borough of Roman citifens, *Olyssippo*, named also *Felicitas Iulia*. Townes of the old Latium liberty, *Ebora*, which likewise was called *Liberalitas Iulia*: *Myrtis* also and *Salatia*, which we haue spoken. Of Tributaries, such as I am not loth to name, beside the aboute said in the additions of *Bætica*, *Augustobrigenses*, *Ammienfes*, *Aranditani*, *Axatricenses*, *Balsenses*, *Cæfarobrigenses*, *Caperenses*, *Caurenfes*, *Colarni*, *Cibilitani*, *Concordienfes*, the same that *Bonori*, *Interaufenfes*, *Lancienfes*. *Mirobrigenses*, fynamed *Celtici*, *Medubricenses*, the same that *Plumbarij*, *Ocelenses*, who also are *Lancienfes*, *Turtuli*, named *Barduli* and *Tapori*. *M. Agrippa* hath written, that *Lusitania*, together with *Asturia* and *Gallæcia*, is in length 540 miles, and in bredth 526. But all Spain from the two promontories of Pyrenæus, along the seas, takes vp in circuit of the whole coast, 2900 miles, and by others 2700. Ouer against Celtiberia be very many Isles, called of the Greekes *Cassiterides*, for the plenty of lead which they yeeld: and iust against the promontorie of the *Arrotrebæ*, fix named *Deorum* [of the gods] which some haue called *Fortunatæ*. But in the very point or cape of *Bætica*, from the mouth of the firth 75 miles, lieth the Island *Gades*, 12 miles long, as *Polybius* writeth, and three miles broad. It is from the maine, where it is neereft, lesse than * 700 paces, in other places aboute seven miles. The whole Isle it selfe contains the space of 15 miles in circuit. It hath within it a towne of Roman citifens named *Augusta*, Vrbs *Iulia Gaditania*. On that side that regards Spain, within 100 paces lieth another Island three miles long and one broad, wherein formerly was the towne *Gades*. The name of this Island, after *Ephorus* and *Thilifides*, is *Erythia*: but according to *Tymæus* and *Silenus*, *Aprodisias*: the naturall home-bred inhabitants call it *Iunonis*. The bigger of these two *Gades*, as saith *Tymæus*, was by them called *Cotinus*, our countrymen name it *Tartessos*, the Carthaginians * *Gadir*, which in the Punicke language signifieth the * number of seven. *Erythia* the other was called, because the *Tirians*, who were the first inhabitants, were reported to haue had their first beginning out of the red sea *Erythræum*. Some thinke that *Geryon* here dwelt, he whose droues of cattell *Hercules* had away. Some againe thinke it is another, ouer against *Lusitania*, and there sometime so called.

* I effethan 3 quarters of a miles.

* Or *Gadir*.
* *Septem*, or ad
some: ad, *Septem*, i. a park
or enclosure.

CHAP. XXIII.

¶ *The measure of all Europe.*

HAuing finished our circuit about Europ, we must now yeeld the totall summe and complete measure of it in the whole, that such as are desirous of knowledge be not to seek in any one thing. *Artemidorus* and *Isidore* haue set downe the length thereof from *Tanais* to *Gades*, 840 14 miles, *Polybius* hath put down the bredth thereof, from Italy to the Ocean 1150 miles, for as then the largeness thereof was not knowne. Now the very bredth of Italy alone by it selfe (as we haue shewed) is 1220 miles to the Alps: from whence by Lyons to the Britaine part of the Morini (which way *Polybius* seemeth to take his measure) is 1168 miles. But the more certaine measure and the longer is directed from the said Alps to the West, and the mouth of the Rhine, through the place called *Castra Legionum Germaniæ*, 1243 miles. Now from henceforward we will describe *Africke* and *Asia*.



THE FIFTH BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS
SECVNDVS.

The description of Africke.

Africke the Greekes haue called *Lybia*, euen all that tract from whence the *Lybian* sea before it beginneth, and endeth in the *Egyptian*. No part of the earth receiueth fewer gulfes and armes of the sea, in that long compasse of crooked coasts from the West. The names as well of the Nations as towns there be of all others most hard to be pronounced, vnlesse it be in their owne tongues, and againe they be castles and forts for the most part that they dwell in.

CHAP. I.

¶ Mauritania.

At the beginning, the lands of Mauritania vntill the time of *C. Caesar*, [*i. Caligula*] sonne of *Germanicus*, were called kingdomes: but by his cruelty diuided it was into two prouinces. The vtmost promontorie of the Ocean is named of the Greeks *Ampelusia*: the townes therein were *Lissa* and *Cotes*, beyond *Hercules* pillars. Now in it is *Tingi*, sometime built by *Antaus*: and afterward by *Claudius Caesar* when he made a Colonie of it, it was called *Traduſta Iulia*. It is from *Batice* a towne in *Batica* by the next and neereſt paſſage ouer ſea thirty miles. Fiue and twenty miles from it in the Ocean coaſt ſtandeth a Colonie erected by *Augustus*, now *Iulia Conſtantia*, exempt from the dominion and iuriſdiction of the Kings of *Zilis*, and commanded to go for law and iuſtice as far as *Batica*. And two and thirty miles from it, *Lixos*, made a Colony by *Claudius Caesar*; whereof in old time there went many fabulous and loud lying tales. For there ſtood, they ſay, the royall pallace of *Antaus*: there was the combat betwene him and *Hercules*: there alſo were the gardens and hort-yards of the *Heſperides*. Now there floweth thereinto out of the ſea a certain creek or arme thereof, and that by a winding channell, wherein men now take it that there were Dragons ſeruing in good ſtead to keepe and gard the ſame. It incloſeth an Iſland within it ſelfe, which, notwithstanding the Tract thereby be ſomewhat higher, is onely not ouerflowed by the ſea tides. In it there ſtandeth erected an altar of *Hercules*: and ſetting aſide certaine wilde Oliues, nothing elſe is to be ſeen of that goodly groue, reported to beare golden Apples. And in good faith leſſe may they wonder at the ſtrange lies of Greece, giuen out of theſe and the riuer *Lixus*, who would but thinke how of late our countrey men haue deliuered ſome fables of the ſame things as monſtrous well-neere: to wit, That this a moſt ſtrong and mighty city, and bigger than great Carthage: moreover, that it is ſituate right againſt it, and an infinite way well-neere from *Tingi*: and other ſuch like, which *Cornelius Nepos* hath been moſt eager to beleue. From *Lixus* forty miles in the midland part of the main ſtands *Babba*, another Colony of *Augustus*, called by him *Iulia* in the field or champion: alſo a third 75 miles off, called *Banafa*, but now it hath the addition of *Valentia*. 35 miles from it is the towne *Volubile*, iuſt in the mid way between both ſeas. But in the coaſt and borders thereof, fifty miles from *Lixus*, runneth *Subur* a goodly plenteous riuer, and nauigable neere to the Colony *Banafa*. As many miles from it is the towne *Sala*, ſtanding vpon a riuer

A a riuer of the ſame name, neere now vnto the wildeſneſſe, much infeſted and annoied with whole heards of Elephants, but much more with the nation of the *Autololes*, through which lies the way to *Atlas* the moſt fabulous mountaine of all *Africke*. For writers haue giuen out, that this hill ariſing out of the very miſt of the ſea ſands, mounteth vp to the ſkie, all rough, ill fauored, and ouergrowne on that ſide that lieth to the ſhore of the Ocean, vnto which it gaue the name; and yet the ſame is ſhadowie, full of woods, and watered with veines of ſpouting Springs that way which looketh to *Africke*, with fruitfull trees of all ſorts, ſpringing of the own accord, and bearing one vnder another, in ſuch ſort, that at no time a man can want his pleaſure and delight to his full contentment. Moreouer, that none of the inhabitants there are ſcene all day long: all is ſtill and ſilent, like the fearful horror in deſert wildeſneſſe: and as men come neerer and neerer vnto it, a ſecret deuotion ariſeth in their hearts, and beſides this feare and horreur, they are liſted vp about the clouds, and euen cloſe to the circle of the Moone.ouer and beſides, that the ſame hill ſhineth oftentimes with many ſaſhes of fires, and is haunted with the wanton laſciuius *Egipanes* and *Satyres*, whereof it is full, that it reſoundeth with noiſe of Haut-boies, pipes, and fifes, and ringeth againe with the ſound of tabers, timbrels, and cymbals. Theſe be the reports of great & famous writers, to ſay nothing of the labors and works both of *Hercules* and *Perses* there; and to conclude, that the way vnto it is exceeding great, and not certainly knowne. Bookes there were beſides of *Hanno*, a great captain and commander among the *Carthaginians*, who in the time of the moſt flouriſhing ſtate of Carthage, had a charge and commiſſion to diſcouer and ſuruey the whole compaſſe of *Africke*. Him, moſt of the Greeks as well as our countrey men following, among ſome other fabulous ſtories, haue written that hee alſo built many cities there, but neither memoriall vpon record, nor any token of them at all is left extant. Whiles *Scipio Amylianus* warred in *Africke*, *Polybius* the writer of the *Annales*, receiued of him a fleet: who hauing ſailed about of purpoſe to ſearch into that part of the world, hath put thus much downe in writing, that from the ſaid mountaine *West*, toward the foreſt full of wild beaſts which *Africke* breedeth, vnto the riuer *Anatis*, are 485 miles. And from thence to *Lixus* 205. *Agrippa* ſaith, that *Lixus* is diſtant from the ſtreights of *Gades* 112 miles. Then, that there is an arme of the ſea called *Saguti*. Alſo a towne vpon the promontory, *Mutelacha*. Riuers, *Subur* and *Sala*. Moreouer, that the hauen *Rutubis* is from *Lixus* 313 miles. And ſo forward to the Promontorie of the Sun. The port or hauen *Rifardir*; the *Gætulians*, *Autololes*, the riuer *Cofenus*, the nation of the *Scelartites* and *Maſſalians*. The riuers *Maſatal* and *Darat*, wherein *Crocodiles* are ingendred. Then forward, that there is a gulfe of 516 miles, incloſed within the promontory or cape of the mountain *Barce*, running along into the *West*, which is called *Surentium*: after it, the riuer *Palfus*, beyond which are the *Æthiopians* *Perorſi*, & at their back are the *Pharufi*. Vpon whom ioine the midlanders, to wit, the *Gætulianders*. But vpon the coaſt are the *Æthiopian* *Daratites*, the riuer *Bambotus* full of *Crocodiles* & *Hippopotames* [*i. Water-horſes*]. From which, he ſaith, That there is nothing but mountains all the way as far as to that which we call *Theon-Ochema* (The gods chariot.) Then, in ſailing nine daies and nights to the promontorie *Heſperium*, he hath placed the mountain *Atlas* in mid-way thereof, which by all other writers is ſet downe to be in the vtmoſt marches of Mauritania. The firſt time that the Romans warred in Mauritania, was in the time of prince *Claudius* Emperor: at what time as *Ademon* the freed ſeruant of king *Protolomeus*, by *C. Caesar* ſlaine, went about to reuenge his death; for as the barbarous people retired and fled back, certaine it is that the Romans came as far as to the hill *Atlas*. And not only ſuch Generals as had bin Conſuls, and were of the Senators degree and calling, who at that time managed and conducted the wars, but knights alſo and gentlemen of Rome, who from that time had gouernment and command there, tooke it for an honor and glory, that they had pierced and entred into *Atlas*. [* Fiue Romane Colonies, as wee haue ſaid, be in that prouince;] and by that common fame and report, there may ſeeme to lie a thorow faire thither. But that is found for the moſt part by daily experience, moſt deceiueable of all things elſe, becauſe perſons of high place and great worth, when they are loath to ſearch out narrowly into the truth of matters, ſticke not for ſhame of ignorance, to giue out vntruths: and neuer are men more credulous and apt to beleue and be deceiued, than when ſome graue perſonage fathereth a lie. And verily I leſſe maruell, that they of gentlemenſ degree, yea, and thoſe now of Senators calling, haue not come to the certaine knowledge of ſome things there: ſeeing they ſet their whole affection and mind vpon nothing but exceſſe and riot; which how powerfull

* It ſeemeth that this claue is to be ſet in the beginning of the next chapter.

powerfull it is and forcible, is seen by this most of all, when forests are sought out far and neere for Iuory and Citron trees; when all the rocks in Getulia are searched for Murices and Purpura [shell fishes that yeeld the purple crimfon colour.] Howbeit, the natural inhabitants of that country do write, That in the sea coast 150 miles from Sala, there is the riuier Afana, that receiueth salt water into it, but hath in it a goodly faire hauen; and not far from it another fresh riuier, which they call Fur: from which to Dyris (for that is the name in their language of Atlas, by a generall consent) are 100 miles, with a riuier comming betweene, named Vior. And there, the speech so goeth, are to be seene the certain tokens of a ground sometimes inhabited; to wit, the reliques of vine yards and date tree groues. *Suetonius Paulinus* (a Confull in our time) who was the first Roman leader, that for certaine miles space went ouer Atlas, also hath reported verily as touching the height thereof, that with the rest: and moreouer, that the foot thereof toward the bottom, stand thick and full of tall woods, with trees therein of an vnknown kinde, but the height of them is delectable to see to, smooth and euen without knots, the leaues & branches like Cypresse, and besides the strong smell they yeeld, are couered all ouer with a thinne downe, of which (with some help of Art) fine cloath may be made, such as the silk-worm doth yeeld. That the top and crest thereof is couered ouer with deepe snow euen in Sommer time. Moreouer, that he reached vp to the pitch of it at the tenth daies end, & went beyond it, as far as a riuier called Niger, through wildernesses full of blacke dust; where otherwhiles there stood out certaine clifffes, and craggie rocks, as they were scorched and burnt; and that those places by reason of partching heat were not habitable, albeit a man made triall thereof in the winter season: furthermore, that the pesants who dwelt in the next forests, were pestered with Elephants, wilde beafts, and serpents of all sorts; and those people were called Canarij, for that they and dogs feed together one with another, and part among them the bowels of wild beafts. For certaine it is knowne, that a nation of the Aethyopians whom they call Peroeci, ioineth vpon them. *Tuba* the father of *Ptolomeus*, who before time ruled ouer both Mauritanes, a man more memorable and renowned for his study and loue of good letters, than for his kingdome and royall port, hath written the like concerning Atlas: and he saith moreouer, that there is an herb growing there called Euphorbia, of his Physitions name that first found it: the milkie iuice whereof he praiseth wondrous much, for to cleare the eies, and to be a preseruatiue against all serpents and poisons whatsoeuer; and thereof hath he written a treatise, and made a book by it selfe: thus much may suffice, if it be not too much, as touching Atlas.

CHAP. II.

¶ The prouince Tingitania.

The length of the Prouince Tingitania taketh 170 miles. The nations therein be these: the Mauri, which in times past was the principall, and of whom the prouince took name: and those most writers haue called Marusij. Being by war weakened and diminished, they came in the end to a few families only. Next to them were the Massasuli, but in like manner were they consumed. Now is the prouince inhabited by the Getulians, Bannurri, and the Autololes, the most valiant and puissant of all the rest. A member of these were sometime the Vesuni, but being diuided from them, they became a nation by themselves, and bounded vpon the Aethyopians. The prouince naturally full of mountains Eastward, breedeth Elephants. In the hill also Abila, and in those which for their euen and equal height they call, The 7 brethren: and these butt vpon Abila, which looketh ouer into the sea. From these beginneth the coast of the Inward sea. The riuier Timuda nauigable, and a town sometime (of that name.) The riuier Laud, which also receiueth vessels. The town Rufardie, and the hauen. The riuier Malvana nauigable. The towne Siga iust against Malacha scituate in Spaine: the Royall seat of *Syphax*, and now the other Mauritania. For a long time they kept the names of KK. so as the vtmost was called Bogadiana: and likewise Bocchi, which now is Caesarienses. Next vnto it is the hauen, for the largenesse thereof called Magnus, with a towne of Roman citizens. The Riuier Muluca, which is the limit of Bocchi and the Massasuli. Quiza Xenitana, a towne of strangers: Arfennaria, a towne of Latines three miles from the Sea: Carcenna, a Colonie of *Augustus*, erected for the second Legion: likewise another Colonie of his planted with the Pretorian band, Gunugi, and the promontorie of *Apollo*. And a most famous towne there Caesarea, vsually before time called Iol, the Royall Seat of King *Tuba*: endowed by *Claudius* the Empe-

-tour

- A rour of happie memorie, with the franchises and right of a Colonie, at whose appointment the old souldiers were there bestowed. A new towne, Tipasa, with the grant of the liberties of Latrium. Likewise Icosium, endowed by *Vespasian* the Emperour, with the same donations. The colonie of *Augustus* Rusconia, and Ruscurium, by *Claudius* honoured with the free burgeoisie of the citie. Rusoezus, a colonie of *Augustus*. Saldea, Colonie of the same man. Igelgili also, and Turca, a towne seated vpon the sea and the riuier Amfaga. Within the land, the Colonie Augusta, the same that Succubar, and likewise Tubrisuptus. Cities, Timici, Tigaur. Riuers, Sardabala and Nabar. The people Macurebi; the riuier Vfar, and the nation of the Nabades. The riuier
- B Ampfaga is from Caesarea 233 miles. The length of Mauritania both the one and the other together, is 839 miles; the breadth 467.

CHAP. III.

¶ Numidia.

- NEXT to Ampfaga is Numidia, renowned for the name of *Masaniſſa*, called of the Greekes the land Metagonitis. The Numidian Nomades, so named of changing their pasture, who carry their cottages or theds (and those are all their dwelling houses) about with them vpon waines. Their townes be Cullu and Ruscade, from which 48 miles off within the Midland parts, is the colonie Cirta, surnamed of the Cirtanes: another also within and a free borough town, named Bulla Regia. But in the vtmost coast, Tacatua, Hippo Regius, and the riuier Armua. The towne Trabacha, of Roman citizens: the riuier Tusca, which boundeth Numidia, and besides the Numidian marble, and great breed of wilde beafts, nothing is there else worth the noting.

CHAP. IV.

¶ Africa.

- FROM Tusca forward, you haue the region Zeugitana, and the countrey properly called Africa. Three promontories, first the White; then anon that of *Apollo* ouer-against Sardinia: and a third of *Mercurie* opposite to Sicilie, which running into the sea make two creekes: the one Hipponensis, next to the towne which they call Hippo rased; the Greekes name it Diarrhyton, for the little brooks and rills that water the grounds: vpon this, there bordereth Theudalis, an exempt towne from tribute, but somewhat farther from the sea side; then the promontory of *Apollo*. And in the other creek, Vtica, a towne of Roman citizens, ennobled for the death of *Caio*, and the riuier Bagrada. A place called Castra Cornelia: and the colony Carthago, among the reliques and ruines of great Carthage, and the colony Maxulla: towns, Carpi, Misina, and the free borough Clupea vpon the promontorie of *Mercurie*. Item, free townes, Curubis, and Neapolis. Soone after ye shall meet with another distinction of Africke indeed. Libyphoenices are they called, who inhabit Byzacium; for so is that region named; containing in circuit 250 miles, exceeding fertile and plenteous, where the ground sowne yeeldeth again to the husband-man 100 fold increase. In it are free townes, Leptis, Adrumetum, Ruspina and Thapfus: then Thenna, Macomades, Tacape, Sabrata, reaching to the lesse Syrtis: to which, the length of Numidia and Africa from Ampfaga, is 580 miles: the breadth, each thereof as is knowne, 200. Now this part which wee haue called Africke, is diuided into prouinces twaine, the old and the new; separated one from the other by a fosse or ditch brought as farre as to Thenna, within the Africane gulfes, which towne is 217 miles from Carthage: and that trench *Scipio Africanus* the second, caused to be made, & bare halfe the charges together with the KK. The third gulfes is parted into twaine, curfed and horrible places both, for the cbbing and flowing of the sea, and the shelles betweene the two Syrtis. From Carthage to the nearer of them, which is the lesse, is 300 miles by the account of *Polybius*: who saith also, that the said Syrtis is for 100 miles forward dangerous, and 300 about. By land also thither, the way is passeable by obseruation of the Stars, at one time of the yeare onely. and that lyeth through desert sands and places full of serpents. And then you meet with Forrests replenished with numbers of wilde beafts. And within-forth Wildernesses of Elephants: and soone after, waste deserts euen beyond the Garamantes, who from the Augila are distant twelue daies iourney. Above

Above them was the nation of the Psylli, and above them the lake of *Diomedes* enuironed with desarts. Those *Auglæ* themselves are seated well neere in the middle way from *Æthiopia*, which bendeth Westward, and the countrey lying between the two Syrtis, with equall distance between of both sides: but the shore betweene the two Syrtis, of 250 miles. There standeth the citie *Ocenus*, the riuer *Cinyph* and the countrey. Townes, *Neapolis*, *Taphra*, *Abrotonum*, the other *Leptis*, called also the great. Then the greater *Syrtis*, incompasse 625 miles, and in direct passage 313. Next to it, there inhabit the people *Cisipades*. In the inmost gulfes was the coast of the *Lotophagi*, whom some haue called *Alachroas*, as far as to the alters of *Phylæna*, and of sand are they. Next to them, not farre from the Continent, the vast and wide Meere admitteth into it the riuer *Triton*, and taketh the name of him: but *Callimachus* calleth it *Pallantias*, and saith it is on this side the lesser Syrtis; but many place it between both *Cyrtes*. The promontory that encloseth the bigger, is named *Boryon*. Beyond it is the prouince *Cyrenaica*. From the riuer *Amphaga* to this bound, *Africke* contains 26 States, who are subiect to the *Romane* Empire: among which are six colonies besides the aboue-named, *Vthina* and *Tuburbis*. Townes endowed with Franchises of *Roman* citizens 15. Of which those in the midland parts, worthy to be named, are *Azuritanum*, *Abutucence*, *Aborienfe*, *Canopicum*, *Chilmanense*, *Simittuense*, *Thunusidense*, *Tuburnicense*, *Tynidrumense*, *Tribigense*, *Vicitana* twain, the greater and the lesse, and *Vagienfe*. One towne enioying the liberties of *Latium*, *Vsalitanum*. One tributary or pensionary towne neere *Castra Cornelia*, paieth custome and duties to *Rome*. Free townes 30, of which there are to be named within forth, *Arolitanum*, *Acharitanum*, *Auinenfe*, *Abziritanum*, *Canopitanum*, *Melzitanum*, *Madaurenfe*, *Salaphitanum*, *Tusdritanum*, *Tiricenfe*, *Tiphicenfe*, *Tunicense*, *Theudenfe*, *Tagestenfe*, *Tigenfe*, *Vlusibritanum*, another *Vagenfe*, *Vigenfe* and *Zamenfe*. The rest may well be called not only cities, but also for the most part, Nations, namely the *Naratontes*, *Capitani*, *Misulani*, *Sabarbares*, *Masili*, *Misues*, *Vamacures*, *Ethini*, *Masini*, *Marcubij*, and *Gatulia* all and whole, euen to the riuer *Nigris*, which parteth *Affricke* and *Æthiopia*.

CHAP. V.

¶ *Cyrene*.

The region *Cyrenaica*, called also *Pentapolitana*, is famous and renowned for the Oracle of *Hammon*, which is from *Cyrenæ* 400 miles, for the fountaine of the Sunne, and principally for 5 cities, *Berenice*, *Arfinoe*, *Ptolemais*, *Apollonia*, and *Cyrene* it selfe. *Berenice* standeth vpon the vtmost winding and nouke of *Syrtis*, called sometim the city of the aboue-named *Hesperides*, according to the wandering tales of *Greece*. And before the towne, not far off, is the riuer *Lethon*, the sacred groue where the hort-yards of these *Hesperides* are reported to be. From *Leptis* it is 385 miles. From it stands *Arfinoe*, usually named *Teuchira*, 43 miles: and from thence 22 miles, *Ptolemais*, called in old time *Barce*. And then 250 miles off the promontory *Phycus* runs out along the *Creticke* sea, distant from *Tanarus* a cape of *Laconia*, 350 miles: but from *Creet* it selfe 125 miles. And after it *Cyrene*, 11 miles from the sea. From *Phycus* to *Apollonia* is 24 miles; to *Cherronesus* 88; and so forth to *Catabathmus* 216 miles. The inhabitants there bordering, be the *Marmaridæ*, stretching out in length almost from *Paratonium* to the greater *Syrtis*. After them the *Araruceles*: and so in the very coast and side of *Syrtis*, The *Nasamones*, whom before-time the *Greekes* called *Mesammones* by reason of the place, for that they were seated in the middest betweene the two quicke sands. The *Cyrenaick* countrey, for the space of 15 miles from the sea side, is fruitfull for trees: and for the same compasse within the land, but for come onely: but then for 30 miles in bredth, and 250 in length, for the gum *Lafer* and nothing else. After the *Masamones*, the *Hasbitæ* and *Masæ* do liue. Beyond them the *Hammanientes*, eleuen daies iournie from the greater *Syrtis* to the West, and euen they also euery way are compassed about with sands: howbeit they find without much ado pits almost in cubits deepe, for that the waters there of *Mauritania* doe ouerflow. Houses they make themselves of salt, hewed out of their owne hills in manner of stone. From these to the *Troglodites*, in the South-west coast is foure daies iournie, with whom they chaffer and traffick onely for a certaine precious stone or gem, which we call a *Carbuncle*, brought out of *Æthiopia*. There comes betweene, the countrey *Phazania*, lying toward the wilde nesse abouesaid of *Africke*, about the lesse *Syrtis*: where we subdued the nation of the *Phazaniij*, together with the cities

ties *Alele* and *Cillaba*. In like manner *Dydammus* ouer-against *Sabrata*. Next to whom there is a mountain, reaching a great way from the East into the West, called by our men *Ater*, naturally as it were burnt, & like as if it were scorched, and set on fire with the reflection of the Sun. Beyond that mountain are the desarts: also *Matelga* a town of the *Garamants*, & likewise *Debris*, which casteth forth a spring of waters seething vp from noon to midnight exceeding hot: and for as many houres again into midday most chilling cold; also the most goodly towne *Garama*, the chiefe head of the *Garamantes*. All which places the *Romanes* haue conquered by force of armes, and ouer them *Cornelius Balbus* triumphed, the onely man of forceners that was honoured with the triumphant chariot, and endowed besides with the freedome of *Romane* citizens. For why, being borne at *Gades*, he and his vncle both, *Balbus* the elder, were made free denizens of *Rome*. And this is maruell that our writers haue recorded, that besides the towns abouenamed by him conquered, himselfe in his triumph caried the titles and pourtraites not of *Cydamus* and *Garama* only, but also of all other nations and cities, which were ranged in a Roll, and went in this order, The towne *Tabidium*, the nation *Niteris*, the towne *Negligina*, a Roll, and went in this order, The towne *Tabidium*, the nation *Niteris*, the towne *Negligina*, the nation *Bubeium*, the town *Vel*, the nation *Enipi*, the town *Thuben*, the hill named *Niger*. The towns *Nitibrum* and *Rapla*, the nation *Discera*, the town *Debris*, the riuer *Nathabari*. And again forward, these townes lying one to another together, *Baracum*, *Buluba*, *Alasibari*. And again forward, these townes lying one to another together, *Baracum*, *Buluba*, *Alasibari*. And again forward, these townes lying one to another together, *Baracum*, *Buluba*, *Alasibari*. The hill *Gyri*, wherein *Titus* hath reported that precious stones were engendred. Hitherto the way to the *Garamants*, was intricate and vnpassable, by reason of the robbers and theeves of that countrey, who vsed to dig certain pits in the way (which to them that know the quarters of the countrey, is no hard matter to doe) and then couer them vnder the conduct and fortunate auspices of *Vespasian* the Emperor, there was found a short and neere way of foure daies iourney; & this way is called *Præter caput Saxi* (besides the rocks head) The frontier towne of *Cyrenaica* is called *Catabathmos*, which is a towne and a vaile all on a sudden falling with a steepe descent. To this bound, from the lesse *Syrtis*, *Cyrenaica* *Africa* lieth in length 1060 miles, and in bredth, for so much as is knowne, 800.

CHAP. VI.

¶ *Lybia* *Mareotis*.

The countrey following is named *Mareotis* *Libya*, and boundeth vpon *Ægypt*, inhabited by the *Marmaridæ*, *Adymachidæ*, and so forward with the *Mareotæ*. The measure of it from *Catabathmos* to *Paratonium*, is 86 miles. In that tract there lyeth in the way betweene the village *Apis*, a place renowned for the religious rites of *Ægypt*. From it to *Paratonium* are 12 miles. From thence to *Alexandria* 200 miles: the bredth thereof is 169 miles. *Eratostrhenes* hath deliuered in writing, that from *Cyrenæ* to *Alexandria* by land is 525 miles. *Agrippa* saith, that the length of all *Africke* from the *Atlanticke* sea, together with the inferiour part of *Ægypt* containeth 3040 miles. *Polybius* and *Eratostrhenes*, reputed to haue bin most exact and curious in this kinde, set downe, from the Ocean to great *Carthage* 1600 miles. From thence to *Canopicum* the neere mouth of *Nilus*, they make 1630 miles. *Isidore* reckoneth from *Tingi* to *Canopus* 3599 miles. And *Artemidorus* forty lesse than *Isidorus*.

CHAP. VII.

¶ *Islands about Africke, and ouer-against Africke*.

These seas haue not very many Islands within them. The fairest of them all is *Meninx*, 35 miles long, and 25 broad, called by *Eratostrhenes* *Lotophagitis*. Two towns it hath, *Meninx* on *Africke* side, and *Thoar* on the other: it selfe is seicuate from the right hand promontorie of the lesse *Syrtis* 200 paces. A hundred miles from it against the left hand is *Cercina*, with a free towne of the same name, in length it is 25 miles, and halfe as much in bredth where it is most; but toward the end not above five miles ouer. To it there lieth a pretty little one toward *Carthage* called *Cerciniris*, & ioineth by a bridge vnto it: from these almost 60 miles, lies *Lopadusa* six miles long. Then, *Gaulos* and *Galata*: the earth whereof killeth the *Scorpion*, a fell

* Or 1500 paces, a mile and a half.

crea-

creature, and noisome to Africke. Men say also that they wil die in Clupea, ouer against which lieth Corfyra, with a towne. But against the gulfes of Carthage be the two Æginori, rocks more like than Islands, lying most between Sicily and Sardinia. There be that write how these sometime were inhabited, but afterwards sunke downe and were couered.

CHAP. VIII.

¶ The Æthyopians.

BVt within the inner compasse and hollow of Africke toward the South, & about the Gæbulians, where the deserts come between, the first people that inhabit those parts, be the Libij Ægyptij, and then the Leucæthiopes. About them are the Æthyopian nations, to wit, the Nigritæ, of whom the riuer tooke name: the Gymetes, Pharusi, and those which now reach to the Ocean, whom we spake of in the marches of Mauritania, namely, the Perorsi. From all these, it is nothing but a wilderness Eastward, till you come to the Garamantes, Augylæ, and Troglodites, according to the most true opinion of them, who place 2 Æthiopiae about the deserts of Africk; and especially of *Homer*, who saith, that the Æthyopians are divided 2 waies, namely, East and West. The riuer Nyger is of the same nature that Nilus. It bringeth forth Reed and Papyr, breedeth the same living creatures, and riseth or swellth at the same seasons. It springeth betweene the Tareleia Æthyopians, and the Oecalicæ. The towne Mavin belonging to this people, some haue set vpon the wilderness; as also, neere vnto them, the Atlantes, the Ægipanes, halfe wilde beasts, the Blemmyi, the Gamphasants, Saryres, & Himantopodes. Those Atlantes if we will beleue it, degenerate from the rites and manners of all other men. For neither call they one another by any name, and they look wistly vpon the Sun, rising, & setting, with most dreadful curses, as being pernicious to them & their fields; neither dream they in their sleep as other men. The Troglodites dig hollow caues, and these serue them for dwelling houses; they feed vpon the flesh of serpents. They make a gnashing noise, rather than utter any voice, so little vse haue they of speech one to another. The Garamants liue out of wedlock and conuerse with their women in common. The Augylæ do noworship to any but to the diuels beneath. The Gamphasantes bee all naked, and know no Wars, and fort themselves with no forrainer. The Blemmyi, by report haue no heads, but mouth and eies both in their breast: the Saryres besides their shape only, haue no properties nor fashions of men. The Ægipanes are shaped, as you see them commonly painted. The Himantopodes be some of them limber legged and tender, who naturally go creeping on the ground. The Pharusi, sometime Perseæ, are said to haue bin the companions of *Hercules*, as he went to the Hesperides. More of Africke worth the noting, I haue not to say.

CHAP. IX.

¶ Of Asia.

VNto it ioineeth Asia, which from the mouth of Canopus vnto the mouth of Pontus, after *Timosthenes* 2639 miles. From the coast of Pontus to that of Maxotis, *Eratosthenes* saith, is 1545 miles. The whole, together with Egypt vnto Tanais, by *Artemidorus* and *Isidorus*, taketh 8800 miles. Many seas there be in it, taking their names of the borderers; and therefore they shall be declared together with them. The next country to Africk inhabited, is Egypt, lying far within forth to the South, so far as the Æthyopians, who border vpon their backs. The nether part thereof the riuer Nilus, diuided on the right hand and the left, by his clasping doth bound and limit, with the mouth of Canopus from Africke, with the Pelusiack from Asia, and carrieth a space between of 170 miles. Whereupon, considering that Nilus doth so part it self, some haue reckoned Egypt among the Islands, so as it maketh a triangular figure of the land. And here it is that many haue called Egypt by the name of the Greeke letter Delta, Δ. The measure of it from the channell where it is but one, and from whence it beginneth first to part into skirts and sides, vnto the mouth of Canopus, is 146 miles; and to the Pelusiack 256: the vpmost part thereof bounding on Æthiopia, is called Thebais. Diuided it is into townships with seuerall iurisdicktions, which they call Nomos; to wit, Ombites, Phatuites, Apolopolites, Hermonhites, Thinites, Phanturites, Caprites, Tentyrites, Diospalites, Antæopolites, Aphroditopolites,

Alites, and Lycopolites. The country about Pelusium, these townships with their seuerall iurisdicktions, Pharboetites, Bubastites, Sethroites, & Tanites. The rest haue these following, the Arabick, the Hammoniack which extendeth to the Oracle of *Iupiter Hammon*, Oxyrynchites, Leontopolites, Atarrabites, Cynopolites, Hermopolites: Xoiters, Mendefins, Sebennites, Capastites, Latapolites, Heliopolites, Prosopites, Panopolites, Busirites, Onuphites, Sorites, Prenethu, Pthemphu, Naucratis, Nitrites, Gynæopolites, Menelaïtes, in the country of Alexandria. In like manner of Libya Marcotis. Heracleopolites is in the Island of Nilus, fiftie miles long, wherein also is that which they call *Hercules* his town. Two Arsinoites there be they, and Memphites reach as farre as two the head of Delta. Vpon it there do bound out of Africa the two Onasitæ. There be that change some names of these, and set down for them other iurisdicktions, to wit, Heroopolites, and Crocodilopolites. Between Arsinoites and Memphites there was a lake 250 miles about, or as *Mutianus* saith, 450, fifty paces deep, [i. 150 foot,] & the same made by mans hand, called the Lake Meridis, of a king who made it 72 miles from thence is Memphis, the castle in old time of the Ægyptian kings. From which to the Oracle of *Hammon* is twelue daies iournie, & so to the diuision of Nilus, which is called Delta, fifteen miles. The riuer Nilus rising from vnkowne springs, passeth thorow deserts and hot burning countries: and going thus a mighty way in length, is known by same onely, without armes, without wars, which haue discovered and found out all other lands. It hath his beginning, so far forth as *Tabæ* was able to search and find out, in a hill of the lower Mauritania, nor far from the Ocean, where a lake presently is seen to stand with water, which they call Nilides. In it are found these fishes called Alabeta, Coracini, Siluri, and the Crocodile. Vpon this argument & presumption Nilus is thought to spring from hence, for that the pourtraict of this source is consecrated by the said prince at Casaria, in Iseum, and is there at this day seene. Moreouer, obserued it is, that as the Snow or rain do satisfie the countie in Mauritania, so Nilus doth encrease. When it is run out of this lake, it scorneth to run through the sandy and ouergrown places, and hides himself for certaine daies iourny. And then soone after out of a greater lake, it breaketh forth in the country of the Massæyli, with Mauritania Casarienses, and lookes about viewing mens company, carrying the same arguments still of liuing creatures bred within it. Then once again being receiued within the sands, it is hidden a second time for twenty daies iourny, in the deserts as farre as to the next Æthiopes: and so soone as hee hath once againe espied a man, forth hee startes (as it should seem) out of that spring, which they called Nigris. And then diuiding Africk from Æthiopia, being acquainted, if not presently with people, yet with the frequent company of wild and sauage beasts, and making shade of woods as he goes he cuts through the midst of the Æthiopians: there surnamed Astapus, which in the language of those nations signifieth a water flowing out of darkenesse. Thus dasheth he vpon such an infinite number of Islands, and some of them so mighty great, that albeit he bare a swift streame, yet is he not able to passe beyond them in lesse space than 5 daies. About the goodliest and fairest of them Meroc, the channell going on the left hand is called Astabores, that is, the branch of a water coming forth of darkenesse: but that on the right hand Astufapes, which is as much as, lying hid, to the former signification. And neuer taketh the name of Nilus, before his waters meet againe & accord all whole together. And euen so was he aforetime named Siris, for many miles space: and of *Homer* altogether Ægyptis: and of others, Triton: here and there, and euer and anon hitting vpon Islands, and stirred as it were with so many prouocations: and at the last enclosed and shut within mountaines, and in no place he carries a rougher and swifter stream, whiles the water that he beareth, hastens to a place of the Æthiopians called Catadupi, where in the last fall among the rocks that stand in his way, he is supposed not to runne, but to rush downe with a mighty noise. But afterwards he becomes more milde and gentle, as the course of his streame is broken, and his violence tamed and abated, yea, and partly wearied with his long way: and so though with many mouths of his, he dischargeth himselfe into the Ægyptian sea. Howbeit at certaine set daies he swellth to a great height: and when he hath trauelled all ouer Egypt, hee overfloweth the land, to the great fertility and plenty thereof. Many and diuers causes of this rising and increase of his, men haue giuen: but those which carry the most probabilitie, are either the rebounding of the water, driuen back by the winds Etesia, at that time blowing against it, and driuing the sea withall vpon the mouths of Nilus: or else the Summer rain in Æthiopia by reason that the same Etesia bring clouds thither from other parts of the world. *Timæus* the

Mathematician, alledged an hidden reason therof, to wit, that the head and source of Nilus is named Phyalā, and the riuer it selfe is hidden, as it were drowned within certain secret trenches within the ground, breathing forth vapors out of reeking rockes, where it thus lieth in secret. But so soone as the sunne during those daies, commeth neere, drawne vp it is by force of heate, and so all the while he hangeth aloft, ouerfloweth: and then againe for feare he should be wholly deuoured and consumed, putteth in his head againe and lieth hid. And this happeneth from the rising of the dog starre Sicinus, in the Sunnes entrance into Leo, while the planet standeth plumbe ouer the fountaine afore said: for as much as in that climate there are no shadows to be seene. Many againe were of a different opinion, that a riuer floweth more abundantly, when the Sunne is departed toward the North pole, which happeneth in Cancer and Leo: and therefore at that time is not so easily dried: but when he is returned once againe back toward Capricorn and the South pole, it is drunke vp, and therefore floweth more sparely. But if according to *Timmā* a man would thinke it possible that the water should be drawne vp, the want of shadowes during those daies, and in those quarters, continueth still without end. For the riuer begins to rise and swell at the next change of the Moone after the Sun-steed, by little and little gently, so long as he passeth through the signe Cancer, but most abundantly when he is in Leo. And when he is entred Virgo, he falleth and setteth low againe, in the same measure as he rose before. And is cleane brought within his bankes in Libia, which is, as *Herodotus* thinketh, by the hundredth day. All the whiles it riseth, it hath been thought vnlawfull for kings or gouernours to faile or passe in any vessell vpon it, and they make conference so to do. How high it riseth, is known by markes and measures taken of certaine pits. The ordinary height of it is sixteen cubits. Vnder that gage the waters ouerflow not all. Aboue that stint there are a let and hinderance, by reason that the later it is ere they be fallen, and downe againe. By these, the feed time is much of it spent, for that the earth is too wet. By the other there is none at all, by reason that the ground is dry and thirsty. The prouince taketh good keepe and reckoning of both, the one as well as the other: For when it is no higher than 12 cubits, it findeth extreame famine: yea, and at 13 it feelleth hunger still, 14 cubits comforts their hearts, 15 bids them take no care, but 16 affoordeth them plenty and delicious dainties. The greatest flood that euer was knowne vntill this daies was 18 cubits, in the time of Prince *Claudius* Emperour: and the least, in the Pharsalian warre, against the death of *Pompey*: as if the very riuer by that prodigious token lothed to see the same. When at any time the waters seeme to stand and couer the ground still, they are let out at certaine sluices, or flood-gates drawne vp and set open. And so soon as any part of the land is freed from the water, straight waies it is sowed. This is the only riuer of all others that breatheth out nowind from it. The Seignory & dominion of *Egypt* beginneth at Syene, the frontier rowne of *Ethiopia*. For that is the name of a demy Island 100 miles in compasse, wherein are the Cerafæ vpon the side of Arabia: and ouer against it the 4 Islands Philæ, 600 miles from the partition of Nilus, where it began to be called Delta, as wee haue said. This space of ground hath *Artemidorus* deliuered, and withall, that within it were 250 townes. *Iuba* seteth down 400 miles. *Aristocreon* saith, that from Elephantis to the sea is 750 miles. This Elephantis being an Island, is inhabited beneath the lowest cataract or fall of water 3 miles, and aboue Syene 16: and it is the vtmost point that the *Egyptians* saile vnto, & is from Alexandria 586 miles. See how far the Authors aboue written, haue erred and gone out of the way: there meet the *Ethiopian* ships, for they are made to fold vp together, and carry them vpon their shoulders, so often as they come to those cataracts or downefalls afore said. *Egypt* ouer and aboue all other their boast and glory of antiquitie, brags that in the raigne of king *Amasis*, there were inhabited in it and peopled twenty thousand cities. And euen at this day full it is of them, such as they be, and of base account. Howbeit, that of *Apollo* is much renowned, as also neere vnto it another of *Leucatheia*, and **Diospolis* the great, the very fame that *Thebes*, famous for the 100 gates in it. Also, *Captos*, a great mart towne next to Nilus, much frequented for merchandise and commodities out of India and Arabia. Moreouer the towne of *Venus*, and another of *Iupiter*, & *Tentyris*, beneath which standeth *Abydus*, the royall seate of *Memnon*, and *Osiris* renowned for the temple there, seuen miles and an halfe distant from the riuer, toward *Lybia*. Then *Ptolemais*, *Panopolis*, and another yet of *Venus*. Also in the *Lybian* coast, *Lycon*, where the hills doe bound *Thebais*. Soone after, these townes of *Mercurie*, *Alabastron*, *Canum*, and that of *Hercules* spoken of before. After these, *Arfinoe*, and the aboue said *Memphis*, betweene which and

The cities
of *Egypt*.

A and the dioceffe *Arfinoetis*, in the *Lybian* coast, the towers called *Pyramides*, the *Labyrinth* built vp in the lake of *Mæris* without any iot of timber to it, and the towne *Crialon*. One more besides, standing within-forth and bounding vpon Arabia, called the towne of the Sunne, of great account and importance.

CHAP. X.

¶ Alexandria.

B Vt right worthy of praise is Alexandria, standing vpon the coast of the *Egyptian* sea, built by *Alexander* the Great on *Africke* side, 12 miles from the mouth of *Canopus*, neere to the lake *Mareotis*; which was before-time called * *Arapotes*. *Danochares* the Architekt (a * *Rachobes*) man renowned for his singular wit many waies) aid the modell and platforme therof by a subtil and witty deuise, for hauing taken vp a circuit of 15 miles for the city, he made it round like to a *Macedonian* cloke, full in the skirts, bearing out into angles and corners, as wel on the right hand as the left, so as it seemed to lie in folds and plaits; and yet euen then he set out one fift part of all this plot for the kings palace. The lake *Mareotis* from the South side, meeteth with an arme of the riuer *Nilus*, brought from out of the mouth of the said riuer called *Canopicus*: for the more commodious trafficke and commerce out of the firme ground and inland Continent. This lake containeth within it sundry Islands, and (according to *Claudius Cesar*) it is thirty miles ouer. Others say, that it lieth in length 40 *Schoeni*, and so, whereas euery *Schoene* is 30 stadia, it commeth by that account to be 150 miles long, and as many broad.ouer and besides, there be many goodly faire townes of great importance, standing vpon the riuer *Nilus* where he runneth, and those especially which haue giuen name to the mouthes of the riuer, and yet not to all those neither (for there be 11 of them in all, ouer and besides foure more, which they themselves call bastard mouthes) but to 7 of the principall: to wit, vpon that of *Canopus*, next vnto Alexandria; then *Bolbitinum*, and so forth to *Sebenniticum*, *Phatuiticum*, *Mendeficum*, *Taniticum*, and last of all *Pelusiacum*. Other cities there be besides, to wit, *Buros*, *Pharboetos*, *Leontopolis*, *Achribris*, *Isis* towne, *Bufiris*, *Cynophis*, *Aphrodites*, *Sais*, *Naucratis*, of which some thinke the mouth *Naucraticum* tooke the name, which they be that call *Heracleoticum*, preferring it before *Canopicum*, next vnto which it standeth.

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CHAP. XI.

¶ Arabia [the Desert or Petraa.]

B Eeing once past that arme of the riuer *Nilus*, which entereth into the sea at *Pelusium*, you come into Arabia, confining vpon the red sea; and that other Arabia, so rich & odoriferous, and therefore renowned with the surname of *Happie*. As for this desert Arabia, possessed it is by the *Catabanes*, *Esbonites*, and *Srenite* Arabians: all barren and fruitlesse, saue whereas it meeteth with the confines of *Syria*, and setting aside the mountaine *Casius*, nothing memorable. This region confronteth the Arabians *Canchlei* on the East-side, and the *Cedraei* Southward, and they both confine together afterwards vpon the *Nabathæes*. Moreouer, 2 Baies there bee, the one called the gulfe of *Heroopolis*, and the other of *Elani*; both in the red sea on the coast of *Egypt*, 150 miles distant, betweene two townes, *Elana*, and *Gaza*, which is in our (*Mediterranean*) sea. *Agrippa* counterth from *Pelusium* to *Arfinoe*, a towne situate vpon the red sea, an hundred and fife and twenty miles. See how small a way lyeth betweene two Climates so different in Nature.

CHAP. XII.

¶ Syria, Palestine, Phœnice.

F Vpon the coast of the said Arabia, confineth *Syria*, a Region in times past, the chiefe and most renowned vpon earth, and the same distinguished by sundry names. For where it confineth vpon the Arabians, called it was *Palestina*, *Iurie*, *Coele-Syria*, and afterward, *Phœnice*. But go farther within the firme land, *Damascene*. Turne more still Southwards, it is named *Babylonia*. And the same, between the riuers *Euphrates* and *Tygris*, carrieth the name

K 2

of

The fifth Booke of

of Mesopotamia. Beyond the mountaine Taurus, it is Sophene; but on this side the hill, they call Comagene. The country beyond Armenia, is Adiabene, named before-time Assyria: but the marches of Syria, which confront Cilicia, is knowne by the name of Antiochia. The whole length of Syria, from the frontiers of Cilicia to Arabia, containeth 470 miles: the breadth between Seleucia Pieria, to Zeugina, a towne seated vpon Euphrates, taketh 175 miles. They that make a more subtil and particular diuision, would haue Phoenice to be enuironed with Syria. And first, as you come from Arabia, is the sea-coast of Syria, which compriseth in it Idumæa & Iudæa; then you enter into Phœnicia, and so into Syria again, when you are past Phœnicia. And within-forth farther into the country, Phœnicie is inclosed with Syria Damascena. All that sea yet, which beateth vpon that coast, beareth the name of the Phœnician sea. As for the nation it selfe of the Phœnicians, haue been highly reputed for their Science and learning, and namely, for the first inuention of letters, for their knowledge in Astrologie, nauigation, and martial skill. Being past Pelusium, you come to a city called Chabrizæ Castra to the mountain Casius, and the temple of *Iupiter Casius*: also the tombe of *Pompeius Magnus*; and last of all to the city Otracium. To conclude, from Pelusium to the frontiers of Arabia the Desert, [alongst the coast of Syria] are 65 miles.

CHAP. XIII.

¶ *Idumæa, Syria, Palestina, Samaria.*

Soon after beginneth Idumæa & Palestina, euen from the rising vp of the lake Sirbon, which some haue reported to carry a circuit of 150 miles. *Herodotus* saith, it is hard vnder the foot of the hill Casius: but at this day it is but a small lake. As for the towns there, they be Rhinocolura, and more within the land, Raphæa: also Gaza a port towne, and farther within, Anthedon, and the mountain Angoris. From thence you descend to the coast of Samaria, the free citie Ascalon, and Azotus; the two Iamnes, whereof the one is well within the land; and so forward to Ioppe, a towne in Phœnicia, which by report, is more antient than the deluge. Scituate it is vpon a hill, with a rocke before it, wherein are to be seen the tokens and reliques of *Lady Andromedæ*s prison where she was bound. Within a chappell there, the *Siren Decreto*, whereof the Poets tell such tales, is worshipped. Being past Ioppe, you meet with Apollonia: the towne of Strato, called also Cæsarea, founded by *K. Herod*: it beareth now the name of Prima Flauia, a colony there planted and endowed with priuiledges by *Vespassian* the Emperour. The bounds of Palestina be 180 miles from the confines of Arabia: and there entreth Phœnicie. Within-forth in the country, are the townes of Samaria, and Neapolis, which before-time was named Mamortha (or Maxbota.) Also Sabaste vpon the mountain, and Gamala, which yet standeth higher than it.

CHAP. XIII.

¶ *Iurie and Galilæa.*

A Boue Idumæa and Samaria, Iudæa spreadeth out far in length and breadth. That part of it which ioineth to Syria, is called Galilæa: but that which is next to Syria and Egypt, is named Peræa, [i. beyond Iordan.] Full of rough mountaines dispersed here and there: and seuered it is from other parts of Iury, by the riuer Iordan. As for the rest of Iudæa, it is diuided into ten gouernments or territories, called Toparchies, in this order following: to wit, that of Hiericho, a vaile richly planted with Date trees: Emmaus, well watered with fountaines: Lydda, Ioppica, Accrabadena, Gophnitica, Thamnitica, Betholene, Tephene, and Orine, wherein stood Ierusalem, the goodliest citie of all the East parts, and not of Iury onely. In it also is the principalitie Herodum, with a famous towne of that name.

CHAP. XV.

¶ *Iordane the Riuer.*

The riuer Iordan springeth from the fountaine Paneades, which gaue the Symame to the citie Cæsarea, whereof we will speake more. A pleasant riuer it is, and as the site of the country will permit and giue leaue, winding and turning in and out, seeking as it were for loue

Plinies Naturall History.

A loue and fauour, and applying it selfe to please the neighbor inhabitants. Full against his will, as it were, he passeth to the lake of Sodom, Asphaltites, that ill-fauored and cursed lake: and in the end falleth into it, and is swallowed vp of it, where amongst those pestilent and deadly waters, he loseth his owne that are so good and wholesome. And therefore to keep himselfe out of it as long as he possibly could, vpon the first opportunity of any vallies, he maketh a lake, which many call Genesara, which is 16 miles long, and 6 broad. The same lake is enuironed with diuers faire and beautifull townes; to wit, on the East side, with Iulias and Hippo; on the South, with Tarichea, of which name, the lake by some is called Tarichion; and on the West, with Tiberias, an healthfull place for the baines there of hot waters.

CHAP. XVI.

¶ *Asphaltites.*

A Asphaltites, or the lake of Sodom, breedeth and bringeth forth nothing but Bitumen; and thereupon it tooke the name. No liuing body of any creature doth it receiue into it: buls and camels swim and stoe aloft vpon it. And hereupon ariseth that opinion which goeth of it, That nothing there wil go downe and sink to the bottome. This lake in length exceedeth 100 miles, 25 miles ouer it is at the broadest place, and six at the narrowest. On the East, the Arabian Nomades confront it; and on the South side, Macharus regardeth it: in time past, the second fortresse of Iudæa, and principall next to Ierusalem. On the same coast, there is a fountain of hot waters, wholesome and medicinable, named Callirhoe, and good against many diseases.

CHAP. XVII.

¶ *The people Esseni.*

A Long the West coast inhabit the Esseni. A nation this is, liuing alone and solitarie, and of all others throughout the world most admirable and wonderfull. Women they see none: carnal lust they know not; they handle no money, they lead their life by themselves, and keepe company onely with Date trees. Yet neuerthelesse, the country is euermore well peopled, for that daily numbers of strangers resort thither in great frequencie from other parts: and namely, such as be weary of this miserable life, are by the surging waues of frowning fortune driuen hither, to fort with them in their manner of liuing. Thus for many thousand yeares [a thing incredible, and yet most true] a people hath continued without any supply of new breed and generation. So mightily increase they euermore, by the wearisome estate & repentance of other men. Beneath them stood sometime Engadda, for fertilitie of soile and plenty of Date-tree groues, accounted the next city in all Iudæa, to Ierusalem. Now, they say, it serueth for a place only to inter their dead: beyond it, there is a castle or fortresse scituate on a rock, and the same not far from the lake of Sodom Asphaltites. And thus much as touching Iudæa.

CHAP. XVIII.

¶ *Decapolis. [i. Cæle-Syria.]*

E Here ioyne to it on Syria side, the region Decapolis, so called of the number of towns and cities in it. Wherein, all men obserue not the same, nor make like account: howbeit most men speake of Damascus and Oporos, watered with the riuer Chrysorrhœa. Also, Philadelphia, renowned for the fruitfull territory about it. Moreouer, of Scythopolis, taking name of the Scythians there planted: and before-time Myfa, so named of Prince or Father *Bacchus*, by reason that his nource there was buried. Also Gadara, scituate on the riuer Hieromias, running euen before it. Besides, the aboue-named Hippos Dios. Likewise Pella, enriched with the good fountaines: and last of all, Galaza and Canatha. There lie betwene and about these cities, certaine Royalties called Triarchies, containing euery one of them as much as an whole country: and reduced they be as it were into seuerall countries; namely, Trachonitis Panias, wherein standeth Cæsarea, with the fountain aboue-said, Abila, Arca, Ampeloessa, and Gaber.

Returne now we must to the sea-coast of Phœnice. A riuer runneth there called Crocodilon, whereupon stood a towne in times past bearing the name. Also there remain in those parts the bare reliques still of cities, to wit, Dorum, Sycaminum, the cape or promontory Carmelum; and a towne vpon the hill so named; but in old time called Ecbatana. Neere therto Getta and Iebba; the riuer Pagida or Pelus, carrying chrystall glasse with his sands vpon the shore. This riuer commeth out of the meere Ceudeuia, from the foot of mount Carmel. Neere vnto it is the city Ptolemais, erected in forme of a colony, by *Claudius Cesar*; in ancient time called Are. The towne Ecdippa, and the cape Album. Then followes the noble citie Tyrus, in old time an Island, lying almost 3 quarters of a mile within the deepe sea; but now, by the great trauell and deuises wrought by *Alexander the Great* at the siege thereof, ioyned to the firme ground: renowned, for that out of it haue bene three other cities of ancient name, to wit, Lep-tis, Vtica, and that great Carthage, which so long stroue with the Empire of Rome for the monarchy and dominion of al the whole world: yea, and Gades, diuided as it were from the rest of the earth, were peopled from hence. But now at this day all the reputation and glory thereof, stands vpon the die of purple & crimson colors. The compasse of it is 19 miles, so ye comprise Palætyrus within it. The very towne it selfe alone, taketh vp 22 stadia. Neere vnto it are these townes, Luhadra, Sarepta, and Ornython: also Sydon, where the faire and cleer glasse be made, and which is the mother of the great citie Thebes in Boeotia.

Behind it, beginneth the mount Libanus, and for 1500 stadia reacheth as farre as to Smyrna, whereas Coele-Syria takes the name. Another promontory there is as big ouer-against it, called Antilibanus, with a vallie lying betweene, which in old time ioyned to the other Libanus with a wall. Being past this hill, the region Decapolis sheweth it selfe to you within-forth, called Decapolis; and the aboue-named Tetrachies or Realmes with it, and the whole largeness that Palestine hath. But in that coast and tract still along the foot of the mount Libanus, there is the riuer Magoras: also the colonie Berytus, called Fœlix Iulia. The towne Leontos, the riuer Lycos: also Palæbyblos, [i. Byblos the old.] Then ye come vpon the riuer Adonis, and so to these townes, Byblos [the new,] Botrys, Gigarta, Trieris, Calamos, and Tripolis, vnder the Tyrians, Sydonians, and Aradians. Then meet you with Orthosia, and the riuer Eleutheros. Also these townes, Simyra, Marathos; and ouer-against, Aradus, a towne of seuen stadia: and an Island lesse than a quarter of a mile from the Continent. When you are once past the countrie, where the said mountaines doe end, and the plaines lying betweene, then beginneth the mount Bargylis: and there, as Phœnice endeth, so begins Syria againe. In which countrie are Carne, Balanea, Paltos, and Gabale: also the Promontorie, whereupon standeth the free city Laodicea, together with Diospolis, Heraclea, Charadrus, and Posidium.

Go forward in this tract, and you shall come to the cape of Syria Atiochena: within-forth is seated the noble and free citie it selfe Antiochena, surnamed Epidaphne: through the midswhereof runneth the riuer Orontes. But vpon the very cape, is the free citie Seleucia, named also Pieria.

Aboue the citie Seleucia, there is another mountaine named Casius, as well as that other, which confronteth Arabia. This hill is of that heighth, that if a man be vpon the top of it in the darke night season, at the reliefe of the fourth watch, he may behold the Sunne arising

A sing. So that with a little turning of his face and body, hee may at one time see both day and night. To get vp by the ordinary high-way to the very pitch of it, a man might fetch a compas of 19 miles; but climbe directly vpright it is but 4 miles. In the borders of this country runs the riuer Orontes, which ariseth between Libanus and Antilibanus, neere to Heliopolis. Then the towne Rhosfos appeares: and behind it, the streight passages and gullers betwixt the mountaines Rhotij and Taurus, which are called Portæ Syriae. In this tract or coast stands the town Myriandros, the hill Avanus (where is the towne Bomilæ, which separateth Cilicia from the Syrians).

It remaineth now to speake of the townes and cities in the midland parts within the firme land: and to begin with Coele Syria, it hath in it Apamia, separated from the Nazerines tetrarchy by the riuer Marfia: likewise Bambyce, otherwise called Hierapolis; but of the Syrians, Magog. There is honored the monstrous idoll of the Meermaid, Atargatis, called of the Greeks Decreto. Also Chalcis, with this addition, Vpon Belus: from which the region Chalcidene, most fertile of all Syria, taketh name. Then haue you the quarter Cyrhistica, with Cirrus, Gazatæ, Gindarenes, and Gabenes. Moreouer, two Tetrarchies, called Granucomatae. Moreouer, the Hemifenes, Hylates, the Ituræans country (and principally those of them who are named Betarrani) and the Mariammitanes. The Tetrarchie or Principalitie named Mam-milca, the city Paradisus, Pagra, Pinarites, and two Seleucia, besides the aboue named, one called, Vpon Euphrates; and the other, Vpon Belus: and last of all, the Carditenses. The rest of Syria hath these States (besides those which shall be spoken of with the riuer Euphrates) the Arethusians, Beræenses, and Epiphanenses: and Eastward, the Laodicenes, namely those who are entituled, Vpon Libanus: the Leucadians and Larissæans: besides 17 Tetrarchies reduced into the forme of realmes, but their names are barbarous.

And here me-thinks is the fittest and meetest place to speake of Euphrates. The source of it, by report of them that saw it last and neereest, is in Caranitis, a state vnder the government of Armenia the greater: and those are *Domitius* and *Corbulo*, who say, that it springeth in the mountaine Aba. But *Licinius Mutianus* affirmeth, that it issueth from vnder the foot of the mountaine which they call Capotes, 12 miles higher into the countrey than is Simyra: and that in the beginning it was called Pyxirates. It runs first directly to Derxene, and so forth, to Ana also, excluding the regions Armeniæ, the greater as well as the lesse, from Cappadocia. The Dastufæ from Simyra are 75 miles: from thence it is nauigable to Pæstona, 50 miles: from it to Melitene in Cappadocia, 74 miles. So forward to Elegia in Armenia, ten miles; where he receiueth these riuers, Lycus, Arsanias, and Arsanus. Neere to Elegia he meeteth afront with the hill Taurus: yet stayeth he not there, but preuaileth a pierceth thorow it, although it beare a bredth there of 12 miles. At this entry where he breaketh thorow the hill they call him Omiras, and so soon as he hath made way and cut thorow it he is named Euphrates. Being past this mountaine, he is full of rocks and very violent: howbeit he passeth through the country of the Moeri, where he carrieth a stream of 3 Schoenes bredth, where he parts Arabia on the left hand, from Comagene on the right. And neuer the lesse, euen therewheras he conquereth and getteth the vpper hand of Taurus, he can abide a bridge to be made ouer him. At Claudiopolis in Cappadocia he courseth Westward: and now the mountain Taurus, though resisted and overcome at first, impeacheth and hindereth him of his way, and notwithstanding (I say) he was ouermatched and dismembred one piece from another, he gets the better of him another way, breaking his course now, and driuing him perforce into the South. Thus Nature seems to match the forces of these two champions equally in this manner, That as Euphrates goes on stil without stay as far as he will, so Taurus will not suffer him yet to run what way he wil. Now when these Cata-racts and downfalls of the riuer are once past, it is nauigable againe, and forty miles from that place

place standeth Samosata the head city of Comagena. Now hath Arabia beside the townes afore said, Edeffa, sometime called Antiochea, Callirrhoe, taking name of the fountain: and Carra, so famous and renowned for the defeature there of *Craffus* and his army. Hereunto ioine the gouernment and territorie of Mesopotamia, which also taketh the first beginning from the Assyrians, in which stand the townes Anthemusa and Nicephorium. Hauing passed this country, ye straitway enter vpon the Arabians called Rhetavi, whose capitall city is Singara. Now to returne to Samosata, from it in the coast of Syria, the riuer Marfyas runneth into Euphrates. As Gingla limiteth Comagene, so the land of the Meri beginneth there. The townes Epiphania and Antiochia haue the riuer running close to them, and hereupon they haue this addition in their names, Standing vpon Euphrates. Zenyma likewise, 72 miles from the Samosata, is innobled for the passage ouer Euphrates: for ioined it is to Apamia, right against, by a bridge, which *Seleucus* the founder of both caused to be made. The people that ioine hard to Mesopotamia be called Rhoali. As for the townes of Syria which be vpon this riuer, are Europum, Thapsicum in times past, at this present Amphipolis; and last of all the Arabian Scenitere. Thus passeth Euphrates, as far as to the land Vra, where turning his course to the East, hee leaueth behinde him the Desarts of Palmyra in Syria, which reach to the city Petra, and to the country of Arabia Foelix.

CHAP. XXV.

¶ *Palmyra.*

THe noble city Palmyra is passing well seated, as well for the riches of the soile, as for abundance of waters, which imbelish and set out the country on euery side. As rich and long as it is, the territory all about is inuironed and inclosed with bars of sand. And as if Nature had a desire to exempt it from all other lands to liue apart in peace, shee hath set it iust in the middest and confines, between two puissant and mighty empires, to wit, the Romans and Parthians: for there is not so soone any war proclaimed between those two States and Monarchies, but at first they haue on both sides a regard of it as a neutre. It is from Seleucia of the Parthians, namely that vpon Tigris, 537 miles: and from the next port or coast of Syria, 252: and from Damasco 27 neerer.

CHAP. XXVI.

¶ *Hierapolis.*

Beneath the desarts and wildernesse of Palmyra lieth the country Stelendena, wherein are the cities named at this day Hierapolis, Berœa, and Chalcis. Beyond Palmyra also, Hemesa taketh vp some part of thole said desarts: and likewise Elutium, neerer to Petra by one halfe than is Damascus. And next to Asura standeth Philiscum, a towne of the Parthians vpon Euphrates: from which by water it is a iourney of ten daies to Seleucia, and from thence as many likewise to Babylon: for Euphrates, 83 miles from Zeugma, about the village Massice, diuideth it selfe into two armes. On the left side he passeth into Mesopotamia, euen thorow Seleucia, and about it enteth into the riuer Tygris, which runneth hard by: but on the right hand he carieth a current in his chanell toward Babylon, the chiefe city sometime of Chaldaea, and passing through the midst thereof, as also of another called Otris, he parts asunder into sundry lakes and meeres. And there an end of Euphrates. He riseth and falleth at certain times after the order of Nilus: yet some little difference there is betweene them in the manner, for he ouerfloweth Mesopotamia when the Sun is in the 20 degree of Cancer, and begins againe to diminish and flake when the Sun is past Leo, and newly entred into Virgo: so as in the 29 degree of Virgo he is downe againe, and come to his ordinary course.

CHAP. XXVII.

¶ *Cilicia, and the nations adioyning, to wit, Isaurica, Homonades, Pisidia, Lycaonia, Pamphylia, the mountaine Taurus, and Lycia.*

BVt time it is to returne now to the coasts of Syria, and to Cilicia that confronts it. Where in the first place we meet with the riuer Diaphanes, the mountain Crocodilus, the streights and

A and passages of the mount Amanus: more riuers also, to wit, Andricon, Pinarus, and Lycus, as also the gulfe Issicus. The towne Issa standeth vpon it, then come we to Alexandria to the Riuer Chlorus, the free towne Æge, the riuer Pyramus, and the streights in the entrance to Cilicia. Beyond them we encounter the townes Mallos & Magarfos: as for Tarfos it is more within the country. From this towne we enter vpon the plaines of Aleij, and so forward to these townes, Cassipolis, and Mopsum, which is free, and standeth vpon the riuer Pyramus; Thynos, Zephyrium, and Anchialæ. On forward you shall haue the riuers Saros and Sydnus, which runs through: Tarfus a free city far from the sea: then are ye in the country Celcuderitis, together with the capitall towne thereof. And anon ye shall set foot in a place called Nymphæum, and Solce Cilicij now Pompeiopolis, Adana, Cibira, Pinara, Pedalie, Halix, Arfinoe, Tabæ, & Doron: and neere the sea side you shall finde a towne, an harbour, and a caue, named all Corycos. Soon after, the riuer Calycadnus. The cape Sarpedon, the townes Olme and Mylæ, the Cape and towne both of *Venus*, the very next harbor from whence men passe into the Isle Cypres. But in the maine land you shall finde these townes, Myanda, Anemurium, Coracesium: and the riuer Melas, the antient bound that limiteth Cilicia. Farther within-forth are to be spoken of, the Anazarbenes, at this day Cæsar Augustani; Castabla, Epiphania, before-time Eniandos, Eleusa, and Iconium: Seleucia vpon the riuer Calicadmus, firnamed also Trachiotis, a city remoued backward from the sea, where it was called Hormia. Furthermore, within the country, the riuers Liparis, Bombos, and Paradisus. Last of all, the mountaine Iubarus. All Cosmographers haue ioyned Pamphylia to Cilicia, and neuer regarded the Nation of Isaurica, being a country by it selfe, hauing within it these towns, Isaura, Clibanus, Lalassis. And it thouts down to the sea side, full vpon the frontiers of the country Anemurium aboue said. In like sort, as many as haue set forth maps and descriptions of the world, had no knowledge at all of the Nation Homonades confining vpon it, notwithstanding they haue a good towne within it, called Homona. Indeed the other fortresses, viz. 44, lie hidden close among the hollow vallies & hills of that country. There inhabit the mountainers ouer their heads, the Pisidians, sometime called Sobymi, whose chiefe colony is Cæsaria, the same that Antiochia. Their townes be Oroanda and Sagaleffos. This nation is inclosed as it were within Lycaonia, lying within the iurisdiction of the lesse Asia, and euen so together with it, the Philomelians, Timbrians, Leucolithi, Pelti, and Hyrienses resort thither for law and iustice. There is a gouernment or Tetrarchy also, out of the quarter of Lycaonia, on that side that bordereth vpon Galatia, vnto which belong 14 States or cities, the chiefe whereof is called Iconium. As for the nations of Lycaonia, those of any note be, Tembasa vpon Taurus, Sinda in the confines of Galatia, and Cappadocia: But on the side thereof aboue Pamphylia, ye meet with Mylæ, descended in old time from Thrace, who haue for their head city Aricanda. As for Pamphylia, it was in antient time called Mopsopia. The Pamphylian sea ioine to the Cilician. The townes scituare vpon that coast, be Side, Aspendus on the hill, Plantanius, and Perga. Also the cape Leucolla, the mount Sardemisus, the riuer Eurymedon, running hard by Aspendum. Moreouer, Cataraetes the riuer, neere vnto which stand Lyrnessus and Olbia; and the vtmost towne of all that coast Phaselis. Fast vpon it lieth the Lycian sea, and the nation of the Lycians, where the sea makes a huge great gulfe.

EThe mountaine Taurus likewise, confining vpon the Levant sea, doth limit Lycia and Cilicia, with the promontorie Chelidonium. This Taurus is a mighty mountain, and determineth as a iudge an infinite number of nations. So soone as he is risen from the coast of the East Indian sea hee parteth in twaine, and taking the right hand passeth Northward, and on the left hand Southward, somewhat bending into the West: yea, and diuiding Asia through the middest, and (but that he meeteth with the seas) ready to stop and dam vp the whole earth besides. He retireth back therefore, as being curbed, toward the North, fetching a great circuit, and so making his way, as if Nature of purpose opposed the seas east soones against him to bar him of his passage, of one side the Phœnician sea, of another the great sea of Pontus, the Caspian & Hyrcanian seas likewise; and full against him the lake Mœotis. And notwithstanding all these bars, within which he is pent, twined, and wrested, yet maketh he means to haue the mastery, and get from them all: and so winding byas he passeth on, vntill he encounter the Rhipæan hills, which are of his owne kinde: and euer as he goeth is entituled with a number of new names. For he is called Imaus where he first beginneth: a little forward, Emodus, Paropamisus, Circius, Canibades, Parphariades, Choatras, Oreges, Oroandes, Niphates, and then Taurus. Neuertheless where

where he is highest, and as it were ouer-reacheth himselfe, there they name him Caucasus : G where he stretcheth forth his armes like as if he would now and then be doing with the seas, he changeth is name to Sarpedon, Coraceus, and Cragus : and then once again he takes his former name Taurus, euen where he opens and makes passage as it were to let in the world. And yet for all these waies and ouertures he claimeth his owne stile, and these passages are called by the names of gates, in one place Armenia, in another Caspia, and sometimes Cilicia. Ouer and besides, when he is broken into parcels, and escaped far from the sea, he taketh many names from diuers and sundry nations on euery side: for on the right hand he is termed Hyrcanus, and Caspius: on the left, Pariedrus, Moschicus, Amazonicus, Coraxicus, and Scythicus: and generally throughout all Greece, Ceraunius.

To returne then to Lycia, being past the foresaid cape there, Chelidonium, ye come to the towne Simena, the hill Chimæra, which casteth flames of fire euery night, the city Hephæstium, where the mountains about it likewise oftentimes are known to burne. Sometimes the city Olympus stood there, but now nothing to be scene but mountaines, and amongst them these townes, Gage, Corydalla, and Rhodiopolis. On the sea coast, the city Lymira vpon a riuer, to which Aricandus runneth: also the mountaine Massyrites, the cities Andriara and Myra. Also these townes, Apyre, and Antiphellos, which sometime was called Habessus; and more within-forth in a corner, Phellus. Then come ye to Pyrrha, and so to Xanthus, 15 miles from the sea, and to a riuer likewise of that name. Soon after ye meet with Patara, before-time named Sataros, and Sydinia seated vpon an hill, and so to the promontorie Ciagus. Beyond which ye shall enter vpon a gulfe as big as the former, vpon which standeth Pinara and Telmessus, the utmost bound in the marches of Lycia. In antient time Lycia had in it 60 townes, but now not aboue 36. Of which the principall and of greatest note, besides the aboue named, be Canæ, Candiba, where is the famous wood Oenium, Podalia, Choma, vpon the riuer Adefa, Cyane, Ascandalis, Amelas, Noscopium, Tlos, and Telanorus. As for the midland parts of the maine, you shall finde Chabalia, with three townes thereto belonging, Oenonda, Balbura, and Bubon.

When you are beyond Telmessus you meet with the Asiaticke sea, otherwise called Carpathium, and this coast is properly called Asia. Agrippa hath diuided it in two parts, whereof the one by his description confronteth vpon Phrygia and Lycaonia Eastward: but on the West side it is limited with the Ægean sea. Southward it bounds vpon Egypt, and in the North vpon Paphlagonia: the length thereof by his computation is 470 miles, the bredth 300. As for the other he saith, That Eastward it confineth vpon Armenia the lesse: Westward vpon Phrygia, Lycaonia, and Pamphylia: on the North it butteth vpon the prouince or realm of Pontus, and on the South side is inclosed with the Pamphylian sea. He addeth moreouer, that it containeth 575 miles in length, and 325 in bredth. The next coast bordering thereupon is Caria: and when you are past it, Ionia, and beyond that, Æolis. As for Caria it incloseth Doris in the mids, enuironing it round on euery side, as far as to the sea. In it is the Cape Pedalium, also the riuer Glaucus, charged with the riuer of Telmessus. The townes of any respect be Dædala and Crya, peopled only with banished persons. Therein you finde the riuer Axoum, and the towne Calydua.

CHAP. XXVIII.

¶ The riuer Indus.

THE riuer Indus, arising from the mountaines of the Cybirates, receiueth into it 60 other running riuers, maintained with springs, of other small riuers and brookes fed with land floods, aboue 100. Vpon it standeth the free towne Caunos, and a little off, Pynos. Soon after ye meet with the port Cressa, ouer against which is discovered the Island Rhodus, within the kenning of twenty miles. Being past that haven, you shall enter vpon the plaine Loryma, vpon which are seated the townes Tyfanusa, Tarydion, Larymna. Then meet you with the gulfe Thymnias, and the cape Aphrodisias: and on the other side of it the towne Hyda, and another gulf Schœnus. Then followes the country Bubassus, wherein stood in antient time, the towne Acanthus, otherwise called Dulopolis. Also vpon the cape there, the free city Gnidos, Triopia, then Pegusa, called likewise Stadia. Beyond which you enter into the Countrey of Doris,

A Doris. But before we passe farther, meet it were to speake of those cities and States which are in the midland countrie, and which lie behind, and namely of one, named Cibiratica. The towne it selfe is in Phrygia, and to it resort for law and iustice 25 cities.

CHAP. XXIX.

¶ Laodicia, Apamia, Ionia, Ephesus.

THE principall citie in those quarters (of the Cibirites) is Laodicia. Seated it is vpon the riuer Lycus: and yet there run hard to the sides thereof two other riuers, Asopus, and Caper. This citie in times past was called Diospolis, & afterwards Rhoas. The other nations belonging to that iurisdiction of the Cibirates, worth the naming, by the Hydrelites, Themifones, and Hierapolites. Another countie court or towne of resort there is, which taketh the name of Synnada: and to it repaire for iustice, the Licaonians, Appians, Encarpenes, Dorylaei, Midæi, Iulienfes, and other states of no great reckoning, sitreene. A third Seigneurie or Shire there is that goes to Apamia, which in old time was called Celæna, and afterwards Ciboron: scituate it is at the foot of the hill Signia, enuironed with three riuers, Marfias, Obrima, and Orga, falling all into the great riuer Meander. As for the riuer Marfias (which a little from his spring was hid vnder the ground, whereas *Marsyas* the musitian stroue with *Apollo* in playing vpon the flute) sheweth himselfe again in Aulocrenæ, for so is the vallie called, ten miles from Apamia, as men trauell the high way to Phrygia. Vnder this iurisdiction, we should dowell to name the Metropolitans, Dionysopolites, Euphorbenes, Acmoneses, Peltenes, and Silbians. There are besides to the number of 60 small towns of no account. But within the gulfe of Doris there stand Leucopolis, Amaxites, Eleus, and Euthenæ. Moreouer, other townes of Caria, Pitium, Eutania, and Halicarnassus. And to this citie were annexed, as subiect and homages by *Alexander* the great, six other townes, namely, Theangela, Sibde, Medmossa, Euranium, Pedasium, and Telnessum: which townes are inhabited betwene the two gulfs, Ceramicus, and Iasius. From thence yee come to Myndus, and where sometime stood Palæmindus, Neapolis, Nariandus, Carianda, the free citie Termera, Bergyla, and the town Iasius which gaue the name to the gulfe Iasius. But Caria is most renowned & glorious for the places of name within it in the firme land: for therein are these cities, to wit, Mylasa free, and Antiochia, now standing where sometime were the townes, Seminethos, and Cranaos: and enuironed now it is about with the riuers Meander, and Mossinus. In the same tract stood sometime Mæandropolis also. There is besides, the citie Eumenia, vpon the riuer Cludrus: the riuer Glaucus: the towne Lycias and Orthasia. The tract or marches of Berecinthus, Nyfa, Trallais, which also is named Euanthia, Seleucia, and Antiochia, which is scituate vpon the riuer Eudone that runneth hard by it, and Thebanis which passeth quite through it. Some there bewho report, that the dwarfes called Pigmaei, sometime there dwelt. In which region besides, were these townes, Thydonos, Pyrrha, Eurome, Heraclea, Amyzon, and the free citie Alabanda, whereof that shierewicke or iurisdiction tooke name. Also the free towne Stratonicea, Hynidos, Ceramius, Troæzene, and Phorontis. Yea there be nations farther remote, that resort thither to pleade and haue iustice in that court: namely, the Othroniens, Halydiens, or Hyppines, Xystianes, Hydissenfes, Apolloniates, Tapezopolites, and of free condition the Aphrodisians. Ouer and besides these, there are Cosinus, & Harpasa, scituate vpon the riuer Harpafus, which also ran vnder Trallicon, when such a towne there was. As for the countrey of Lydia, watered it is in many places with the recourse of Mæanders streame, winding and turning in and out, as his manner is: and it reacheth aboue Ionia: confining vpon Phrygia in the East, vpon Misa in the North, and in the South side enclosing all the countrey of Caria. This Lydia was sometimes named Mœnia. The capitall citie of this region, is Sardis, seated vpon the side of the mountaine Tmolus, called before-time Timolus, a hill well planted with vineyards. Moreouer, renowned is this countrey for the riuer Pactolus issuing forth of this mountaine, which riuer is called likewise Chrysothoas: as also for the fountain Tarnes. The city abouesaid, was commonly by the Mœonians called Hyde, famous for the meer or lake of Gyges. Al that iurisdiction is at this day called Sardinia. Thither resort besides the abouenanied, the Caduēnes, descended from the Macedonians; the Lorenens, Philadelphenes, yea and the very Mœonians, such as inhabite vpon the riuer Cogamus at the foot of Tmolus; and the Tripolitans who together with the Antonopolites, dwell vpon the

the riuér Mæander. Furthermore, the Apollonos-Hieritæ, Myformolites, and others of small reputation.

Ionia beginneth at the gulfe Iasius, and all the coast thereof is very full of creekes and reaches. The first gulfe or creeke therein is Basilicus; and ouer it the cape Posideum, and the town called somtime, the Oracle of Branchidæ, but at this day, of Apollo Didymæus, 20 stadia from the sea side. Beyond which 180 stadia, standeth Milletus, the head citie of Ionia, named in time past Lelegeis, Pityusa, and Anaſtoria. From which, as from a mother citie, are descended more than eighty others, all built along the sea coast by the Milleſians. Neither is this city to be defrauded of her due honour, for bringing forth that noble citizen *Cadmus*, who deuised and taught first to write in Prose. Concerning the riuér Mæander, it issueth out of a lake at the foot of the mountain Aulocrene; and passing vnder many townes, and filled still with as many riuers running into it, it fetcheth such windings to and fro, that oftentimes it is taken for to run back againe from whence it came. The first countrie that it passeth through, is *Apamia*: and from thence it proceedeth to *Eumenitica*, and so forward through the plaines *Beryllitici*. Last of all, hee commeth gently into *Caria*, and when hee hath watered and ouerflowed all that land with a most fat and fruitful mud that he leaueth behind him, about ten stadia from *Miletus*, he dischargeth himselfe into the sea. Neer to that riuér, is the hill *Latmus*: the citie *Heraclea*, surnamed *Caryca*, of a hill of that name: also *Myus*, which as the report goeth, was the first citie founded by the Ionians after their arriual from *Athens*, *Naurochum*, and *Pyrene*. Also vpon the sea coast, the towne called *Trogilia*, and the riuér *Gessus*. Moreouer, this quarter all the Ionians resort vnto in their deuotion, and therefore named it is *Panionia*. Neere vnto it was built a priueledged place for all fugitiues, as appeareth by the name *Phygela*: as also the town *Maraſium* stood there sometime: and aboue it, the renowned citie *Magnesia*, surnamed, Vpon Mæander; of the foundation of that other *Magnesia* in *Theſſalie*. From *Ephesus* it is 15 miles; and from *Trallais* thither, it is three miles farther. Beforetime, called it was *Theſſaloce*, & *Androlitia*: and being otherwise situate vpon the strond, it tooke away with it other Islands called *Deraſides*, and ioine them to the firme land from out of the sea. More within the maine standeth *Thyatira* (in old time called *Pelopia* and *Euhippa*) vpon the riuér *Lycus*. But vpon the sea coast, yee haue *Manteium*, and *Ephesus*, founded in times past by the *Amazones*. But many names it had gone through before, for in time of the *Troiane* war, *Alopes* it was called: soone after, *Ortygia*, and *Morges*; yea, and it took name *Smyrne*, with addition of *Trachæa*, [i. rough] *Samornium*, and *Ptelea*. Mounted it is vpon the hill *Pione*, and hath the riuér *Cayſtrus* vnder it, which commeth out of the *Cilbian* hills, and bringeth downe with it many other riuers, and principally is maintained and enriched with the lake *Pegaseum*, which dischargeth it selfe by reason of the riuér *Phyrites* that runneth into it. With these riuers he bringeth downe a good quantitie of mud, whereby he increaseth the land: for now already a good way within the land, is the Island *Syrie*, ioined to the continent. A fountain there is within the citie, called *Callipia*; and two riuers (height both *Selinus*) comming from diuers parts, enuiron the temple of *Diana*. After you haue been at *Ephesus*, you come to another *Manteium*, inhabited by the *Colophonians*: and within, the country *Colophon* it selfe, with the riuér *Halesus* vnder it. Then meet you with the noble temple of *Apollo Clarius*, and *Lebedos*. And in this quarter sometime was to be seen the towne *Notium*. The promontory also *Coryceon* is in this coast: and the mountaine *Mimas*, which reaches out 250 miles, and endeth at length in the plaines within the continent that ioine vnto it. This is the place, wherein *Alexander* the Great commanded a trench seven miles long and an halfe to be cut through the plain, for to ioine two gulfes in one, and to bring *Erythree* and *Mimas* together for to be enuironed round therewith. Neere this city *Erythree* were sometimes the townes, *Pteleon*, *Helos*, and *Dorion*: now, there is the riuér *Aleon*, and the cape *Corineum*: vpon the mount *Mimas*, *Clazomene*, *Parthenia*, and *Hippi* called *Chytophria*, hauing bene sometime Islands: the same, *Alexander* caused to be vnted to the firme land for the space of two stadia. There haue perished within-forth and bene drowned, *Daphnus*, *Hermesia*, and *Sipylum*, called before-time *Tantalus*, notwithstanding it had bene the chiefe citie of *Mæonia*, situate in that place, where now is the meere or lake *Sale*. And for that cause *Archæopolis* succeeded in that preeminence, and after it *Colpe*, and in stead thereof *Lebade*. As you returne from thence toward the sea side, about twelue miles off, you come vpon the citie *Smyrna*, built by an *Amazonite*, but repaired and fortified by *Alexander* the Great. Situate

A tuar it is pleasantly vpon the riuér *Melis*, which hath his head and source not far off. The most renowned hills in *Asia* for the most part, spread themselves at large in this tract, to wit, *Maſtusia*, on the back side of *Smyrna*; and *Termetis*, that meets close to the foot of *Olympus*. This hill *Olympus* endeth at the mountain *Tmolus*; *Tmolus* at *Cadmus*; and *Cadmus* at *Taurus*. When you are past *Smyrna*, you come into certain plains, occasioned by the riuér *Hermus*, and therefore adopted in his name. This riuér hath his beginning neer to *Doryleus* a city of *Phrygia*, and takes into it many other cities; & principally *Phryge*, which giues name to the whole nation, and diuides *Phrygia* and *Caria* asunder. Moreouer *Lyllus* & *Crios*, which also are big and great by reason of other riuers of *Phrygia*, *Myſia*, and *Lydia*, which enter into them. In the very mouth of this riuér stood sometime the towne *Temnos*; but now in the very vtmost nouke of the gulfe certain stony rocks called *Myrmeces*. Also the towne *Leuce* vpon the cape so called: sometime an Island it was: and last of all *Phocæa*, which limiteth and boundeth *Ionia*. But to returne to *Smyrna*; the most part of *Æolia*, whereof we will speake anon, repaires commonly thither to their Parliament and Assises. Likewise the *Macedonians*, surnamed *Hircani*, as also the *Magnetes* from *Sipylum*. But vnto *Ephesus*, which is another principal and famous city of *Asia*, resort those that dwell farther off, to wit, the *Cæsarians*, *Metropolites*, *Cylbianes*, the *Myſo-Macedonians*, as well the higher as the lower, the *Maſtaurians*, *Bullites*, *Hyppepeonians*, and *Dios-Hieritæ*.

CHAP. XXX.

Æolis, Troas, and Pergamus.

A *Æolis*, in old time *Myſia*, confronts vpon *Ionia*: so doth *Troas*, which bounds on the coast of *Helleſpontus*. Being then past *Phocæa*, you meet with the port *Ascanius*, & the place where sometime *Lariſſa* stood: and now *Cyme*, and *Myrina* which loueth to be called *Sebastopolis*. Within the firme land, *Ægæa*, *Attalia*, *Posidea*, *Neon-tichos*, and *Temnos*. But vpon the coast, the riuér *Titanus*, and a city taking name thereof. The time was when a man might haue seen there the city *Grynia*: but now there is but an haue and the bare ground, by reason that the Island is taken into it, and ioined thereto. The towne *Elæa* is not farre from thence, and the riuér *Caicus* comming out of *Myſia*. Moreouer, the towne *Pytane*, and the *Riuér Canaius*. Other townes there were in old time, but they are lost and perished, namely, *Canæ*, *Lyſimachia*, *Atarnæa*, *Carenæ*, *Cisthene*, *Cilla*, *Cocillum*, *Thebæ*, *Aſtyre*, *Chryſa*, *Palæſteſis*, *Gergithos*, and *Neandros*. Yet at this day are to be seen the city *Perperene*, & beyond it the tract and territory *Heracleotes*, the towne *Coryphas*, the riuér *Gryliſolius*, the quarter called *Aphrodisias*, before-time *Polirice*. *Orgas* the country, and *Scepsis* the new. The riuér *Evenus*, vpon the banke whereof stood once *Lymneſſos*, and *Mileros*, but now they are gon. In this tract is the mountain *Ida*. Moreouer, in the sea coast, *Adramytteos*, sometime called *Pedafus*, where the Parliament and Terme is holden, and whereof the gulfe is named *Adramytteos*. Other riuers be there besides, to wit, *Aſtron*, *Cormalos*, *Eryannos*, *Alabaſtros*, and *Hieros* out of *Ida*. Within-forth be *Gargara*, a towne and hill both. And then again toward the sea side, *Antandros*, before-time called *Edonis*: then, *Cymeris*, and *Aſſos*, which also is *Apollonia*. Long since also there was a towne called *Palamedium*. After all these, you come vpon the cape *Leolon*, the middle frontier between *Æolis* and *Troas*. And there had bin in ancient time the city *Polymedia*, and *Cryſſa*, with another *Lariſſa* also. As for the Temple *Smintheum* it remaineth still. But farther within, the towne *Colone* that was, is now decayed and gon, and the traffique and negotiation in all affaires turned from thence to *Adramytteum*. Now as touching the territorie of the *Apollonians*, after you be past the riuér *Rhyndicus*, you finde these States; the *Ereſians*, *Miletopolites*, *Pœmanenes*, *Macedonians*, *Aſchilacæ*, *Polychneæ*, *Pionites*, *Cilices*, and *Mandagandenes*. In *Myſia*, the *Abrettines*, and those called *Helleſpontij*; besides those of base account and estimation. The first city you encounter in *Troas*, is *Amaxintus*: then *Cebrenia* and *Troas* it selfe, named also *Antigonia*, now *Alexandria*, and is entituled a Roman Colony. Beyond *Troas* standeth the towne *Nec*: there runneth also *Scamander*, a riuér nauigable; and *Sigæum*, a Towne sometime, vpon the cape so called. At length you come to the haue of the *Greeks*, into which *Xanthus* and *Somœis* runne ioyntly together, as also

also Palæ-Scamander, but first it maketh a lake. The rest that *Homer* so much speaks of, namely *Rhæsius*, *Heptaporus*, *Carefus*, and *Rhodus*, there is no mention or token remaining of them: as for the river *Granicus*, it runneth from diuers parts into the chanel of *Propontis*. Yet there is at this day a little city called *Scamandria*: and one mile and a halfe from the port or sea, the free city *Ilium*, that enjoyeth many immunities and liberties; of which towne goeth all that great name. Without this gulfe lieth the coast *Rhœtea*, inhabited with these townes vpon it, namely, *Rhœteum*, *Dardanium*, and *Arisbe*. There stood sometimes also *Acheleum*, a towne nere vnto the tombe of *Achilles*; founded first by the *Mityleneans*, and afterwards re-edified by the *Athenians*, vpon the Bay *Sigæum*, vnder which his fleet rode at anchor. There also was *Acantium*, built by the *Rhodians*, in another coine or canton of that coast, where *Ajax* was interred, a place thirty stadia distant from *Sigæum*, and the very Bay wherein his fleet also lay at harbour. About *Æolis* and one part of *Troas*, within the Continent and firme land there is the towne called *Teuthrania*, which the *Mysians* in old time held. And there springeth *Caicus* the river aboue said. A large countrey this is of it selfe, and especially when it was vnto *Mysia*, and all so called: containing in it *Pionia*, *Andera*, *Cale*, *Stabulum*, *Conisium*, *Tegium*, *Balcea*, *Tiare*, *Teuthrae*, *Sarnaca*, *Haliferne*, *Lycide*, *Parthenium*, *Thymbrum*, *Oxiopum*, *Lygdanum*, *Apollonia*, and *Pergamus* the goodliest city of them all by many degrees: through it passeth the river *Selinus*, and *Cælius* runneth hard vnder it, issuing out of the mountain *Pindarus*. And not far from thence is *Elea*, which as we said standeth vpon the strond. And verily all that tract and iurisdiction is of that city named *Perganena*. To the Parliament and iudiciall Assises there resort the *Thyatyrenes*, *Mygdones*, *Mosines*, *Bregmenteni*, *Hieracomitæ*, *Perpereni*, *Tyareni*, *Hierapolenses*, *Harmatapolites*, *Atrallenses*, *Pantaenses*, *Apollonidenses*, and other petty cities of no name and account. As for *Dardanium*, a pretty towne it is, threecore and ten stadia from *Rhœteum*. Eightene miles from thence is the cape *Trapeza*, where the sea beginneth to rush roughly into the streight *Hellespont*. *Eratosthenes* mine Authour saith, That the cities of the *Solyimi*, *Leleges*, *Bebrices*, *Colycantij* and *Trepseiores* sometime flourished, but now are vtterly perished. *Isidorus* reporteth as much of the *Arymeos* and *Capretæ*, the very place where *Apamia* was built by *Seleucus*, betweene *Cilicia*, *Cappadocia*, *Catoonia*, and *Armenia*: and for that he had vanquished most fierce and cruell nations, at the first he named it *Damea*.

CHAP. XXXI.

¶ The Islands lying before little Asia, and in the Pamphylian sea. Also *Rhodus*, *Samus*, and *Chios*.

THE first Island of Asia is iust against the mouth or channell of *Nilus*, called *Canopicus* of *Canopus*, (as men say) the Pilot of *K. Menelaus*. The second is *Pharus*, which is ioined to *Alexandria* by a bridge: in old time it was a daies sailing from *Ægypt* to it: and now by fires from a watch-tower sailers are directed in the night along the coast of *Egypt*. *Cæsar Dictator* erected therein a colory. And in truth it serueth in right good stead as a *Lanthe*: for the hauens about *Alexandria* be very dangerous and deceitfull, by reason of the barres and shelues in the sea: and there are but three chanelles and no more, by which a man may passe safely to *Alexandria*, to wit, *Tegamum*, *Posideum*, and *Taurus*. Next to that Isle, in the *Phœnician* sea before *Ioppa*, lies *Paria*, an Isle of no great compass, for it is all one town. This is the place, folke say, where lady *Andromeda* was exposed and cast out to a monster. Moreouer, *Aredos*, the Isle before named, between which and the Continent there is a fountaine, as *Mutianus* writeth, in the sea where it is fifty cubits deep, out of which fresh water is drawne and conueighed from the very bottome of the sea, through pipes made of leather. As for the *Pamphylian* sea, it hath some smal Islands of little or no reckoning. In the *Cilician* sea there is *Cyprus*, one of the five greatest in those parts, and it lieth East and West full against *Cilicia* and *Syria*. The Seate it was in times past, whereunto nine Kingdomes did homage, and of which they held. *Timosthenes* saith, That it contained in circuit foure hundred and nineteene miles and an halfe: but *Isidorus* is of opinion, that it is but three hundred seuentie five miles about. The full length thereof

A thereof betweene the two capes, *Dinaretas* and *Acamas*, which is Southward, *Artemidorus* reporteth to be a hundred and sixtie miles and a halfe: and *Timosthenes* two hundred; who saith besides, that sometime it was called *Acamantis*: according to *Philonides*, *Cerastris*: after *Xenagoras*, *Aspelia*, *Amathusia*, and *Macatia*: *Astynomus* calleth it *Cryptos* and *Colinia*. Townes there be in it fiftene, *Paphos*, and *Palepaphos* (that is, *Paphos* the new, and *Paphos* the old,) *Curias*, *Citium*, *Corineum*, *Salamis*, *Amathus*, *Lepathos*, *Solœ*, *Tamaseus*, *Epidarum*, *Chytiri*, *Arfinoc*, *Carpasium*, and *Golgi*. There were in it besides, *Cinirya*, *Marium*, and *Idalium*: but now are they come to nothing. And from the cape *Anemurium* in *Cilicia*, it is fifty miles distant. All that sea which lieth betweene it and *Cilicia*, they call *Aulon Cilicium*, that is to say, The plaine of *Cilicia*. In this tract is the Island *Elæusa*: and foure others besides, euen before the cape, named *Clides*, ouer-against *Syria*. Likewise one more, named *Stiria*, at the other cape or point of *Cilicia*. Moreouer, against *Neampaphos*, [i. new *Paphos*] the Isle *Hierocopia*. Against *Salamis*, *Salaminx*. Moreouer in the *Lycian* sea there be *Illyris*, *Telendos*, *Artelebussa*, and three *Cypriæ*, all barren and fruitlesse: besides *Dionysia*, before-time called *Carætha*. Moreouer, against the promontory of *Taurus*, and the *Chelidonia*, hurtfull and dangerous to saylers: and besides them as many more, together with the towne *Leucola*, called *Paðia*, namely, *Lafia*, *Nymphous*, *Macris*, *Megista*, in which the citie that flood is gone. Besides these, many others therewere, but of no importance. But ouer-against the cape *Chimera*, *Dolichiste*, *Chirogilium*, *Crambussa*, *Rhoge*, *Enagora* of eight miles. Against *Dædalion*, two: against *Cryeon*, three: *Stongyle*, moreouer, against *Sidynia*, which king *Antiochus* founded: and toward the river *Glaucus*, *Lagusa*, *Macris*, *Didyma*, *Helbo*, *Scope*, *Aspis*, and *Telandria*: howbeit, the towne in it is sunke and gone: last of all the Isle *Rhodusa*, next to the harborough or haue *Caunus*. But the fairest of all is the Isle *Rhodes*, a free state, and subiect to none: It containeth in compass an hundred and thirtie miles, or if we rather giue credit to *Isidorus*, an hundred and three. Three great townes there be in it well peopled, *Lindus*, *Camirus*, and *Ialyfus*, now called *Rhodes*. By the account of *Isidorus* it is from *Alexandria* in *Ægypt*, five hundred seuentie and eight miles: but according to *Eratosthenes* five hundred sixty and nine: after *Mutianus* five hundred, and from *Cyprus* foure hundred and sixteene. Many names hath it been knowne by in times past, to wit, *Ophysa*, *Asteria*, *Æthraea*, *Trinacria*, *Corymbia*, *Pœessa*, *Atabyria* of king *Arabyris*: and finally, *Macaria*, and *Oloessa*. Many other Islands be subiect vnto it, and namely *Carpathus* (which gaue name to the sea *Carpathium*) *Casos*, *Achme* in times past: and *Niseros*, distant from *Gnidus* twelue miles and an halfe, which heretofore had bene called *Porphyris*. And in the same ranche, *Syme*, betweene *Rhodes* and *Gnidus*, and is in circuit six and thirtie miles and a halfe. Enriched this Island is with eight commodious hauens. Ouer and besides these, there lie about *Rhodes*, *Cyclopis*, *Teganon*, *Cordylusa*, foure vnder the name of *Diabete*: *Hymos*, *Chalcis*, wherein standeth a good towne: *Seutusa*, *Narthecusa*, *Dimaltos*, and *Progne*. Being past *Gnidus*, yee shall discouer *Ciferussa*, *Therionarce*, *Calydne* beautified with three townes, to wit, *Nortium*, *Nisyrus*, *Mendeterus*: with *Arconesus* the Isle, wherein standeth the towne *Ceramus*. Vpon the coast of *Caria*, the Islands, twenty in number, called *Argia*: besides, *Hytussa*, *Lepsia*, and *Leros*. But the goodliest & most principall of all others in that coast is *Cos*, which lieth from *Halicarnassus* fiftene miles; and in compass about, it beareth an hundred miles: as men thinke, *Merope* it was called: as *Staphylus* saith, *Cos*: but according to *Dionysius*, *Meropis*: and afterwards *Nymphæa*. This Isle is fortified with the mount *Prion*: and as some thinke, *Nisyrus* the Island, named before-time *Porphyris*, was of old vnto this; and afterwards dismembred from it. Beyond this Island yee may discouer *Carianda*, with a towne in it: and not farre from *Halicarnassus*, *Pidosus*. Moreouer, in the gulfe *Ceramicus*, *Priaponeus*, *Hipponeus*, *Psyræ*, *Mya*, *Lampfemandus*, *Passala*, *Crusa*, *Pyrre*, *Sepiussa*, *Melano*. And within a litle of the maine, another called *Cinedopolis*, by occasion of certain *Catamites* and shamefull baggages that king *Alexander* the Great left there. The coast of *Ionis* hath in the sea the Islands *Ægæa* and *Corseæ*, besides *Icaros*, spoken of before. Also *Lade*, before-time called *Lata*: and among some other little ones of no worth, the two *Camelides* nere to *Milerus*. Moreouer, *Mycalum*, *Trogylia*, *Trepilion*, *Argennon*, *Sardalion*: & the free Island *Samos*, which in circuit hath fourescore and seuen miles, or as *Isidorus* thinkes, a hundred. *Aristotle* writeth, how at the first it was called *Parrhania*, afterwards *Dryusa*, and then *Anthemusa*.

Aristocritus giueth it moreouer other names, to wit, Melamphyllus, yea, and Cyparissia: others terme it Partheno-arusa, and Stephane. Riuer in it be Imbrasus, Chesium, and Ibetres: fountaines of fresh water, Gigarto, and Leucothea: but no other hills, laue only Cercetius. There lie adioyning to it other Islands besides, namely, Rhypara, Nymphæa, and Achillea. Fourescore and thirteene miles from it, you may discouer Chios, a free state, with a town in it, which is an Island as renowned euery way as Samos: *Ephorus* by the ancient name calleth it Æthalia: *Metrodorus* and *Cheubulus*, Chia, of a certaine lady Nymph, whose name was *Chio*: others supposed it was so called of Chion, i. Snow: and some would haue it to be Macris and Pityusa. An hill there is in it called Pellenæas, where the good marble is digged, called Chium. The ancient Geographers haue written, That it is a hundred twenty and fise miles about; and *Isidorus* addeth nine more. Scituate it is betweene Samos and Lesbos, full opposite vnto the cape Erythra. Neere vnto it lie Thallusa (which some write Dapnusa,) Oenussa, Elaphites, Euryanassa, Arginussa with a towne. Now are all these about Ephesus, as also the Isles of *Pisistratus*, so called: and those which are named Anthina, to wit, Myonessus, and Diareusa. In both these the townes that were, be lost through water. Furthermore, the Island Poroselenæ with a towne in it, Cercia, Halone, Commone, Illetia, Lepria, and Rhospheria, Procusa, Bolbulæ, Phana, Priapos, Syce, Melane, Ænare, Sidusa, Pela, Drymusa, Anydros, Scopelos, Sycussa, Marathussa, Psile, Perirheusa, and many others of no reckoning. But among the Isles of name, is that of Teos, lying farther in the deepe sea, which hath a towne in it: and lieth from Chios fourescore and one miles, and as much from the Bay Erythra. Neere vnto Smyrna are the Islands Peristerides, Catieria, Alopecce, Elæussa, Bachina, Pyrtira, Crommyonessus, and Megale. And iust before Troas, the Isles Ascania, and three Plateæ. Then the Lamiæ, and two Plitaniæ. Moreouer, the Islands Plate, Scopelos, Getone, Artheidon, Celæ, Lagussa, and Didymæ. But the most stately of all others in this sea, is Lesbos, which lies from Chios threescore and fise miles. Named it was in times past, Hemerte, Lafia, Pelalgia, Ægira, Æthiope and Macaria: within it were eight townes of name; whereof one, namely Pyrrha, is swallowed vp of the sea: and another, to wit, Arisbe, ouerthrowen by an earthquake. As for the Isle Methymna was peopled from Antissa, which was vnited to it, and wherein were eight townes, and is about seuen and thirtie miles from * Asia the lesse. As for the townes Agamede and Hiera which were in it, gone they be now and vtterly perished. Yet there remaine Eresos, Pyrrha, and Mitylenæ, which hath continued for fise hundred yeeres, mighty and puissant. *Isidorus* saith, That this Island is in circuit about a hundred seueny and three miles: but the old Geographers, a hundred ninety and fise. In it are these mountaines, Lepethymus, Ordymnus, Maristus, Creon, and Olympus. Eight miles and a halfe it is from the Continent, where it lieth neereft. About this Island Lesbos, there lie neere at hand other little ones, namely, Saudalion, and the fise Leuca. Of which Cydonea is one, wherein is a fountaine of hot water. As for Argenussa, from thence to Ægæ is reckoned foure miles. There are besides in this coast Phellusa, & Pedua. Now without Hellepont, ouer-against the bay and cape Sigæum, lieth the Isle Tenedus, called sometimes Leucophrys, Phænice, and Lynceffos. From Lesbos it is six and fifty miles, and from Sigæum twelue miles and a halfe.

CHAP. XXXII.

¶ *Hellepontus, Mysia, Phrygia, Gallatia, Bithynia, Bosphorus.*

Archipelago.

Let vs now leaue the Isles in the sea Ægeum, and come to Hellepont, now called the streights of Callipolis: whereinto the maine sea gushes with a mighty force and violence, with his gulfes and whirlpooles, digging before him a way, vntil he haue limited and diuided Asia from Europe. The promontory first appearing there, we named Trapeza. From which tenne miles off, standeth the towne Abidum, where the streights are but seuen stadia ouer. Beyond it is Percote the towne: and Lampfacum, called before-time Pityusa. Moreouer, the Colonie Parium, which *Homer* named Adrastia. Moreouer, the towne Priapos, the riuer Æscopus and the cape Zelia. Then come ye to Propontus, for so is the place called where the sea begins to enlarge it selfe. Into this channell runneth the riuer Granicum, which maketh the hauen Artace, where once stood a towne. Beyond it there is an Island, which *Alexander* the Great ioined to the Continent [by two bridges, according to *Strabo*] in which standeth the towne Cyzicum,

A zicum, founded by the Milesians, called heretofore Arconnefos, Dolionis, & Dindymis, neere the top whereof is the mountaine Dindymus. When ye are beyond Cizycum, you meet with these townes besides, Placia, Ariacos, Scylacum, & behind them, the hill Olympus, called sometime Mæsius. Also the city Olympena. The riuers Horiæus and Rhyndacus, named heretofore Lycus. This riuer taketh his beginning in the marish or meere Artynia, neere to Miletopolis. It receiueth into it Marestos, and many others, and parteth Asia from Bithynia. This region in ancient time was called Cronia: after, Theffalis: then Malianda, and Strymonis. All this nation of these quarters, *Homer* named Halizones, for that they be enuiroined with the sea. Therein stood in old time a mighty great city named Attusa. At this day it hath 15 cities, amongst which is Gordiu, come, now called Iuliopolis: and in the very coast vpon the sea, Dascylos. Go further on and ye meet with the riuer Gebes: and within the main, the towne Helgas, the same that Germanicopolis, knowne also by another name, Booscoere, as also Apamea, now called Myrtea of the Colophonians. Being past it, you come to the riuer Etheleum, the ancient limit of Troas, where Mysia beginneth. Afterwards you enter into the gulfes of Bryllion, whereinto runneth the riuer Ascanium, vpon which standeth the towne Bryllion, and beyond it you shall see the riuers Helas and Cios, together with a towne of that name. A mart towne this was, whereto resorted the Phrygians that border neere to it, for to traffique and furnish themselves with merchandise: built verily it was by the Milesians: but the place whereon it stood was called Ascania of Phrygia. And therefore me-thinks we cannot do better than euen here to speake of that country. Phrygia then spreadeth out about Troas and the nations before-named, from the cape Lectus vnto the riuer Etheleus. It confronteth on the North side vpon part of Galatia, Southward it boundeth hard to Lycæonia, Pisidia, and Mygdonia. And on the East part it reacheth to Cappadocia. The townes of greatest name, besides those before rehearsed, be Ancyra, Andria, Celæna, Colosse, Carina, Cotiaion, Ceranæ, Iconium, and Midaion. Certain Authors I haue, who write, that out of Europe there come to inhabit these parts, the Mysi, Bryges, and Thyni, of whom are descended and likewise named, the Mysians, Phrygians, and Bithynians.

And euen here I think it good to write also of Galatia, which lying higher than Phrygia, yet possesseth a greater part of the plaine country thereof, yea and the capitall place of it, sometime called Gordium. They that inhabited and held that quarter of Phrygia were Gaules, called Tolistobogi, Voturi, and Ambitui: but they that occupied the countreys of Mæonia and Paphlagonia were named Trochmi. This region confronteth Cappadocia on the North and East side, and the most fruitfull part thereof the Tectofages and Teutobodiaei kept in their possession. And so much for the principall nations of this country. As for the States, Terrarchies, and regiments, there be in all 195. The townes are these: of the Tectofages, Ancvra: of the Trochmi, Tavium: of the Tolistobogians, Pefinus. Besides these, there be States of good account, Attalenses, Arasenses, Comenses, Dios hieronitæ, Lystreni, Neapolitani, Oeandenses, Seleucenses, Sebasteni, Timmoniacenses, and Tebaseni. This Galatia extendeth euen as far as to Gabalia and Milyæ in Pamphylia, which are scituate about Baris: also Cyllaticum and Oroadicum, the marches of Pisidia, likewise Obigene, part of Lycæonia. Riuers there be in it, beside those before named, Sangarium and Gallus, of which riuer, the gelded priests of dame *Cybele*, mother of the gods, were named Galli. Now it resteth to speake of the towns vpon the sea coast. Yet I cannot ouerpasse Prusa neere to Cios, which lieth farre within the country of Bithynia, which *Annibal* founded at the foot of the hill Olympus: from Prusa to Nicæa are counted 25 miles: in which way lieth the lake Ascanium betweene. Then come you to Nicæa in the very vtmost part of the gulf Ascanium, which before was called Olbia: also to another Prusa, built vnder the mountaine Hippius. Once there were in this coast Pythopolis, Parthenopolis, and Coryphanta. And now there be vpon the sea side these riuers, Æsius, Bryazon, Plataneus, Arcus, Siros, Gendos, named also Chrysothoas. The promontory also, vpon which stood the towne Megaricum. Then the gulfes or arme of the sea which was called Craspedites, for that that towne before named stood as it were in a fold, plait, or nouke thereof. Sometimes also there was the towne Astacum, whereupon the Creeke tooke the name of Astacenus. Moreouer, in ancient time, the Towne Libyssa, by report, was planted there: But now there remaineth nothing else to be seen but the tombe of *Annibal*. But in the inmost part of the Gulfe, where it endeth, there standeth the goodly faire City of Bithynia called Nicomedia.

media. The cape Leucatas, which incloseth the gulfe Astareus, is from Nicomedia 42 miles and halfe. Being past this gulfe, the sea begins to streighten again, and the land to meet neer together; and these streights reach as far as Bosphorus in Thracia. Vpon these streights stands the free city Chalcedon, 72 miles and a halfe from Nicomedia. Before time it was called Procrastis: then Compusa: afterwards, the city of the Blind, for that they who founded it, being in a place but 7 stadia from Bizantium, where was a seat in all respects more commodious and fit for a city, were so blind as not to chuse it for the plot of Chalcedon. But within the firme land of Bithynia is the colony Apamena: and there inhabit also the Agrippenses, Iuliopolites, and they of Bithynium. Moreouer, for riuers ye haue Syrium, Lapias, Pharmicas, Alces, Crynis, Lylæus, Scopius, Hieras, which parteth Bithynia from Galatia. Beyond Chalcedon stood Chrysopolis: then Nicopolis, of which the gulfe still retaines the name, wherein is the haven of Amycus: the cape Naulocum, Estia, wherein is the temple of Neptune: and the Bosphorus, a streight halfe a mile ouer, which now once again parteth Asia and Europe. From Chalcedon it is 12 miles and an halfe. There beginneth the sea to open wider, where it is 8 miles & a quarter ouer, in that place where stood once the towne Philopolis. All the maritime coasts are inhabited by the Thyni, but the inland parts by the Bithynians. Lo here an end of Asia, and of 282 nations, which are reckoned from the limits and gulf of Lycia, vnto the streights of Constantinople. The space of the streights of Hellespont and Propontis together, vntill you come to Bosphorus in Thracia containeth in length 188 miles, as we haue before said. From Chalcedon to Sigeum, by the computation of *Isidor*, are 372 miles and a halfe. Islands lying in Propontis before Cyzicum, are these, Elaphonnesus, from whence commeth the Cyzicen marble; and the same Isle was called Neuris, and Proconnesus. Then follow Ophyusa, Acanthus, Phœbe, Scopelos, Porphyrione, and Halone with a towne. Moreouer, Delphacia and Polydora, also Artacæon, with the towne. Furthermore, ouer against Nicomedia is Demonnesos: likewise beyond Heraclea, iust against Bithynia, is Thynias, which the Barbarians call Bithynia. Ouer and besides, Antiochia: and against the fosse or riuer Rhyndacus, Besbicos, 18 miles about. Last of all, Elæa, two Rhodustæ, Erebinthus, Magale, Chalcitis, and Pityodes.



THE SIXTH BOOKE OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIUS SECVNDVS.

CHAP. I.

¶ Pontus Euxinus.



He sea called Pontus Euxinus, and named by the Greeks in old time, Axenos, for the hard vsage that passengers found at the hands of those sauage Nations vpon the coasts thereof, is spred also betwixt Europ and Asia, vpon a very spite and speciall enuy of Nature, as it seems, to the earth, and a wilfull desire to maintaine the sea still in his greatnesse, and to fulfill his greedy and endlesse appetite. For theee was not contented to haue inuironed the whole earth, with the main Ocean, yea and taken from it a great part thereof, with exceeding rage overflowing the same, and laying all empty and naked: it sufficed not, I say, to haue broken through the mountaines, and so to rush in, and after the sea had dismembred * Caspe from Affricke, to haue

A haue swallowed vp much more by far than is left behind to be seen: no nor to haue let Propontis gush through Hellespont, and so to encroach again vpon the earth and gaine more ground: vnlesse from the streights of Bosphorus also he enlarge himselfe into another huge and vast sea, and yet is neuer content, vntill the lake Mœotis also with his streight, meet with him as he thus spreadeth abroad and floweth at liberty, and so ioine together and part as it were, their stolne good betweene them. And verily that all this is happened maugre the earth, and that it made all resistance that it could, appeareth evidently by so many streights and narrow passages lying between these two elements of so contrary nature (considering that in Hellespont, the space is not about 875 paces from land to land; and at the two Bosphori the sea is so passeable, that oxen or kine may swim at ease from the one side to the other: and hereupon they both tooke their name:) the which vicinitie serueth very wel to entertaine and nourish amity among nations, separated by nature one from another, and in this disunion as it were, appeareth yet a brothely fellowship and vnitie. For the cocks may be heard to crow, and the dogs to bark, from the one side to the other, yea and men out of these two worlds may parly one to another with audible voice, and haue commerce of speech together, if the weather be calme, and that the windes doe not carry away the sound thereof.

Well, the measure some haue taken of the sea, from Bosphorus Thracius to the lake of Mœotis, and haue accounted it to be 1438 miles and a halfe. But *Eratoſthenes* reckoneth it lesse by one hundred. *Agrippa* saith, that from Chalcedon to Phacis, is a thousand miles, and so to Bosphorus Cimmerius 360 miles. As for vs we will set downe summarily and in generall, the distances of places, according to the moderne knowledge of our nation in these daies, forasmuch as our armies haue warred in the very streight and mouth of this Cimmerian streight.

Being passed then from the streight of Bosphorus Thracius, we meet with the riuer Rhebas, which some haue called Rhœsus; and beyond it Pissilis another riuer, then come we to the port of Calpas, and Sangarius one of the principall riuers of Asia; it ariseth in Phrygia, it receiueh other huge riuers into it, and among the rest Tembrogius and Gallus. The same Sangarius was called also Coralius. After this riuer, begin the gulfes Mariandini, vpon which is to be seen the towne Heraclea, scituate vpon the riuer Lycus. It is from the mouth of Pontus 200 miles. Beyond it is the port Acone, cursed for the venomous herbe and poisonous Aconitum, which taketh name thereof. Also the hole or caue Acherusia. Riuers also there be, Pedopiles, Callichorum and Sonantes. One towne, Tium, eight and thirty miles from Heraclea: and last of all, the riuer Bilis.

CHAP. II.

¶ The nation of the Paphlagonians and Cappadocians.

Beyond this riuer Bilis, is the countrey Paphlagonia, which some haue named Pylemerina; and it is inclosed with Galatia behinde it. The first towne ye meet in it, is Mastya, built by the Milesians: and next to it, is Cromna. In this quarter the Heneti inhabit, as *Cornelius Nepos* saith. Moreouer, from thence the Venetians in Italy, who beare their name, are descended as he would haue vs beleue. Neere to the said towne Cromna, is another called Sefamum in times past, and now Amastris. Also the mountaine Cytorus, 64 miles from Tium. When you are gone past this mountain, you shall come to Cimolus and Stephane, two townes, and likewise to the riuer Parthenius; and so forward to the cape and promontory Corambis, which reacheth forth a mighty way into the sea: and it is from the mouth of the sea Pontus 315 miles, or as others rather thinke, 350. As far also it is from the streight Cimmerius, or as some would rather haue it, 312 miles and a halfe. A towne there was also in times past of that name; and another likewise beyond it called Arminum: but now, there is to be seen the colony Sinope, 164 miles from Citorum. Being past it, you fall vpon the riuer Varetum, the people of Cappadocia, the townes Gazima and Gazelum, and the riuer Halyto, which issuing out of the foot of the hill Taurus, passeth through Cataonia and Cappadocia. Then meet you with these townes following, Gangre, Carissa, and the free city Amisum, which is from Sinope 130 miles. As you trauell farther, you shall see a gulfe carrying the name of the said towne, where the sea runneth so far within the land, that it seems to make Asia well-neare an Island: for from thence vnto the gulf Issicus in Cilicia is not about 200 miles through the continent. In al which tract, there be

no more than three nations which iustly and by good right, may be called Greekes, to wit, the Dorians, Ionians, and Æolians; for all the rest are reputed barbarous. Vnto Amisum, there ioined the towne Eupatoria, founded by *K. Mithridates*; and after that he was vanquished, both together tooke the name of Pompeiopolis.

CHAP. III.

¶ *Cappadocia.*

IN Cappadocia, there is a city well within the land, called Archelais, situate vpon the riuer Halys: which *Claudius Cesar* the Emperor erected as a colony, and peopled it with Romane souldiers. There is besides a towne which the riuer Sarus runneth vnder: also Neo-cæsarea, which Lycus passeth by: and Amasia with the riuer Iris running vnder it, within the countrey Gazacena. Moreouer, in the quarter called Colopena, there stand Sebastia & Sebastopolis, little towns indeed, howbeit comparable with those abovesaid. In the other part of Cappadocia there is the city Melita, built by queene *Scmiramis*, not far from Euphrates: also, Dio-cæsarea, Tyana, Castabala, Magnopolis, Zela, and vnder the mountaine Argæus, Mazaca, which now is named Cæsarea. That part of Cappadocia which lieth before Armenia the greater, is called Melitene: that which bordereth vpon Comagene, Cataonia: vpon Phrygia, Garfaurit: vpon Sargaurasana, Cammanum; and finally vpon Galatia, Morimene. And there the riuer Cappadox separateth the one from the other. Of this riuer the Cappadocians took name, whereas beforetime they were called Leucosyras for the lesse Armenia, the riuer Lycus diuideth it from Neo-cæsarea before said. Within the country there runneth also the great riuer Ceraunus. But on the coast side, when you are past the city Amysum, you meet with the town Lycastum, and the riuer Chadisa; and once past them, you enter into the countrey Themiscyrea. In this quarter also you may see the riuer Iris, bringing down with it another riuer Lycus that runneth into it. And in the midland parts there is the city Zicia, ennobled for the ouerthrow of *Triarius*, whom *C. Cesar* defeated with his whole army. But in the coast againe you shall encounter the riuer Thermodon, which issueth from before a castle named Phanarœa, and passeth beside the foot of the mountaine Amazonius. In which place there stood sometime a towne of that name, and other fiue, namely, Phamizonium, Themiscyrea, Sotira, Amasia, Comana, at this present called Mantium.

CHAP. IV.

¶ *The people of the region Themiscyrene.*

MOREouer, in Pontus ye haue the nations of the Genetæ & the Chalybes, together with a town of Coryi. People besides called Tibareni, and Mossyni, who brand and marke their body with hot searing yrons. Also the nation of the Macrocephali, with the towne Cerasus, and the port Cordula. Beyond which you come to a people named Bechires, and Buzeri, and to the riuer Melas. And so forward to the quarter of the Macrones, Sideni, & so to the riuer Sydenum, vpon which is situate the town Polemonium, distant from Amisum 220 miles: where ye shall finde the riuers Iasonius and Melanthius; and a towne 80 miles from Amisum, called Pharnacea; the castle and riuer of Tripolis. Item, Philocalia, and Liniopolis without a riuer: and lastly the imperiall & free city Trapezus, enuironed with a high mountain, 100 miles from Pharnacea. And being past Trapezus, you enter into the country of the Armenochalybes, and Armenia the greater; which are 30 miles asunder. But vpon the coast you shall see the riuer Pyxites that runneth euen before Trapezus; and beyond it the country of the Sanni Heniochi. Moreouer, the riuer Abfarus, in the mouth whereof there is a castle likewise so named, from Trapezus 150 miles. Behind the mountains of that quarter, you meet with the region Iberia; but in the coast thereof the Heniochi, Ampreutæ and Lazi. The riuers Campeonyfis, Nogrus, Bathys. When ye are once past them, you come into the countrey of the Colchians, where stands the town Marium, with the riuer Heracleum passing vnder it, & a Promontorie of that name, & last of all, the most renowned riuer of all Pontus, called Phasis: this riuer riseth from out of the Moschian mountains, & for 38 miles and an halfe, is nauigable, & beareth any great vessels whatfouer. And then for a great way it carrieth smaller bottoms, & hath ouer it

A 120 bridges. Beautified it was sometimes with many faire townes vpon the bankes thereof on both sides, and the principall of them all, were Tyritæum, Cygnus, and the city Phasis situate in the very mouth thereof, as it falleth into the sea. But the goodliest city planted vpon this riuer, and most famous of all the rest was Æa, fifteene miles distant from the sea: where Hippos and Cyanos, two mighty great riuers, comming from diuers parts, enter both into the riuer Phasis. But now there is no count made of any but of Surium onely, which taketh name of the riuer Surium which runneth to it. And thus far we said that Phasis was capable of great ships. Among other riuers which it receiues, for number and greatnesse admirable, is the riuer Glaucaus. In the fosse and mouth of this tiuer Phasis, where hee is discharged into the sea, there be some little Islands of no reckoning. And there, from Bfarus it is 75 miles. Being past Phasis you meet with another riuer called Charien: vpon which bordereth the nation of the Salæ, named in old time Phthiophagi and Suani, where you shall meet with the riuer Cobus, which issueth out of Caucasus, and runneth through the country of the Suani aboue said. Then you come to another riuer Rhoas, and so forward to the region Eerectice: to the riuers Sigania, Tersos, Atelpos, Chryforrhoas, and the people Abfilæ: the castle Sebastopolis, an hundred miles from Phasis, the nation of the Sanigores, the towne Cygnus, the riuer and towne both called Pityus. And last of all ye arriue vpon the country of the Heniocha, where be nations entituled with many and fundry names.

CHAP. V.

¶ *The region of Colchis, the Achæi, and other nations in that tract.*

NEXT followeth the region of Colchis, which is likewise in Pontus: wherein the mountain Caucasus windes and turnes toward the Rhiphæan hills, as hath been said before, and that mountaine of the one side bendeth downe toward Euxinus, Pontus, and Mæotis; and of the other, enclineth to the Caspian and Hircane seas. When ye are descended to the maritime coasts, ye shall find many barbarous and sauage nations there inhabiting, to wit, the Melanchlæni, and the Choruxi, where sometimes stood Dioscurias a city of the Cholchians, neere vnto the riuer Anthemus, which now lieth wast and dispeopled, notwithstanding it was so renowned in times past, that by the report of *Timosthenes*, there repaired thither and inhabited therein 300 nations of diuers languages. And euen afterwards our Romanes were forced to prouide themselves of 130 interpreters, when they would negotiate and traffick with the people in and about Dioscurias. Some there be that think how it was first founded by *Amphitus* and *Telchium*, who had the charge of the chariots of *Cæstor* and *Pollux*: for certain it is, that the fierce and wild nation of the Heniochi, are from them descended. Being past Dioscurias, you come vpon the towne Heraclium, which from Sebastopolis is 80 miles distant: and so forward to the Achæi, Mardi and Cercetæ: and after them to the Serri, and Cephaloromi. For within that tract stood the most rich and wealthy town Pitius, which by the Heniochians was rancked and spoiled. On the backe part thereof inhabit the Epagerites [a nation of the Sarmatians] euen vpon the mountaine Caucasus: and on the other side of that hill, the Sauromatæ (the country is at this day called Tartaria the great.) Hither retired and fled king *Mithridates* in the time of *Claudius Cesar* the Emperor: who made report, that the Thali dwell thereby, and confine Eastward vpon the very opening of the Caspian sea: which by his report remaineth dry, whenfouer the sea doth ebbe. But now to turne vnto the coast neer vnto the Cercetæ, you meet with the riuer Icarusa, with a towne and riuer called Hierum, 136 miles from Heracleum. Then come yee to the cape Cronea, in the very ridge and high pitch whereof the Toretæ inhabit. But beneath it you may see the citie Sindica, 67 miles situate from Hierum: and last of all, you arriue vpon the riuer Sceaceriges.

CHAP. VI.

¶ *Mæotis, and the streights thereof called Bosphorus Cimmerius.*

FROM the said riuer to the very entrance of the Cimmerian Bosphorus are counted 88 miles and a halfe. But the length of the very demy Island, which extendeth and stretcheth out between Pontus and Mæotis, is not about 87 miles and a halfe, and the breadth in no place lesse

lesse than two acres of land. This the paifants of that country do call Eione. The very coasts of this streight Bosphorus, both of Asia side and Europa, boweth and windeth like a curb to Mœotis. As touching the townes here planted, in the very first entry thereof standeth Hermonassa, and then Cepi, founded by the Milesians. Being past Cepi you come soone after to Stratilia, Phanagoria, and Aparuros, in manner vnpeopled and void: and last of all, in the very vtmost point of the mouth where it falleth into the sea, you arrive at the towne Cimmericus, named before-time Cerberian.

CHAP. VII.

¶ Nations about Mœotis.

Being passed Cimmericus, you come to the very broad lake Mœotis, whereof we spake before in the Geography of Europe. Vpon the coast wherof, beyond Cimmericus on the side of Asia, inhabite the Mœotici, Vati, Serbi, Archi, Zingi, and Plesij. After this, you come to the great riuer Tanais, which runneth into Mœotis with two armes or branches: and on the sides of it dwell the Sarmations, an off-spring descended in old time (as men say) from the Medians: but so multiplied now, that they themselves are diuided and dispersed into many nations. And first of all are the Sauromatæ, surnamed Gynacocratumeni, i. (as one would say) subiect to women: from whence the Amazones are provided and furnished of men to serue their turne in stead of husbands. Next to them, are the Euasæ, Cortæ, Cicimeni, Messeniani, Costobocci, Choatræ, Zigæ, Dandari, Thussageræ, and Turcæ, euen as far as the wildernes, forrests chafes, and rough vallies. But beyond them are the Arnuphæi, who confine vpon the mountaine Rhiphæi. As for as the riuer Tanais, the Scythians call it Silys: and Mœotis, they name Temerinda, that is to say, the mother of the sea, or rather, the seas end. In ancient time there stood a great towne vpon the very mouth of Tanais, where it falleth into the sea. As for the neighbour borders of this sea, inhabited they were sometime by the Lares: afterwards, by the Clazomenij, and Mœones: and in proceffe of time, by the Panticapenses. Some Authours write, that about Mœotis toward the higher mountaine Ceraunij, these nations following doe inhabit, to wit, first vpon the very coast and sea side, the Napææ: and aboue them, the Eßedones, joyning vpon the Colchy, and the high mountain [Corax.] After them, the Carmæes, the Oranes, Anticæ, Mazacæ, Alicantici, Acapæates, Agagammæ, Phycari, Rhimofoli, and Ascomarci. Moreouer, vpon the hill Caucasus, the Icatales, Imaduches, Ranes, Anelaks, Tydians, Charastasci, and Afuciandes. Moreouer, along the riuer Lagous, issuing out of the mountaines Cathei, and into which Opharus runneth, these nations ensuing do dwell, to wit, the Caucadians, and the Opharites: beyond whom runneth the riuer Menotharus, and Imitues, out of the mountaines Cissij, which passeth through the Agedi, Carnapes, Gardei, Accrifi, Gabri, and Gregari: and about the source or spring of this riuer Imitues, the people Imitui and Aparrheni. Others say, that the Suites, Auchetes, Saternei, and Asampates, invaded and conquered these parts; and that the Tanaites and Nepheonites, were by them put to the edge of the sword, and not one person of them spared. Some write, that the riuer Opharius runneth through the Canteci, and the Sapæi: and that the riuer Tanais trauesed sometime through the Phatareans, Herticei, Spondolici, Synthietæ, Amassij, Issi, Catareti, Tagori, Catoni, Neripi, Agandei, Mandarei, Saturechei, and Spalei.

CHAP. VIII.

¶ Cappadocia.

Hitherto haue wee treated and gone through the nations and inhabitants of the coasts vpon the Mediterranean sea. Now are wee to speake of the people inhabiting the very midland parts of the maine within: wherein I protest, and deny not, but that I will deliuer many things otherwise than the ancient Geographers haue set downe: forasmuch as I haue made diligent search into the state of those regions, as wel by enquiry of *Domitius Corbulo* (who lately went with an army through those quarters as of diuers kings and princes, who made repaire to Rome with futes and supplications, but especially of those kings sons that were left as hostages in Rome. And first to begin with the nation of the Cappadocians. This is a country that

A that of all others which bound vpon Pontus, reacheth farthest within the firm land; for on the left hand it passeth by both Armenias, the greater and the lesse, & Comagene: and on the right all those nations in Asia before-named, confining many others; and still preuailing with great might, growing on and climbing Eastward vp to the mountain Taurus, it passeth beyond Lycania, Pisidia, and Cilicia: and with that quarter which is called Cataonia, pierceth aboue the tract of Antiochia, and reacheth as far as to the region Cyrrethica, which lyeth well within that country. And therefore the length of Asia there, may containe 1250 miles, & the breadth 640.

CHAP. IX.

¶ Armenia the greater and the lesse.

The greater Armenia, beginning at the mountains Pariedri, is diuided from Cappadocia by the riuer Euphrates, as hath bin said before: & where the riuer Euphrates beginneth to turne his course from Mesopotamia, by the riuer Tigris as renowned as the other, both these riuers is it furnished withal, which is the cause that it taketh the name of Mesopotamia, as being situate between them both. The main land which lyeth between, is possessed by the mountains of Arabia called Orei: howbeit, it extendeth vntill it confine vpon Adiabene. Being past it once, it is hemmed in with mountains that encounter it ouerthwart, which cause it to enlarge it selfe into a bredth on the left hand, as far as to the riuer Cyrus: and then it turneth euer crosse, vntill it meet with the riuer Araxes: but it carrieth his length into the lesse Armenia, confining stil vpon the riuer Absarus, which falleth into the Ponticke sea: and the mountaines Pariedri (from which the said riuer issueth) which diuide it from the lesse Armenia. As for the riuer Cyrus, it springeth in the mountains Heniochij, which some called Coraxici. But Araxes issueth out of the same mountain from whence Euphrates commeth, and there is not aboue six miles space between them both. This riuer Araxes is augmented with the riuer Musis, and then himselfe loseth also his name, and as most haue thought, is carried by the riuer Cyrus into the Caspian sea: as for the townes of name in the lesse Armenia, they be these, Casarea, Asia, and Nicopolis. In the greater yee haue Arsamole, fast vpon the riuer Euphrates: likewise Carcathiocerta, situate vpon Tigris. In the higher country, is the city Tigranocerta, built in the plain beneath, neere to Araxes. *Ausidius* saith, that both the Armeniæ containe in all 500 miles. *Claudius Cesar* reporteth, that in length from Dascusa to the confines of the Caspian sea, it taketh 1300 miles, and in bredth halfe so much, to wit, from Tigranocerta to Iberia. This is wel knowne, that diuided it is into certain regiments, which they call Strategians; and yet some of them in old time, were as large each of them as realmes and kingdomes: and to the number they were of 120, but such barbarous names they had, that they cannot well be set downe in writing. Enclosed it is Eastward with the mountains, but neither the hills Ceraunij, nor yet the region Adiabene, do presently and immediatly confine thereupon: for the country of the Sopheni lyeth between: then you come to the mountaines aforesaid, and being past them, you enter into the country of the Adiabenes. But on that coast where the plaines lie and the flat vallies, the next neighbors to Armenia, be the Menobardi and Moscheni. As for Adiabene, enuironed it is partly with the riuer Tigris, and partly compassed with an vnaccessible steep mountaines. On the left hand, it confineth vpon the Medians, and hath a prospect to the Caspian sea, the which commeth out of the Ocean (as we shall shew in meet and convenient place) and is inclosed wholly within the mountains of Caucasus. As for the nations there inhabiting along the marches and confines of Armenia, now wil we speake of them.

CHAP. X.

¶ Albania, and Iberia.

All the plaine country between Armenia and the riuer Cyrus, the Albanois of Asia do inhabit. Being past it, you enter anon into the Iberians region, who are separated from the Albanois aforesaid by the riuer Alazon, which runneth downe from the Caucasian hills into Cyrus. The townes of importance, in Albania, is Cabalaca; in Iberia, Harmastis, neere to the riuer Neoris: beyond which, is the region Thasie, and Triare, as farre as vnto the mountaines

tains Partedori. And when you are past them, you enter into the desarts of Chelchis: and on the side of them which lyeth toward the Ceraunij, the Armenochalybes do inhabit: and so forward you come into the tract and marches of the Moschi, which extend to the river Iberus, that runneth into Cyrus. Beneath them, inhabit the Sacassani, and beyond them the Macronians, who reach euen to the river Abfarus. Thus you see how the plaines and the hanging of the hills in these parts are inhabited. Againe, from the marches and frontiers of Albania, all the forefront of the hills is taken vp and possessed by the sauage people of the Sylui; and beneath them, of the Lubienes, and so forward by the Didurians, and Sodij.

CHAP. XI.

¶ The gates and passages of the mountaine Caucasus.

When ye are beyond the Sodij, you come to the Streights of the hill Caucasus, which many haue erroneously called Caspiæ Portæ. And certes, Nature hath performed a mightie piece of worke, in cleauing asunder at one instant those mountaines, where the gates were barred vp as it were with iron portculleises, whiles vnder the mids thereof, the river Dyriodorus runneth: and on this side of it, standeth a strong fort and castle called Cumathia, scituate vpon a rock, able to impeach an army neuer so puissant & innumerable that would passe thereby; in such sort, as in this place by means of these bar-gates, one part of the world is excluded from the other: and namely most of all they seeme to be set opposite as a rampart against Harmastis a towne of Iberia. But being passed these said gates, you come to the mountaines Gordyei, where the Valli and Suarni, barbarous and sauage nations, are employed onely in the mines of gold. Beyond them as far as to the Ponticke sea, you enter into the countrey of the Heniochi, wherof be many forts, and soon after to the Achei. And thus much as touching this tract of the sea Ponticke, and of the most renowned gulfs of all others. Some haue set downe in writing, that between Pontus and the Caspian sea, it is not above 375 miles. *Cornelius Nepos* saith it is but 150. See into what great streights betweene both seas Asia is driuen again, and as it were thronged. *Claudius Caesar* hath reported, that from Cimmerius Bosphorus to the Caspian sea, it is 150 miles, and that *Seleucus Nicator* purposed if he had liued, to cut the land through from the one side to the other: but in this purpose of his, himselfe was cut short and slain by *Ptolemeus Ceraunus*. To conclude, it is in manner held for certain, that from those gates of Caucasus vnto the Ponticke sea, it is 200 miles, and no lesse.

CHAP. XII.

¶ The Islands in the Ponticke sea.

In the Ponticke sea lye the Islands Planctæ, otherwise Cyaneæ or Symplegades. Then Apollonia, named also Thynnias, for distinction sake from that other so named in Europe: it is from the continent one mile, and is in circuit three. Iust ouer-against Pharnacca, is the Isle Chalceritis, which the Greeks called Aria, consecrated as it were to Mars; wherein they say the foules that are, vsed to fight and flutter with their wings against all other birds that come thither.

CHAP. XIII.

¶ The Regions and people confining vpon the Scythian Ocean.

Having thus sufficiently discoursed of all the countries within the firme land of Asia, let vs now determine to passe ouer the Rhiphæan hills, and discover the coasts of the Ocean which lie on the right hand of those hills. Wherein we haue to consider, that Asia is dashed and beaten vpon by this maine sea on three parts: to wit, on the North side, and there it is called Scythicus: on the East, where they call it Eous: and last from the South, and there they name it Indicus. And according to the sundry gulfs and creeks that it maketh, and the inhabitants by whom it passeth, many names it taketh. Howbeit, a great part of Asia toward the North, lieth desart, and hath in it much wildernesse vnhabitable, by reason of the extreme cold of that frozen climat, so subiect to the Pole Artick, But being once past the vtmost quarter of the

A the North-point, and came to the North-East where the Sun ariseth at midsommer, then you come to the Scythians. Beyond whom, and the very point of the North-pole and the winde from thence, some haue placed the Hyperborei; of whom we haue spoken at large in the treatise of Europe. On this side the Hyperborei, the first cape or promontory that you meet withall in the countrey Celtica, is named Lytarmis: and then you come vnto the river Carambucis, where by the forcible influence of the starres, the high mountaine Rhiphæa, as being wearied, begin to settle and abase themselves lower. At the fall and descent of which mountaine, I haue heard say, that certain people named Arnupheæ inhabited: a nation not much vnlike in their manner of life to the Hyperboreans. They haue their habitations in forests; their feeding is vpon berries & trees: shorne they be all and shauen, for both men and women count it a shame to haue haire on their heads: otherwise they are ciuill enough in their conuersation and behavior: and therefore, by report, they are held for a sacred people and inuiolable, in so much as those cruell nations and inhumane that border vpon them, will offer them no abuse; neither do they respect them only, but also in regard and honour of them, they forbear those also that lie vnto them as to a place of franchise and priuilege. Go beyond them once, you come among the *Scythians indeed, the Cimimerij, Cicianthi, Georgi, and the nation of the Amazons, & these confront the Caspian or Hircan sea: for it breaks forth of the deep Scythian Ocean, toward the back parts of Asia, and takes diuers names of the inhabitants coasting vpon it, but especially about all other of the Caspians & Hircaneans. *Clitarchus* is of this opinion, that this sea is full as great and large as Pontus Euxinus. And *Eratoſthenes* sets downe the very measure and pourpriſe thereof: namely, from East to South along the coast of Cadusia and Albania, 5400 stadia: from thence by the Aratiatics, Amarbi, and Hircanij, to the mouth of the river Zoum, 4800 stadia: from it to the mouth of Iaxartes where it falleth into the sea, 2400 stadia: which being put together amount in all to 1575 miles. *Artemidorus* counteth lesse by 25 miles. *Agrippa* in bounding out and limiting the circuit of the Caspian sea, & the regions coasting vpon it, together with them Armenia both the greater and the lesse, namely, Eastward with the Ocean of the Seres, Westward with the mountaines of Caucasus; on the South side with the hill Taurus, and finally on the North with the Scythian Ocean, hath written, That the whole precinct and compass of these parts may contain in length [so far as is known & discovered of those countries] 590 miles, and 290 in breadth. Yet for all this, therewant not others who say, That the whole circuit of that sea, and begin at the very mouth and firth thereof, ariseth to 2500 miles. As for this mouth afore said where it breakes into the sea it is very narrow, but exceeding long: howbeit when it begins once to enlarge it selfe and grow wide, it turns and fetcheth a compass with horned points like to a quarter moone, and after the manner of a Scythian bow, as *M. Varro* saith, it windes along from his mouth toward the lake Mœotis. The first gulfe that it makes is called Scythicus; for the Scythians inhabit on both sides, and by means of the narrow streight between haue commerce and trafficke one with another: for of the one side are the Nomades and Sauromatæ, comprising vnder them many other nations of diuers names: and on the other, the Abzoæ, who haue no fewer states vnder them. At the very entry of this sea on the right hand, the Vdines, a people of the Scythians, dwell vpon the very point of this mouth: and then along the coast, the Albanois, a nation descended (as men say) from *Iafon*; where the sea lying before them is called Albanum. This nation is spread also vpon the mountaines of Caucasus, and so along downe the hills as far as to the river Cyrus, which confines the marches between Armenia and Iberia, as hath bin said. About the Maritime coasts of Albania & the Vdines country, the Sarmatians, called Vridors, and Aroteræ, are planted: and behinde them, the Amazones, whom we haue already shewed; who also are women Sauromatians. The rivers of Albani which fall into the sea, are Cassios and Albanos: and then Cambices, which hath his head in the Caucasian mountaine: and soon after Cyrus, which ariseth out of the hills Corax, as before is said. Moreouer *Agrippa* writes, that this whole coast of Albanie (fortified with those high and inaccessible mountaine of Caucasus) contains 425 miles. Now when you are past the river Cyrus, the Caspian sea begins to take that name, for that the Caspians doe inhabit the coasts thereof. And here the error of many is to be laid open and corrected, euen of those also who were in the last voyage with *Corbulo* in Armenia with the Romane armie: for they tooke it, that those gates of Caucasus whereof we spake before, were the Caspian gates, and so called them: and the verie mappes and descriptions which are painted and sent from thence, beare that name and title.

M

Likewise

* At this day, the Moscho-uites, white & black Rufians, Georgians, Amazonians, & the lesse Tartaries

Likewise the menacing commandements, and threatning commissions sent out by *Nero* the Emperour for to gaine and conquer those gates, which through Iberia lead into Sarmatia, made mention of the gates Caspia there, which had in a manner no passage at all to the Caspian sea, by reason that the mountaine Caucasus empeached it. Howbeit in very truth, there be other gates so called, which joine vpon the Caspian nations, which wee had neuer knowne from the other, but by relation of those that accompanied *Alexander* the Great in his voyage and expedition to those parts. For the realme and kingdom of the Persians, which at this day wee take that the Parthians hold, lyeth aloft betwene the Persian and Hircane seas vpon the mountaines of Caucasus, in the very hanging and descent thereof, on both sides confining vpon Armenia the greater: and on that part which lieth to Comagene, confronteth and joineth (as we haue said) vpon Sephenia: and vpon it againe bordereth Adiabene, where the realme of the Assyrians doth begin: whereof Arbelitis, which boundeth next vpon Syria, taketh vp a good part: which is the countrie wherein *Alexander* the Great discomfited and vanquished *Darius*. All this tract, the Macedonians who entered with *Alexander*, surnamed Mygdonia, for the resemblance of that in Greece from which they came. Townes of name there be in it, Alexandria, and Antiochia, which they call Nisibis: and from Artaxata it is 750 miles. There was also another citie called Ninus, or Niniue, seated vpon the riuer Tygris, which regarded the West, which in times past was highly renowned. But on the other side, where it lieth toward the Caspian sea, lieth the region Atropatene, separated by the riuer Araxes, from Otene in Armenia: wherein is the citie Gazæ, 450 miles from Artaxata: and as many from Ecbatana in Media, whereon some part the Atropatenes do hold.

CHAP. XIII.

¶ *Media, and the gates Caspia.*

AS for Ecbatana the head citie of Media, *Seleucus* the king founded it: and it is from Seleucia the great 750 miles, and from the Caspian gates 20. The other great towns of importance in Media, be Phausia, Agamzua, and Apamia, named also Rhaphane. And as for the streights there, called the Caspian gates, the same reason is there of that name, as of the other by Caucasus: by reason that the mountaine is clouen and broken through, and hath so narrow a lane, that hardly a waine or cart is able to passe by it; and that for the length of 8 miles: all done by the picke-axe and mans hand. The rockes and cliffs that hang ouer on the one side and the other, be like as if they were scorched and half burnt: so dry and thirsty is all that tract, and without fresh water for 38 miles space: for all the liquor and moisture issuing out of those craggie rockes, runneth through it, which letteth the passage, and causeth folke to auoid that way. Besides, such a number of serpents doe there haunt, that no man dare passe that way but in winter onely.

CHAP. XV.

¶ *Nations about the Hircane sea.*

VNTO Adiabene, joyneth the countrie of the Carduchy, so called in times past, and now Cordueni, by which the riuer Tigris runneth: and vpon them the Pratitæ do confine, called also Paredoni: who keepe the hold of the Caspian gates aforesaid. On the other side of whom, you shall meet with the deserts of Parthia, and the mountaine Cithenus: but being passed that once, you come straight into the most pleasant and beautiful tract of the same Parthia, called Choara; and there stand two cities of the Parthians, built sometimes as forts opposite against the Medians: namely, Calliope & Issatis, situate in times past vpon another rocke. As for the capitall citie of al Partia, Hecatompylos, it is from the Caspian gates aforesaid 133 miles. Thus you see how the kingdom of the Parthians also is limited & separat by these mountaines and streights. When a man is once gotten forth of these gates, presently he enters vpon the Caspian countrie, which reacheth as far as to the sea side, and gaue the name as well to it as to the gates aforesaid. Howbeit al the region vpon the left hand is full of mountains from whence backward to the riuer Cyrus, are by report 220 miles, but from that riuer if you would go higher vp to those gates, you shall find it 700 miles. And in very truth from this place began *Alexander* to make the account and reckoning of his iournies, in that voyage of his to India,

A India, saying, that from those gates to the entrance of India, it was 15680 stadia: from thence to the city Bacha, which they call Zariafpa 3700, and so to the riuer Iaxartes 5 miles.

CHAP. XVI.

¶ *Other Nations also.*

FROM the Caspian countrie Eastward, lieth the region called Zapanortene, & in it the land Daricum, the most fertile tract of all those parts. Then come you to the Tapyrians, Anariaci, Stauri and Hircani, at whose coasts the same sea begins to take the name Hircanum, euen from the riuer Syderis. About it are other riuers, to wit, Mazeras and Stratos, all issuing out of Caucasus. Out of the realme of Hircania, you enter into the countrie Margiana, so commendable for the warme Sun-shine weather there, and the only place in all that quarter which yeeldeth vines. Enuironed it is on euery side with goodly pleasant hills to the cie, for the compass of 1500 stadia. Fortified it is besides, and affordeth hard access vnto it by reason of the sandy and barren deserts for the space of 120 miles. And scituate it is euen against the tract of Parthia, wherein *Alexander* the Great sometime had built Alexandria, which beeing rased and destroyed by the Barbarians, *Antiochus* the son of *Seleucus* re-edified in the same place vpon the riuer Margus, which runs through it, together with another riuer Zodale, and it was called Syriana [or rather Seleucia.] Howbeit, he desired rather that it should be named Antiochia. This citie containeth in circuit 70 stadia: and into it, *Orodes* after that he had defeated *Craffus* & his host, brought all the Romans whom he had taken prisoners. Being past the high countrie Margiana, you come to the region of Mardi, a fierce & sauage people, subiect vnto none, they inhabit the mountain Caucasus, and reach as far as to the Baetrians. Beyond that tract are these nations, the Ochanes, Chomares, Berdriget, Hermatotrophi, Bomarci, Commani, Marucæi, Mandrueni and Iatij. The riuers also Mandrus and Gridinus. Beyond inhabit the Chorasmij, Gandari, Atafini, Paricani, Sarangæ, Parafini, Maratiani, Nasotiani, Aorsi, Gelæ, whom the Greeks called Cadufij, and the Matiani. Moreouer, in it stood the great towne Heraclea, built by *Alexander* the Great, which afterwards was subuerted and ouerthrowne: but when it was repaired again by *Antiochus*, he named it Achais. Beneath in the country, the Derbines do inhabit, thorough whose marches in the very midst runneth the riuer Oxus, which hath his beginning out of a lake called Oxus. Beyond them are the Symataæ, Oxij, Tagæ, Heniochi, Bateni, Saraparæ, and Baetrians, with their towne Zariafpe, called afterwards Baetrum, of the riuer Baetra. This nation inhabiteth the back parts of the hill Paropamisus, ouer against the source & spring of the riuer Indus, & is enuironed with the riuer Ochus. Beyond the Baetrians are the Sogdianes, & Panda the principal city of that country. In the very most marches of their territory standeth the town Alexandria built by *Alexander* the Great, wherein are to be seen the altars and columns, erected by *Hercules*, prince *Bacchus*, *Cyrus*, *Semiramis*, and *Alexander*: supposed and taken to be the very end of all their voiaages in that part of the world, resting within the riuer Iaxartes, which the Scythians call Silys. For *Alexander* and his soldiers thought it had bin Tanais. Howbeit, captain *Demonax*, who serued vnder the kings *Seleucus* and *Antiochus*, passed over that riuer with an army, and at the end of his voiage set vp altars vnto *Apollo Didymus*. And the *Demonax* we follow, especially in this description and Geographic of ours.

CHAP. XVII.

¶ *The Scythian Nation.*

BEYOND the realm Sogdiana, inhabit the Nations of the Scythians. The Persians were wont to call them in general Sacas, of a people adioyning vnto them, so named. In old time they were known by the name of Arameans. And on the other side, the Scythians for their part vsed to term the Persians, Chorsari: and the hill Caucasus, they called Graucalus, that is to say, white with snow. The principal nations of Scythia, be the Saræ, Massagetæ, Dahæ, Essedonæ, Ariacæ, Rhymnici, Pefici, Amordi, Histi, Edones, Camæ, Camacæ, Euchatæ, Cotieri, Antariani, Pialæ, Arimaspi beforetime called Acidiri, Afei & Oetei. As for the Napæans & Apelæans who sometime dwelt there, they be vtterly extinct and gone. The riuers there of name be Mandagræus and Caspius. And surely there is not a region wherein Geographers doe varie

and disagree more than in this: and as I take it, this commeth of the infinit number of those nations, wandering to & fro, and abiding neuer in one place. *Alexander* the Great and *M. Varro* make report, that the water of the Scythian sea is fresh in taste, & potable. And in truth *Pompey* the great had such water brought vnto him from thence to drink, when he waged war thereby against *Mithridates*: by reason no doubt of the great riuers that fall into it, which overcome the saltnesse of the water. *Varro* saith moreover, That during this expedition and iourney of *Pompeius*, it was for certain knowne, that it is but seuen daies iourney from out of India to the *Bactrians* country, euen as far as to the riuier *Icarus* which runneth into *Oxus*: and that the merchandise of India, transported by the *Caspian* sea, and so to the riuier *Cyrus*, may be brought in fife daies by land as far as to *Phasis* in *Pontus*. Many Islands there lie all ouer that sea: but one above the rest, and most renowned, is *Tazata*; for thither all the shipping from out of the *Caspian* sea and the *Scythian* Ocean, do bend their course & there arriue; for that all the sea coasts do affront the *Leuant*, and turn into the East. The frontiers of *Scythia* from the first cape thereof is vnhabitable by reason of the snow that lies continually: neither are the next regions inhe-
 to frequented and tilled, for the barbarous crueltie of those nations that border vpon it: such as the *Anthropophagi*, who liue of mans flesh, and haunt those parts. Hereupon it commeth, that you shall find nothing there but huge defart forests, with a number of wild beasts, lying in wait for men as sauge as themselves. When you are past this region, you enter againe amongst the *Scythians*, where you shall find likewise a wilde-nes ful of wild beasts, euen as far as to the promontory & mountain called *Tabis*, which regardeth the sea. In such sort as one moitie in manner of that coast, all along which looketh toward the East, lieth wast, and is not inhabited. The first people of any knowledge and acquaintance be the *Seres*, famous for the fine silk that their woods do yeeld. They kemb from the leaues of their trees the hoary downe thereof, and when it is steeped in water, they card and spin it, yea, and after their manner make thereof a sey or web, whereupon the dames here with vs haue a double labour both of vndoing, and also of weaving again this kind of yearn. See what ado there is about it, what labour and toile it costeth, & how far fet it is; and all for this, that our ladies and wiues when they go abroad in the street may cast a lustre from them, and shine again in their silks and veluets. As for the *Seres*, a mild and gentle kind of people they are by nature: howbeit, in this one point they resemble the bruit and wild beasts, for that they cannot away in the commerce with other nations, with the fellowship and society of men, but shun and auoid their company, notwithstanding they desire to * traf-
 ficke with them. The first riuier known among them is *Psitars*: the next to it *Carabi*: the third *Lanos*: and then you come to a cape of that name. Beyond it is the gulfie *Chryse*, the riuier *At-
 tans*, and another bay or creeke called *Attanos*. By it lyeth the region of the *Attaci*, a kind of people, secluded from all noisome wind & aire, keeping vpon hils, exposed to the pleasant sun-
 shine, where they inioy the same temperature of aire that the *Hyperboreans* liue in. Of this country and people, *Amonetus* hath written a seuerall booke of purpose: like as *Heratens* hath compiled such another treatise of the *Hyperboreans*. Beyond the *Attaci* or *Attacores*, the *Thy-
 rians* and *Tocharians* do inhabit; yea, and the *Casirians*, who now by this time belong to the *Indians*, & are a part of them. But they within forth that lie toward the *Scythians*, feed of mans
 flesh. As for the *Nomades* of India, they likewise wander to & fro, and keep no resting place. Some write, that they confine vpon the very *Ciconians* and *Brytians* on the North side. But
 there (as all Geographers do agree) the mountains *Emodi* arise and shoot vp: and there entereth
 the country of the East *Indians*, and extendeth not only to that sea, but also to the Southerne,
 which we haue named the *Indian* sea. And this part of the *Oriental* *Indians*, which lieth di-
 rectly straight forth, as far as to that place where India beginneth to twine and bend toward
 the *Indian* sea, containeth 1875 miles. And all that tract which windeth and turneth along the
 South, taketh 2475 miles (as *Erastosthenes* hath collected & set downe) euen vnto the riuier
Indus, which is the vtmost limit of India West-ward. But many other writers haue set downe the
 whole length of India in this manner, namely, that it requireth 40 daies and nights sailing, with
 a good gale of a forewind: also, that from the North to the South coast thereof, is 2750 miles.
 Howbeit, *Agrippa* hath put down in writing that it is 3003 miles long, and 2003 broad. *Posido-
 nius* took measure of it from the Northeast to the Southeast: & that by this means it is direct-
 ly opposit vnto *Gaule*, which he likewise measured along the West coast, euen from the North
 west point where the Sun goeth down at Mid-summer, to the South-west where it setteth in the

* Euen at this day they set a-broad their wares with the prices vpon the shore, and goe their waies: the forrain merchants come and lay downe the money, and haue away the merchandise: and so depart without any communication at all.

A in the midst of Winter. He addeth moreover and saith, That this West wind which from be-
 hind *Gaule* bloweth vpon India, is very healthsome & wholsome for that country, and this he
 proued by very good reason & demonstration: and verily the *Indians* haue a far different aspect
 of the sky from vs. Other stars rise in their Hemisphere, which we see not. Two Summers they
 haue in one yere, and as many haruests: and their winter between hath the *Etesian* winds blow-
 ing in our dog-daies, in stead of the Northern blasts with vs. The winds are kind and mild with
 them: the sea alwaies nauigable: the nations there dwelling, & the cities and towns there built,
 innumerable, if a man would take in hand to reckon them all, for India hath bin discovered, not
 only by *Alexander* the great his mighty and puissant army, and by other kings his successors (&
 namely *Seleucus* and *Antiochus*, and their Admirall *Patrocles*, who sailed about it euen to the
Hircane and *Caspian* seas: but also by diuers other Greek Authors, who making abode, & so-
 journeying with the kings of India (like as *Megasthenes* and *Dionysius* sent thither of purpose from
Philadelphus) haue made relation of the forces which those nations are able to raise and main-
 tain. And yet further diligence is to be imployed still in this behalfe, considering they wrote of
 things there so diuers one from another, and incredible withall. They that accompanied *Alex-
 ander* the great in his Indian voiage, haue testified in their writings, that in one quarter of India
 which he conquered, there were of towns 500 in number, and not one lesse than the city *Cos*:
 of feuerall nations nine. Also that India was a third part of the whole earth: & the same so well
 inhabited, that the people in it were innumerable. And this they said (beleeue mee) not with-
 out good apparance of reason; for the *Indians* were in manner the onely men of all others that
 neuer went out of their own country. Moreover, it is said, That from the time of *Bacchus* vnto
 C *Alexander* the Great, there reigned ouer them successiue 154 kings, for the space of 5402 yeres
 between, and 3 moneths ouer. As for the riuers in that country, they be of a wonderfull bignes.
 And reported it is, that *Alexander* sailed euery day at the least 600 stadia vpon the riuier *Indus*,
 and yet in lesse than fife moneths and some few daies ouer, he could not come vnto the end of
 that riuier, and lesse it is than *Ganges* by the confession of all men. Furthermore, *Seneca* a Latine
 writer, assaied to write certain commentaries of India: wherein he hath made report of 60 Ri-
 uers therein, and of nations 120 lacking twaine. As great a labour it were to reckon vp & num-
 ber the mountains that be in it. As for the hils *Imaus*, *Emodius*, *Paropamisus*, as parts all and
 members of *Caucasus*, but one vpon another, and conioine together. And being past them yee
 D go downe into a mighty large plain country, like to *Egypt*. It remaineth now to shew the con-
 tinent and firm land of this great country, and for the more evident demonstration, let vs fol-
 low the steps of *Alexander* the great, and his Historiographers, *Diogenes* and *Belon*, who set down
 all the gaits and iournies of that prince, haue left in writing, That from the *Caspian* ports vn-
 to the city *Hecatompylos* which is in *Parthia*, there are as many miles as we haue set down al-
 ready. From thence to *Alexandria* in the *Ariane* country (which city the same king founded)
 562 miles: from whence to *Prophthasia* in the *Dranganes* land, 199 miles: & so forward to the
 capitoll towne of the *Arachosians*, 515 miles. From thence to *Orthospanum*, 250 miles: last of
 all, from it to the city of *Alexandria* in *Opianum*, 50 miles. In some copies these numbers are
 found to vary and differ. But to return to this foresaid city, (scituate it is at the very foot of *Cau-
 casus*, from which to the riuier *Chepta* and *Pencolaitis*, a town of the *Indians*, are counted 227
 E miles. From thence to the riuier *Indus* & the towne *Tapila*, 60 miles: and so onward to the no-
 ble and famous riuier *Hidaspes*, 120 miles: from which to *Hypasis*, a riuier of no lesse account
 than the other, 4900, or 3900. And there an end of *Alexanders* voiage: howbeit, he passed ouer
 the riuier, and on the other side of the bank, he erected certaine altars and pillars, and there de-
 dicated them. The letters also of the king himselfe, sent back into Greece, do cary the like cer-
 tificate of his iournies, and agree iust herewith. The other parts of the country were discovered
 & surueied by *Seleucus Nicator*, namely from thence to *Hefudrus* 168 miles: to the riuier *Ioanes*
 as much: & some copies adde 5 miles more therto: from thence to *Ganges* 112 miles: to *Rho-
 dapha* 119, & some say, that between them two it is no lesse than 325 miles. From it to *Calini-
 paxa*, a great town, 167 miles: & an half: others say, 265. And so the confluent of the riuers *Io-
 manes* & *Ganges*, where both meet together, 225 miles, & many put therto 13 miles more: from
 F thence to the town *Palibotta* 425 miles: & so to the mouth of *Ganges* where he falleth into the
 sea, 628 miles. As for the nations, which it pains me not to name, from the mountains *Emodi*,
 & the principal cape of them, *Imaus*, which signifies in that country, language ful of thow, they be

be these: the Isari, Cofyri, Izgi, and vpon the very mountains, the Ghiforofagi: also the Brach. **G** manæ, a name common to many nations, among whom are the Maccocalingæ. Of riuers besides, there are Pinna & Cainas, the later of which twain runneth into Ganges, & both are nauigable. The people called Calingæ, coast hard vpon the sea. But the Mandeï & Malli, among whom is the mountain Mallus, are about them higher in the country. And to conclude, then you come to Ganges, the farthest bound and point of all that tract, India.

CHAP. XVIII.

¶ The riuer Ganges.

MAny traue bin of opinion, & so haue written, that the spring of Ganges is vncertain, like **H** as that also of Nilus: and that he swelleth, ouerfloweth, and wate: eth all the countries whereby he passeth, in the same sort that Nilus doth. Others again haue said that it issueth out of the mountains of Scythia: & how into it there run 19 other great riuers: of which ouer and aboue those before named, certain are nauigable; namely, Canucha, Vama, Erranoboa, Cofogus, and Sonus. There be also that report, that Ganges presently ariseth to a great bignesse of his owne sources and springs, and so breaketh forth with great noise and violence, as running downe with a fall ouer craggy and stony rocks: and when he is once come into the flat plains and euen country, that he taketh vp his lodging in a certain lake; and then out of it carrieth a mild and gentle stream, 8 miles broad where it is narrowest; and 100 stadia ouer for the most part, but 160 where he is largest: but in no place vnder 20 paces deep, [i. a 100 foot.]

CHAP. XIX.

¶ The nation of India, beyond the riuer Nilus.

When ye are ouer Ganges, the first region vpon the coast that you set foot into, is that of the Gandaridæ and the Calingæ, called Parthalis. The king of this country hath in ordinance for his wars 80000 foot, 1000 horse, and 700 Elephants, ready vpon an **K** houres warning to march. As for the other nations of the Indians that liue in the champion plaine countries, there be diuers states of them, of more ciuility than the mountainers. Some apply themselves to tillage and husbandry: others set their minds vpon martiall feats: one sort of them practise merchants trade, transporting their owne commodities into other countries, and bringing in forrein merchandise into their own. As for the nobility and gentry, those also that are the richest and mightiest among them, they manage the affaires of State and Commonweale, and sit in place of justice, or els follow the court, and sit in counsell with the king. A **L** fit estate there is besides in great request, & namely of Philosophers & Religions, giuen wholly to the study of wisdom & learning; and these make profession of voluntary death: and verily when they are disposed to die at any time, they make a great funerall fire, cast themselves into it, and so end their daies. Besides all these, one thing there is among them halfe brutish, and of exceeding toile and trauell (and yet it is that which partly maintaineth all the other estates abouesaid) namely, the practise of hunting, chasing and taming Elephants. And in very truth, with them they plow their ground, vpon them they ride vp & down: with these beasts are they best acquainted, they serue in the wars for maintenance of their liberty, and defence of their frontiers against all inuasion of enemies. In the choise of them for war-seruice, they regard and consider their strength, their age, and bignesse of body. But to leaue them. An Island there is within the riuer Ganges, between two arms thereof, of great largenesse and capacity, which receiue one nation by it selfe, apart from others, & named it is Modogalica. Beyond it are seated the Modubians and Molindians, where standeth the stately city Molinda, situated in a plentiful and rich soile. Moreouer, the Galmudroefians, Pretians, Calissæ, Safuri, Fassalæ, Colubæ, Orxulæ, Abali, and Taluctæ. The king of these countries hath in ordinary for his wars 50000 **M** foot, 3000 horse, and 400 Elephants. Then you enter into a country of a more puissant & valiant nation, to wit, the Andarians, planted with many villages well peopled: and moreover with 30 great townes, fortified with strong walls, towers, and bastiles. These find and maintain preft & ready to serue the king in his wars, an Infantry of 100000 foot, a Cauallery of 2000 horse, and 100 Elephants besides, well appointed. Of all the regions of India, the Dardanian country

A is most rich in gold mines, and the Selian in siluer. But about all the nations of India thorow out, and not of this tract and quarter only, the Prasij far exceed in puissance, wealth, and reputation; where the most famous, rich, and magnificent city Palibotria stands, whereof some haue named the people about it, yea and all the nation generally beyond Ganges, Palibotrians: their king keeps continually in pay 600000 foot men, and 30000 horsemen, and 9000 Elephants euery day in the yere, whereby you may soongesse the mighty power & wealth of this prince. Beyond Palibotria, more within the firme land, inhabit the Monedes and Suari, where standeth the mountain Maleus: and there for six moneths space the shadowes in winter time fall Northward; and in summer season go into the South. The pole Arcticke starres in all that tract are seen but once in the yere, and that no longer than for 15 daies, as *Beton* reporteth. But *Megasthenes* writeth, that this is vsuall in other parts of India. The Antartique or South pole the Indians call Dromosa. As for the riuer Iomanes, which runs into Ganges, it traueseth through the Palibotrians country, and passeth between the townes Methora and Cyrisoborca. Beyond the riuer Ganges, in that quarter and clymate which lieth Southward, the people are caught with the Sun, and begin to be blackish, but yet not all out so sun-burnt and blacke indeed as the Æthyopians and Moores. And it seemeth, that the neerer they approach to the riuer Indus, the deeper coloured they are and tanned with the Sun: for you are not so soone past the Prasians country, but presently you are vpon Indus: and among the mountaines of this tract, the Pygmæans, by report, do keepe. *Artemidorus* writeth, that betwene these two riuers there is a distance of 21 miles.

CHAP. XX.

¶ The riuer Indus.

The great riuer Indus, which the native people call Sandus, issueth out of a part or dependence of the hill Caucasus, which is called Paropamisus: hee takes his course and runs full against the Sun rising, and makes 19 riuers more to lose their names, which he takes in vnto him: among which the principall are these, Hydaspis one, bringing with him 4 more: and Cantabra another, accompanied with 3 besides. Moreouer, of such as are of themselves nauigable, without the help of others, Acesines, and Hypasis. And yet for all their additions, the riuer of Indus (such a sober and modest course as it were his waters keepe) is in no place either **D** about 50 stadia ouer, or 15 paces, i. 75 foot, or 12 fathom and halfe deep. This riuer incloseth within two branches of it, a right great Island named Prasiane, and another that is lesse, called Patale. As for himselfe, they that haue written the least of him say he beareth vessels for 1240 miles: and turning with the course of the Sun, keepeth him company Westward vntill hee is discharged into the Ocean. The measure of the sea coast from Ganges vnto him I wil expresse generally and in grosse, as I find it written, albeit there is no agreement at all of Authors touching this point. From the mouth of Ganges where he entrench into the sea, vnto the cape Caluigon and the towne Dandagula, are counted 725 miles: from thence to Tropina 1225 miles. Then to the promontorie Perimula, where stands the chiefe mart or towne of merchandise in all India, they reckon 750 miles: from which to the towne aboue-said Patale within the Isle, **E** 620 miles. The mountainers inhabiting betwixt it and Iomanes, are the Cesti and Celiboni, wilde and sauage people: next to them the Megallæ, whose king hath in ordinary preft for seruice 500 Elephants, of foot and horse a great number, but vncertaine it is how many, sometime more, sometime fewer. As for the Chryseans, Parafangians, and Afangians, they are full of the wilde and cruell Tygers: they are able to arme 30000 foot and 800 horse, and to set out with furniture 300 Elephants. This country is on three sides enuironed and inclosed with a range of high mountaines, all desert and full of wildernes for 625 miles, and of one side confined with the riuer Indus. Beneath those wilde hills you enter among the Dari & Suræ: then you come againe to waste desarts for 188 miles, compassed about for the most part with great bars and banks of sand, like as the Islands with the sea. Vnder these desert Forrests you shall meet **F** with the Maltecores, Cingians, Marobians, Rarungians, Morantes, Masuæ, and Pangungæ. Now for those who inhabit the mountains, which in a continuall range without interruption stand vpon the coasts of the Ocean, they are free States and subiect to no Prince, and many fair townes and cities they hold among these cliffes and craggy hills. Then come you to the Næmans,

rans, inclosed within the highest mountaine of all the Indian hills, Capitalia. On the other side of this mountaine great store there is all ouer it, of gold and siluer mines, wherein the Inhabitants do dig. Then you enter vpon the kingdom of Oratura, whose king indeed hath but ten Elephants in all, howbeit a great power of footmen. And so forward to the Varetates, who vnder their King keepe no Elephants at all for his seruice, trusting vpon their Cauallery and Fanterie, wherein they are strong. Next to them the Odomboerians & Salabastres, where standeth a goodly faire city called Horata, enuironed and fortified with deepe fosses and ditches full of standing water: wherein there keepe a great number of Crocodiles, which for the greedy appetite to deuoure mens bodies, wil suffer none to passe into the town but ouer the bridge. Another towne there is besides among them, of great name and importance, to wit, Automela, standing vpon the sea side: and otherwise much resort there is vnto it of merchants from all parts, by reason of 5 great riuers which meet all there in one confluence. Their king maintains in ordinary 1600 Elephants, 150000 footmen, and 5000 horse. The king of the Charmians is but poore to speake of: his strength lieth in 60 Elephants, for his power otherwise is but smal. Being past that realme, you come into the country of the Padians, the only nation of all the Indians, which is gouerned by women. One of this sex, they say, was begotten somtime by *Hercules*, in which regard she was the better accepted, and had the prerogative of the regencie ouer the greatest kingdome. From her the other Queens fetch their pedigree, and haue the dominion and rule ouer 30 great townes, and the command of 150000 foot, and 500 Elephants. Beyond this realme you come to the nation of the Syrieni, containing 300 Cities: and from them to the Deraugæ, Pofunge, Bugæ, Gogyarei, Vmbræ, Nereæ, Brancosi, Nobundæ, Cocondæ, Nefei, Pedatritæ, Solobriæ, and Olostræ, who confine vpon the Island * Patale: from the vtmost point of which Iland vnto the gates Casoiæ, are reckoned 18035 miles. Now on this side the riuier Indus, iust against them, as appeareth by euident demonstration, there dwell the Amatæ, Bolingæ, Gallitalutæ, Dimuri, Megari, Ordabæ, and Mefæ. Beyond them the Vri and Sileni, and then you come to the deserts for 250 miles: which hauing passed ouer, you shall meet with the Organages, the Abaorts, Cibaræ, and the Suertæ: and beyond these, a wilderness againe as great as the former. Passe on farther, you come among the Sarpophages, Sorgæ, Baraomatæ, and the Gunbretes, of whom there be 13 seuerall nations, and each one hath two great cities apiece. As for the Aseni, they people three cities: their capitall city is Bucephalia, built in the very place where king *Alexanders* horse called *Bucephalus* was interred. Aboue them are the mountainers on the rising of the hill Caucasus, named Soleadæ, and Sondæ: and when you are on the other side of the riuier Indus, as you go along the coast and banks thereof, you shall see the Samarabrians, the Sambrucenes, the Brisabrites, Olij, Autixeni, and Taxillæ, with a famous city called Amandra, of which all that traſt now lying more flat and plaine within the country is named Amandria. Foure other nations there be besides of Indians, the Peucolaitæ, Arfagalites, Geretes, and Aſei: for many of the Geographers set not down Indus the riuier, for to determine the marches of the Indians Westward; but lay thereto foure other prouinces and seuerall feignories, to wit, of the Gedrosians, Arachotes, Arii, and Paropamisades.

CHAP. XXI.

¶ *The Arii, and other nations depending vnto them.*

Other writers are of opinion, that the vtmost frontier and limit of India is the riuier Coſphetes, and both it and all those quarters are included within the territorie of the Arii; yea and most of them affirme, that the city Nyſa, as also the mountaine Merus consecrated to god *Bacchus*, belong vnto India as parcels thereof. This is that mountaine whereof arose the poeticall fable, That *Bacchus* therein was borne, and issued out of *Iupiters* thigh. Likewise they assigne and lay to India the country of the Aspogores, so full of vines, laurel, and box, and generally of all sorts of apple trees and other fruitfull trees that grow within Greece. Many strange, wonderful, and in manner fabulous things they report of the fertilitye of that land, of the diuers sorts of corne, of trees bearing cotton, of wilde beasts, of birds, and other creatures there breeding and liuing: which because they are not properly belonging to this Treatise now in hand, I will referue them for another part of this Worke, and write more particularly

Early of them in their due and seuerall places. And as for those 4 prouinces which I touched before, I will speake of them anon: for now I hasten and thinke it long vntill I haue said somewhat of the Island Taprobane. And yet before I come to it there be other Isles which I cannot passe by, and namely that of Parala, which I noted to ly in the very mouth of the riuier Indus, and it carrieth the forme and shape of a triangle figure, and is 220 miles long. Without the mouth of the riuier Indus two other Isles there be, Chryse and Agyræ, so named (as I thinke) of the gold and siluer mines which they do yeeld: for I cannot easily beleue, that the very earth and soile there is all gold and siluer entire, as some haue made report. Twenty miles from them lieth the Isle Crocala: and 12 miles farther into the sea, Bibaga, where of oysters and other shell fishes called Purples are found good store. And last of all, 9 miles beyond it, Toralliba shewes it selfe, and many other petty Islands of no regard.

CHAP. XXII.

¶ *The Island Taprobane.*

It hath bene of long time thought by men in antient daies, That Taprobane was a second world, in such sort as many haue taken it to be the place of the Antipodes, calling it the Antichthonos world. But after the time of *Alexander* the Great, and the voiage of his army into those parts, it was discovered and knowne for a truth, both that it was an Island, and what compass it bare. *Onesicritus* the Admiral of his fleet hath written, that the Elephants bred in this Island be bigger, more fierce and furious for war seruice than those of India. *Megasthenes* saith there is a great riuier which parteth it in twaine, and that the people thereof dwelling along the riuier be called Palæogoni: adding moreover, that it affordeth more gold and bigger pearles by farre than India doth. *Eratosthenes* also tooke the measure thereof, and saith, that in length it beareth 7000 stadia, and in bredth 5000: that in it there be no cities or great towns, but villages to the number of 700. It begins at the Levant sea of Oriental Indians, from which it stretcheth and extendeth between the East and West of India; and was taken in times past to ly out into the sea from the Præsians country 20 daies sailing. But afterwards, for that the boats and vessels vsed vpon this sea in the passage thither, were made & wound of paper reeds like those of the riuier Nilus, and furnished with the same kinde of tackling, the voiage thither from the foresaid country was gaged within a lesse time: and well knowne it was, that according to the faile of our ships and gallies, a man might arriue there in 7 daies. All the sea lying between is very ebbe, full of shallowes and shelues, no more than 5 fathom deepe: howbeit in certain chanel that it hath, it is so deep that it cannot be sounded, neither wil any anchors reach the bottom, and there rest; and withall, so streight & narrow these chanel are, that a ship cannot turne within them: and therefore to auoid the necessitie of turning about in these seas, the ships haue prows at both ends, and are pointed each way: in sailing they obserue no star at all. As for the North pole, they neuer see it: but they carry euer with them certaine birds in their ships, which they send out oft times when they seeke for land, euer obseruing their flight: for knowing well that they wil fly to land, they accompany them, bending their course accordingly: neither vse they to saile more than one quarter of a yeare: and for 100 daies after the Sun is entred into Cancer, they take most heed, and neuer make faile: for during that time it is winter with them. And thus much we come to knowledge of, by relation of antient Writers. But we came to far better intelligence, and more notable information, by certain Embassadors that came out of that Island, in the time of *Claudius Cesar* the Emperor: which happened vpon this occasion, and after this manner; It fortuned that a free slave of *Annius Plocamus*, (who had farmed of the Exchequer the customs for impost of the red sea) as he made saile about the coasts of Arabia, was in such wise driven by the North windes besides the realme of Carmania, and that for the space of 15 daies, that in the end he fell with an harbour thereof called Hippuros, and there arriued. When he was set on land, he found the King of that Countrey so courteous that hee gaue him entertainment for six moneths, and entreated him with all kindnesse that could be deuised. And as he vsed to discourse and question with him about the Romanes and their Emperour, he recounted vnto him at large of all things. But amongst many other reports that he heard he wondred most of all at their iustice in all their dealings, & was much in loue therewith, and namely, that their Deniers of the money which was taken, were alwaies of like

like weight, notwithstanding that the sundry stamps and images vpon the pieces shewed plainly that they were made by diuers persons. And hereupon especially was he moued & sollicitated to seeke for the alliance and amitie of the people of Rome: and so dispatched 4 Embassadors of purpose, of whom one *Rachias* was the chiefe and principall personage. By these Embassadors we are informed of the state of that Island, namely, that it contained fise hundred great townes in it: & that there was a haueyn therein regarding the South coast, lying hard vnder Palefimumdum the principall citie of all that realme, and the kings seat and pallace: that there were by iust account 200000 of commoners & citizens: moreouer, that within this island there was a lake 270 miles in circuit, containing in it certain Islands good for nothing else but pasturage, wherein they were fruitfull; out of which lake there issued 2 riuers, the one, Palefimumdas, passing neere to the citie abovesaid of that name, and running into the haueyn with three streames, whereof the narrowest is fise stadia broad, and the largest 15; the other Northward on India side, named Cydara: also that the next cape of this country to India is called Colaicum, from which to the neereft port of India is counted foure daies failing: in the midst of which passage, there lieth in the way, the Island of the Sunne. They said moreouer, that the water of this sea was all of a deepe Greene colour; and more than that, full of trees growing within it: as much as the pilots with their helmes many times brake off the heads and tops of those trees. The stars about the North-pole, called Septentriones, the Waines or Beares, they wondred to see here among vs in our Hemisphere: as also the Brood-hen, called *Vergilia* in Latine, as if it had been another heauen. They confessed also they neuer saw with them, the Moone about the ground before it was 8 daies old, nor after the 16 day. That the Canopus, a goodly great and bright star about the pole Antarticke, vsed to shine all night with them. But the thing that they maruelled and were most astonied at was this, that they obserued the shadow of their own bodies fell to our Hemisphere, and not to theirs; and that the Sun arose on their left hand, and set on their right, rather than contrariwise. Furthermore they related, that the front of that Island of theirs which looked toward India, contained 10000 stadia, & reached from the South-East beyond the mountains Enodi. Also, that the Seres were within their kenning, whom they might easily discouer from out of this their Island; with whom they had acquaintance by the meanes of trafficke and merchandise: and that *Rachias* his father vsed many times to trauell thither. A firming moreouer, that if any strangers came thither, they were encountred and assailed by wild & sauage beasts: and that the inhabitants themselves were gyants of stature, exceeding the ordinary stature of men, hauing red haire, eyes of colour blewish, their voice for sound horrible, for speech not distinct nor intelligible for any vse of traffick and commerce. In all things else their practise is the same that our merchants and occupiers do vse: for on the farther side of the riuier, when wares and commodities are laid downe, if they list to make exchange they haue them away, and leaue other merchandise in lieu thereof to content the forreine merchant. And verily no greater cause haue we otherwise to hate & abhor this excessive superfluitie, than to cast our eie so far and consider with our selues, what it is that we seeke for, from what remote parts we fetch it, and to what end we so much desire al this vanitie. But euen this Island Taprobane, as farre off as it is, seeming as it were cast out of the way by Nature, and diuided from all this world wherein we liue, is not without those vices and imperfections wherewith we are tainted and infected. For euen gold & siluer also is there in great request and highly esteemed: and marble, especially if it be fashioned like a tortois shell. Iemmes and pretious stones; pearles also, such as be orient and of the better sort, are highly prized with them: and herein consisteth the very height of our superfluous delights. Moreouer, these Embassadors would say, that they had more riches in their Island, than we at Rome, but we more vse thereof than they. They affirmed also, that no man with them had any slaues to command: neither slept they in the morning after day-light, ne yet at all in the day time. That the maner of building their houses was low, somewhat raised aboue the ground, and no more adoe: that their markets were neuer deare, nor price of victuals raised. As for courts, pleading of causes, and going to law, they knew not what it meant. *Hercules* was the onely god whom they worshipped. Their king was alwaies chosen by the voices of the people: wherein they had these regards; that hee were aged, milde, and child lesse: but in case he should beget children afterward, then hee was deposed from his regall dignitie, to the end that the kingdome should not in proceffe of time bee hereditary and held by succession, but by election onely. This king being thus chosen and inuested,

- A inuested, hath thirtie other gouernours assigned vnto him by the people: neither can any person be condemned to death, vnlesse he be cast by the more part of them, and pluralitie of voices: and thus condemned as he is, yet may he appeale vnto the people. Then are there 70 iudges deputed to sit vpon his cause: and if it happen that they assiole and quit this party condemned: then those 30 who condemned him, are displaced from their state and dignity, with a most bitter and sharpe rebuke, and for euer after, as disgraced persons liue in shame and infamie. As for the king, arraied he is in aparrell as prince *Bacchus* went in old time: but the subiects and common people are clad in the habit of Arabians. If it fortune that the king offend, death is his punishment: howbeit, no man taketh in hand to doe execution. All men turne away their faces from him, and deigne him not a looke nor a word. But to do him to death in the end, they
- B appoint a solemne day of hunting, right pleasant and agreeable vnto Tygres and Elephants, before which beasts they expose their king, and so he is presently by them deuoured. Moreouer, in that Island good husbands they are for their ground, and till the same most diligently. Vines haue they no vse of at all: for all sorts of fruits otherwise they haue abundance. They take also a great pleasure and delight in fishing, and especially in taking of tortoisses: and so great they are found there, that one of their shells will serue to couer an house: and so the inhabitants doe employ them in stead of rouses. They count an hundred yeeres no long life there: that is the ordinary time of their age. Thus much we haue learned and knowne as touching Taprobane. It remaineth now to say somewhat of those foure Satrapies or prouinces, which we did put off vnto this place. Of them therefore as followeth.

C H A P. XXIII.

¶ *Capissene, Carmania.*

- Beyond those nations that confine hard vpon the riuier Indus, as yee turn toward the mountaintaines, yee enter vpon the realme of *Capissene*, wherein sometime stood the citie *Capissa*, which *Cyrus* the king caused to be raised. At this day there standeth the citie *Arachosia*, with a riuier also of that name in the country *Arachosia*: which citie some haue called *Cophe*, founded by queene *Semiramis*. There likewise is to be seen the riuier *Hermandus*, which runneth by *Abeste*, a city of the *Aracosians*. The next that confront *Arachosia* Southward, toward part of the *Arachotes*, are the *Gedrosi*: and on the Northside, the *Paropamisades*. As for the towne
- D *Cartana*, named afterwards *Tetragonius*, scituate it is at the foot of the mountaine *Caucasus*. This country lies ouer-against the *Bactrians*: then you come to the principall towne thereof *Alexandria*, named so of king *Alexander* the founder thereof: vpon the marches whereof are the *Syndrari*, *Dangulæ*, *Porapiani*, *Cantaces*, and *Maci*. Moreouer, vpon the hill *Caucasus* standeth the towne *Cadusi*, built likewise by the said *Alexander*. On this side all these regions lieth the coast of the riuier *Indus*. Then follows the region of the *Arianes*, all scorched and senged with the parching heate of the Sunne, and inuironed about with desarts: howbeit, many shadowie vallies lie between to allay the exceeding heat. Well peopled it is about the two riuers especially, *Tonderos* and *Arasapæ*. Therein stands the citie *Artaccana*. Being past it, the riuier *Arius* runneth vnder the city *Alexandria*, built by *Alexander* the Great. The towne containes in compass 30 stadia. Then come you to *Artacabane*, a citie as it is much more ancient, so it is also fairer by far, which by *Antiochus* the king was walled the second time, and enlarged to 50 stadia. The next in order is the nation of the *Dorisci*. The riuers *Pharnacotis* and *Ophradus*. *Prophtasia*, a towne in *Zaraspria*. The *Drangæ*, *Argetæ*, *Zarangæ*, and *Gedrusij*. Townes moreouer, *Peucolais* and *Lymphora*. After you are past their territory, you enter into the desarts of the *Mithoricanes*, and so to the riuier *Mauain*, and the nation of the *Augutturi*. The riuier *Borru*, the people called *Vrbi*, the nauigable riuier *Ponamus*, which passeth through the marches of the *Pandanes*. Ouer and besides, the riuier *Ceberon* within the country of the *Sorates*, which in the mouth thereof where it falleth into the sea, makes many baies and harbours. As you go farther, you come vpon the towne *Candigramma*, with the riuier *Cophes*: into which there runne other riuers that carry vessels, to wit, *Sadarus*, *Paraspus*, and *Sodinus*. As for the country *Darius*, some would haue it to be a part of *Ariana*, and they set down the measure of them both together to be in length 1250 miles, & in breadth lesse by half than *India*. Others haue set down that the country of the *Gedrusians* and *Seyrians* may contain 183 miles. Being passed which quarters,

quarters, you enter into the region of the Ichthyophagi, surnamed Oritæ or mountainers (who haue a proper language by themselves, and speake not in the Indian tongue) which reaches on full for 200 miles. And beyond it you meet with the people of the Arbians, who likewise continue for other 200 miles. As for those Ichthyophagi before-named, *Alexander* by an expresse edict forbade them all to feed on fish. Being past them, you are in the deserts: and beyond them you come into Carmania, Persis, and Arabia. But before that we treat distinctly of these countries, I thinke it meet to set downe what *Onesicritus* (who hauing the conduct of a fleet vnder *Alexander* the great, sailed from off India, about the Southerly coasts of Persis) reports according to those intelligences which came lately from king *Iuba*. In like maner those voiaiges of ours for these yeeeres past, performed, by which euen at this day we are guided. Howbeit, in the reports made by *Onesicritus* and *Nearchus*, of their nauigations, we finde neither the distance, ne yet the names of the seueral resting places, after euery daies iournie. And to begin with the citie Xyleneopolis built by *Alexander*, from which they entred first into their voiage, it is not put down by them, either in what place it is situate, nor vpon what riuer. Yet these particulars following are by them reported worth remembrance: to wit, that in this voyage *Nearchus* founded a towne in those parts: that the riuer Nabrus runs thereby, and is able to beare great vessels: ouer-against which there is an Island 70 stadia within the sea. Moreouer, that *Leonatus* caused Alexandria to be built in the frontiers of that region, by direction and commandement from king *Alexander*, where the riuer Argenus enters into the sea, and yeelds a safe & commodious haue. Also that the riuer Tiberum is nauigable, along the bankes whereof the Parites inhabit. And after them the Ichthyophagi, who tooke vp so long a tract, that they were 20 daies sailing by their coasts. They make relation likewise of the Isle of the Sun, named also the couch or bed of the nimphs: This Island is red all ouer, and no liuing creature will liue therein, but is consumed, & perishes no man knoweth how, or vpon what cause. They speake besides of the nation of the Oriens: as also of Hytanis a riuer in Carmania, which affordeth many baies and harbours, yea, and plentie of gold in the grauell and sand thereof. And here was the first place wherein they obserued, that they had a sight of the North-pole star. As for the starre *Arcturus*, they affirmed, that they saw it not euery night, nor at any time all night long. Furthermore, that the country of the Achæmenides in Persia, reached thus farre. Ouere and besides, that as they trauelled, ordinarily they found good store of mines, wherein was digged for brasse, yron, Arsenicke or Sardaracha and Vermilion. And then they came to the cape of Carmania: from which to the coast ouer-against them of the Maræ, a people in Arabia, the cut ouer sea is 50 miles. Vpon these coasts they discovered 3 Islands, whereof Organa onely is inhabited, by reason of fresh water within it, and from the continent it lieth about 25 miles. And foure Islands more they fell vpon, euen in the Persian gulf ouer-against Persia. And about these Islands they might see sea-adders & Serpents so monstrous great that as they came swimming toward them, they put the very fleet in great fright, for there were among them some, 20 cubits long. Beyond it they met with the Island Acrotadus: likewise the Gaurates Isles, wherein the nation the Chiani doe inhabit. About the middle of this gulf or arme of the sea, the riuer Hiperus hath his course, able to beare great hulkes and ships of burden. Also the riuer Sitiogagus, vpon which a man may passe in 7 daies to Pasargadia. Also a riuer that is nauigable called Phiristimus, and an Island within it, but it is namelesse. As for the riuer Granus which runs through Susiane, it carries but small vessels. Along the coast on the right hand of this riuer dwell the Deximontanes, who dresse and prepare Bitumen. Then they come to the riuer Oroatus, with a dangerous haue or mouth where it falls into the sea, vnlesse a man be guided by skilfull pilots: & full against this riuer there are discovered 2 little Islands. Past which, the sea is very low and shallow, full of shelues and sands, more like a meere and marsh water, than a sea. Howbeit there be certaine trenches or channells in it that draw deepe water, wherein they may without danger saile. Then met they with the mouth of the riuer Euphrates. Also the lake which the two riuers Eulæus and Tigris doe make, neere vnto Characum. And so from thence they arriued vpon the riuer Tigris, at Sufa. And there an end of the nauigation performed by *Onesicritus* and *Nearchus*. For after they had bene three months embarked and in their voiage vpon the sea, they found *Alexander* at Sufa (where he feasted and made solemne bankets) and that was 7 monthes after he parted from them at Patalæ. And thus much concerning the voiage of *Alexander* his fleet. Now afterwards from Syagrus, a Promontory in Arabia, it was counted vnto Patalæ 1332 miles, & held it was for certain then that,

A that the West wind with the people of that country call Hypalus, was thought most proper for to make saile to the same place. Howbeit the age ensuing discovered a shorter and safer cut, namely, if from the said promontorie or cape Syagrus, they set their course directly to the mouth of the ritter Zigerus, which maketh an harborough in India. And in truth this passage held a long time, vntill such time that in the end the merchants found out a more compendious and shorter course, and gained by their voiage to India: for euery yeeere now they saile thither, and for feare of pirats and rousers that were wont very much to infect and annoy them, they vsed to embarke in their ships certaine companies of Archers. And seeing that all these seas are now discovered, and neuer before so certainly, I will not thinke much of my pains, to declare and shew, the whole course of our Indian voiaiges from out of Egypt. And first and foremost this is a thing worthy to be noted and obserued of euery man, that there is not a yeeere goeth ouer our heads, but it costs our State to furnish a voiage into India, 500 hundred thousand Sesterces, i. fifty millions of Sesterces. For which the Indians sendeth backe againe commodities and merchandise of their owne, which being at Rome, are sold for an hundred times as much as they cost, or yeeld in the price an hundred fold gain. But to returne againe to our voiage, from Alexandria in Egypt, it is two miles to Iuliopolis: from whence vpon the riuer of Nilus, they saile 303 miles to Coptus, which may be done in 12 daies space, hauing the Etesian winds at the poupe. From Coptus they trauell forwards vpon Cammels backs: and for great default of water in those parts, there be certain set places for bait, lodging, and watering.

C The first is called Hydreuma 32 miles from Coptus. The second one daies journey from thence in a certaine mountaine. The third watering place at another Hydreuma, 95 miles from Coptus. The fourth againe in a second mountaine. The fifth is at a third Hydreuma of *Apollo*, from Coptus 184 miles. Beyond which, the resting place is vpon another hill. And then to Hydreuma the new, from Coptus 234 miles. Another water towne there is, called Hydreuma the old, named also Trogloditicum, where two miles out of the port way lieth a garrison, keeping watch and ward both day & night: and foure miles distant it is from new Hydreuma. From whence they trauell to the towne Berenice, an haue towne standing vpon the red sea, 258 miles from Coptus. But for as much as the journey all this way is for the most part performed in the night season, by reason of the excessiue heat, & the traouellers are forced to rest all the day long, therefore twelue daies are set down for the whole voiage between Coptus and Berenice. The time then that they vsually begin to set saile, is about Midsummer before the dog daies, or presently vpon the rising of the dog starre. And about the 30 daies end they arriue to Ocelis in Arabia, or els at Cama, within Saba, the country of incense. A third port there is besides called Muza, vnto which there is no resort of merchants out of India: neither is it in request but with merchants that aduenture only for incense, drugs, & spices of Arabia. Howbeit peopled this country is within-forth, and hath diuers great townes. Of which, Saphar is the principall, and the kings seat: & another besides of good importance called Sabe. But for them that would make a voiage to the Indians, the most commodious place to set forward is Ocelis: for from thence, and with the West wind called Hypalus, they haue a passage of forty daies sailing to the first towne of merchandise in India, called Muziris. Howbeit a port this is, not greatly in request, for the daunger of pirates and rousers, which keep ordinarily about a place called Hydra: and besides that, it is not richly stored and furnished with merchandise. And more than so, the harborough is farre from the town, so as they must charge and dischrg their wares to and fro in little boats. At the time when I wrote this story, the king that reigned there, was named *Celeborthras*. But another haue there is more commodious, belonging to the Necanidians, which they call Becare: the kings name at this present is *Pandion*: not far off is another town of merchandise within the firme land, called Madufa. As for that region, from whence they transport pepper, in small punts or trouges made of one peece of wood, it is named Corona. And yet of all these nations, haueans, and towns, there is not a name found in any of the former writers. By which it appeareth, that there hath been great change and alteration in these places. But to come againe to India, our merchants returne from thence back in the beginning of our month December, which the Egyptians call Tybis, or at farthest before the sixt day of the Egyptians month Machiris, and that is before the Ides of Ianuary: and by this reckoning they may passe to and fro, and make return within the compasse of one yere. Now when they saile from India, they haue the Northeast wind Vulturius with them: and when they be entered once into the red sea, the

So as it appeareth that euery daies journey was about 34 miles.

South or Southwest. Now wil we return to our purposed discourse as touching Carmania. The coast wherof after the reckoning of *Nicarchus* may take in circuit 12050 miles. From the first marches thereof to the riuer Sabis is counted 100 miles. From whence all the way as far as to the riuer Andaius, the country is rich and plenteous, for in it are vineyards and corne fields well husbanded. This whole tract is called Amuzia. The chiefe townes of Carmania be Zetis and Alexandria. Vpon the marches of this realme the sea breaks into the land in two armes, which our countrymen call the red sea, and the Greekes Erythræum, of a king named *Erythras*: or as some thinke, because the sea by reason of the reflection and beating of the Sun beams, seemes of a reddish colour. There be that suppose this rednesse is occasioned of the sand and ground which is red: and others againe, that the very water is of the own nature so coloured.

CHAP. XXIV.

¶ The Persian and Arabian gulfs.

THIS red sea is diuided into two armes: that from the East is named the Persian gulf, being in compasse 2500 miles, by the computation of *Eratosthenes*.ouer against this gulf, in Arabia (which lieth in length 1200 miles) on the other side another arme there is of it called the Arabian gulf, which runs into the Ocean Azanius. The mouth of the Persian gulf where it maketh entrance is 5 miles ouer, and some haue made it but 4: from which to the farthest point thereof, take a direct and straight measure by a line, and for certaine it is, that it containeth 1225 miles: and is fashioned directly like a mans head. *Onesichritus* and *Nearchus* write, That from the riuer Indus to the Persian gulf, and so from thence to Babylon by the meeres and fens of the riuer Euphrates, it is 2500 miles. In an angle of Carmania inhabit the Chelonophagi, i. such as feed vpon the flesh of Tortoises, and the shells of them serue for roofes to couer their cottages. They inhabit all that coast along the riuer Arbis, euen to the very cape: rough they are, hairy all their body ouer but their heads, and weare no garment but fish skins.

CHAP. XXV.

¶ The Island Cassandrus: and the kingdomes vnder the Parthians.

WHEN you are past this tract of the Chelonophagi, directly toward India, there lieth fifty miles within the sea the Island Cassandrus, by report all desert and not inhabited: and neere to it, with a little arme of the sea between, another Island called Stoils; wherein pearles are good chaffer, and yeeld gainfull trafficke. But to returne againe to Carmania, when you are beyond the utmost cape thereof, you enter presently vpon the Armozei, who ioyn vpon the Carmanians. But some say that the Arbij are between both: and that their coast may containe in the whole 402 miles. There are to be seen the port or hauen of the Macedonians, and the altars or columnes which *Alexander* erected vpon the very promontorie and utmost cape. Where also be the riuers Saganos, Daras, and Salfos. Beyond which is the cape Themiscas, and the Isle Aphrodisias well peopled. Then beginneth the realme of Persis, which extendeth to the riuer Oroatus, that diuides it from Elymais. ouer against the coasts of Persis, these Islands be discovered, Philos, Cassandra, and Aratia, with an exceeding high mountaine in it: and this Isle is held consecrated to *Neptune*. The very kingdome of Persis Westward hath the coasts lying out in length 450 miles. The people are rich, and giuen to royall and superfluous expence in all things: and long since are become subiect to the Parthians, carying their name. And seeing we are come to speake of them, we will briefly now mention their dominion and empire: the Parthians haue in all 18 realmes vnder them; for so they termed all their prouinces as they lie diuided about the two seas, as wee haue before said: namely the red sea Southward, and the Hircane sea, toward the North. Of which, eleuen that lie about in the countrey, and are called the higher Prouinces, they take their beginning at the confines and marches of Armenia, and the coasts of the Caspians on the one side: and reach to the Scythians, whom they confront of the other side, with whom they conuerse and keepe company together as Equalls. The other seuen are called the base or lower Realms. As for the Parthians, their land was alwaies counted to ly at the foot and descent of those mountains wherof we haue so often

spoken,

A spoken, which do enuiron and enclose all those nations. It confineth Eastward vpon the Arii, and Southward, vpon Carmania and the Arians: on the West side it butteth vpon the Pratites and Modes: and on the North, boundeth vpon the realm of Hircania: compassed round about with deserts and mountaines. The utmost nations of the Parthians before yee come to those deserts be called Nomades: and their cheife townes seated toward the West, are Istaris and Calliope, wherof we haue written before: but toward the Northeast, Europum; and Southeast Mania. In the heart and midland standeth the citie Hecatompylos, as also Arsacia. And there likewise the noble region of Nysea in Parthyerum: together with the famous city Alexandropolis, bearing the name of *Alexander* the first founder.

CHAP. XXVI.

Media, Mesopotamia, Babylon, and Seleucia.

REQUISIT now it is and needfull in this place to describe the posture and situation of the Medians kingdom, and to discover all those countries round about, as farre as to the Persian sea, to the end that the description of other regions hereafter to be mentioned, may the better be vnderstood. Wherein this first and formost is to be obserued, that the kingdome of Media on the one side or other confronteth both Persis and Parthia, and casting forth a crooked and winding horne as it were toward the West, seemeth to enclose within that compasse both the said realmes. Neuerthelesse, on the East side it confineth vpon the Parthians and Caspians: on the South, Sittacene, Susiane, and Persis: Westward, Adiabene: and Northward, Armenia: as for the Persians, they alwaies confronted the red sea, whereupon it was called the Persian gulf. Howbeit, the maritime coast thereof is called Cyropolis, and that part which confineth vpon Media, Elymais. In this realme there is a strong fort called Megala, in the ascent of a steep high hill, so direct vpright, that a man must mount vp to it by steps and degrees, and otherwise the passage is very streight and narrow. And this way leadeth to Persepolis the head city of the whole kingdome, which *Alexander* the great caused to be rased. Moreouer in the frontiers of this Realme, standeth the city Laodicea, built by king *Antiochus*. From whence as you turn into the East, the strong fort or castle Passagarda is seated, which the sages or wise men of Persia called Magi, do hold, and therein is the tomb of *Cyrus*. Also the citie Ecbatana belonging to these sages, which *Darius* the king caused to be translated to the mountaines. Between the Parthians and the Arians lie out in length the Parotacenes. These nations and the riuer Euphrates serue to limit and bound the seuen lower realmes abouenamed. Now are we to discourse of the parts remainitg behind of Mesopotamia; setting aside one point and corner thereof, as also the nations of Arabia, wherof we spake in the former booke. This Mesopotamia was in times past, belonging wholly to the Assyrians, dispersed into pettie villages and burgades, all saue Babylon & Ninus. The Macedonians were the first, that after it came vnder their hands reduced it into great cities, for the goodnesse and plenty of their soile and territorie. For now besides the abouenamed townes, it hath in it, Seleucia, Laodicea, and Artemita: likewise within the quarters of the Arabians named Aroei & Mardani, Antiochea: and that which being founded by *Nicanor*, gouernor of Mesopotamia, is called Arabis. Vpon these ioine the Arabians, but well within the countrey are the Eldamarij. And about them is the citie Bura, situated vpon the riuer Pellocontas: beyond which are the Salmanes and Mascans Arabians. Then there ioine to the Gordians those who are called Aloni, by whom the riuer Zerbis passeth, and so discharged into Tigris. Neere vnto them are the Azones and Silices mountainers, together with the Orentians: vpon whom confronteth the city Gaugamela on the West side. Moreouer, there is Sue among the rocks: aboue which are the Sylici and Classita, through whom Lycus the riuer runneth out of Armenia. Also, toward the Southeast, Absitris, and the town Azochis. Anon you come down into the plains & champion country, where you meet with these towns, Diospage, Positelia, Stratonicea, & Anthemus. As for the city Niccephorium, as we haue already said, it is seated neer to the riuer Euphrates, where *Alexander* the great caused it to be founded, for the pleasant seat of the place, and the commodity of the countrey there adioining. Of the city Apamia we haue before spoken in the description of Zeugma: from which they that goe Eastward meet with a strong fortified town, in old time carrying a pourprise & compasse of 65 stadia, called the royall pallace of their great dukes & potentates, named Satrapæ,

N 2

vnto

* Or rather
Nahal Nalca,
i. the kings ri-
uer.

vnto which from all quarters men resorted to pay their imposts, customs, and tributes; but now it is come to be but a fort and castle of defence. But there continue still in their entire and as flourishing state as euer, the city Hebrata and Oruros, to which by the fortunat conduct of Pompey the Great, the limits and bounds of the Roman empire were extended; and is from Zeugma 250 miles. Some writers report, that the riuer Euphrates was diuided by a gouernor of Mesopotamia, and one arme thereof brought to Gobaris, euen in that place where we said it parted in twain: which was done for feare lest one day or other the riuer with his violent streame should indanger the city of Babylon. They affirme also, that the Assyrians generally called it * Armalchar, which signifieth a royall riuer. Vpon this new arme of the riuer aforesaid, stood sometime Agrani, one of the greatest towns of that region, which the Persians caused to be utterly rased and destroyed.

As for the city of Babylon, the chiefe city of all the Chaldean nations, for a long time carried a great name ouer all the world: in regard whereof all the other parts of Mesopotamia and Assyria was named Babylonia: it contained within the walls 60 miles: the walls were 200 foot high, and 50 thick, reckoning to euery foot 3 fingers bredth more than our ordinary measure. Through the midst of this goodly great city passeth the riuer Euphrates: a wonderfull piece of worke, if a man consider both the one and the other. As yet to this day the temple of Jupiter Belus there stands entire. This prince was the first inuenter of Astronomie. It is now decayed, and lieth waste and vnpeopled, for that the city Seleucia stands so neere it, which hath drawne from it all resort and traffique; and was to that end built by Nicator within 40 miles of it, in the very confluent where the new arm of Euphrates is brought by a ditch to meet with Tigris: notwithstanding it is named Babylonia, a free state at this day, and subiect to no man; howbeit they liue after the lawes and manners of the Macedonians. And by report, in this city there are 600000 citifens. As for the walls thereof, it is said they resemble an Eagle spreading her wings: and for the soile, there is not a territorie in all the East parts comparable to it in fertilitie. The Parthians in despiht again of this city, and to do the like by it, as sometime was done to old Babylon, built the city Ctesiphon within three miles of it, in the tract called Chalontis, euen to dispeople and impoverish it; which is now the head city of that kingdom. But when they could do little or no good thereby to discredit the said new Babylon, of late dayes Vologesus their king founded another city hard by called Vologeso Certa. Moreouer, other cities there are besides in Mesopotamia, namely Hipparenum, a city likewise of the Chaldeans, and innobled for their learning as well as Babylon; scituate vpon the riuer Narragon, which gaue the name vnto that city. Howbeit the Persians caused this Hipparenum to be dismantled, and the walls thereof to be demolished. There be also in this tract the Orchenes towards the South, from whence is come a third sort of the Chaldeans, called Orcheni. Being past this region, you meet with the Norites, Orthophants, and Græciophants. *Nearchus* and *Onesicritus*, who registred the voiage of Alexander the Great into India, report, That from the Persian sea to the city Babylon by the riuer Euphrates, is 412 miles. But the later and moderne Writers do count from Seleucia to the Persian gulfe 490 miles. *K. Tubaw* titeth, That from Babylon to Charax is 175 miles. Some affirme moreouer, That beyond Babylon the riuer Euphrates doth maintaine one entire course, and keepeth one channel 87 miles, before he is diuided into feuerall branches here and there, for to water the country: and that he holdeth on his course from his head to the sea for the space of 1200 miles. This varietie of Authors as touching the measure is the cause why a man may not so wel resolute and conclude thereof, considering that euen the very Persians agree not about the dimensions of their Scenes and Parafanges, but haue diuers measures of them. Whereas the riuer Euphrates giueth ouer his owne chanel, (which for the bredth thereof is a sufficient munition to it selfe) and beginneth to part into diuers branches, which it doth about the marches & confines of Charax, in all the tract neere adioyning, great danger there is of the Attalæ, a theeuish nation amongst the Arabians, who presently set vpon all passengers comming and going to and fro. When you are past this infamous and suspected Region, you shall enter into the Countrey of the Schenites. As for the Arabians which are called Nomades, they occupie all the coasts of the riuer Euphrates, as farre as to the Desarts of Syria. From the which place we haue said that hee turned, and tooke his way into the South, abandoning the desarts of Palmyrene. To conclude, from the beginning and head of Mesopotamia, it is counted to Seleucia, if you passe vpon the riuer Euphrates, 1125 miles:

A miles: and from the red sea, if you go by the riuer Tigris, 320 miles: from Zeugma 527 miles: and to Zeugma from Seleucia in Syria vpon the coast of our sea, is reckoned 175 miles. This is the very true and iust latitude there, of the firm land between the two seas, to wit, the Persian gulfe and the Syrian sea. As for the kingdome of Parthia, it may containe 944 miles. Finally, there is yet another towne of Mesopotamia vpon the banke of Tigris, neere the place where the riuers meet in one, called Digba.

CHAP. XXVII.

¶ The riuer Tigris.

B Me et also and conuenient it is to say somewhat of the riuer Tigris. It begins in the land of Armenia the greater, issuing out of a great source; and euident to be seen in the very plaine. The place beareth the name of Elongosine. The riuer it selfe so long as it runs flow and softly is named Diglito; but when it begins once to carry a more forcible streame it is called Tigris, for the swiftnesse thereof; which in the Medians language betokens a shaft. It runs vp into the lake Arethusa, which beareth vp afloate all that is cast into it, suffering nothing to sinke; and the vapors that arise out of it carry the sent of Nitre. In this lake there is but one kind of fish, and that entreth not into the chanell of Tigris as it passeth through, nor more than any fishes swim out of Tigris into the water of the lake. In his course and colour both he is vnlike, and as he goes may be discerned from the other: and being once past the lake, and in countreth the great mountain Taurus, he loseth himself in a certain caue or hole in the ground, and so runs vnder the hill, vntill on the other side thereof he breaketh forth again, and appears in his likenesse, in a place called Zoroanda. That it is the same riuer it is euident by this, that he carrieth through with him, and sheweth in Zoroanda, whatsoeuer was cast into him before he hid himselfe in the caue aforesaid. After this second spring and rising of his he enters into another lake, and runneth through it likewise, named Thospites; and once again takes his way vnder the earth through certain blinde gutters, and 25 miles beyond he putteth forth his head about Nymphæum. *Claudius Cesar* reporteth, that in the countrey Arrhene, the riuer Tigris runs so neere the riuer Arsanias, that when they both swell, and their waters are out, they ioine both their streams together, yet so, as the water is not mingled: for Arsanias being the lighter of the twain, swimmeth and floteth ouer the other for the space wel-neere of 4 miles: but soon after they part asunder, and Arsanias turneth his course toward the riuer Euphrates, into which he entreth. But Tigris receiuing into him certain goodly great riuers out of Armenia, to wit, Parthenis, Agnice, and Pharion, & so diuiding the Arabians & Trocenes from the Adiabenes, and by this means making as it were an Island of Mesopotamia aforesaid, after he hath passed by and viewed the mountaines of the Gordians, neere vnto Apamia a towne of Mesene on this side Seleucia surnamed Babylonia, 125 miles: diuiding himselfe into two armes or channels, with the one he runneth Southward to Seleucia, watering as he goeth the countrey of Mesene; and with the other windeth Northward: he goeth on the backside of the said Mesene, and cutteth through the plains of the Cauchians. Now when these two branches are re-vnited again, the whole is called Pasitigris. After this, he taketh into him out of Media, the great riuer Caspes: and so passing between Seleucia and Ctesiphon, as we haue said, he falls into the meeres and lakes of Chaldæa, which he furnissheth and replenissheth with water for the compasse of seuentie miles: which done, he issueth forth againe, gushing out with a mighty great and large streame; and running along the towne Charax, on the right hand thereof, he dischargeth himselfe into the Persian sea, carrying there a mouth ten miles ouer. Between the mouthes of these two riuers, Tigris & Euphrates, where they fall into the sea, were counted in old time 25 miles, or as some would haue it but seven: and yet both of them were nauigable, and bare right great ships. But the Orcheniens and other neighbor inhabitants, long since turned the course of Euphrates aside to serue their owne turnes in watering their fields, and stopped the ordinarie passages thereof, insomuch as they forced him to run into Tigris, & not otherwise than in his chanell to fall into the sea. The next countrey bordering vpon Tigris is called Parapotamia, in the marches whereof is the city Mesene, whereof we haue spoken. The chiefe towne thereof is Dibitach: from thence you enter presently into the region Chalontis, ioyning hard vpon Ctesiphon, a rich countrey, beautified not only with rowes of date trees, but also with Oliue, Apple,

and pearre trees, and generally with all sorts of fruit. Vnto this country extends the mountaine Zagrus, comming along from out of Armenia, between the Medes and Adiabenes, aboue Parretacene and the realme of Persis. Chalontis is from Persis 480 miles distant: & some write, that going the streight, direct, and neere way, it is so much and no more from the Caspian sea to Assyria. Between these countries and Mesene lieth Sittacene, the same that Arbelitis and Palestine. The townes of importance therein are Sittace, held by the Grecians, scituate toward the East, and Sabata: but on the West side Antiochia, seated betwene the two riuers Tigris and Tornadotus. In like manner Apamia, which *Antiochus* the king so called after his mothers name, This City is inuironed as it were with the riuier Tigris, and diuided with the riuier Archous which passeth through it. Somewhat lower than these countries lieth the region Susian, wherein stood the antient royall pallace and seat towne of the Persian kings, Susa, founded by *Darius* son of *Hystaspes*; and from Seleucia Babylonia it is 450 miles distant: & as much from Ecbatana in Media, taking the way along the mountaine Charbanus. Vpon that branch of the riuier Tigris that taketh his course Northward, stands the towne Babyrace; and from Susa it is 135 miles. The people of this country are the only men in the world that hate gold: and in very truth get it they do, and when they haue it, they bury it sure enough within the ground, that it may serue for no vse. Vpon the Susianes Eastward ioyn the Cossians, Brigands, and theenes generally all. Likewise the Mizrans, a free state, and subiect to no gouernment, hauing vnder them 40 nations, all wilde, and liuing as they list. Aboue these quarters you enter into the countries of the Parthians, Mardians, Saïtes, and Hyans, who confine vpon high Persia called Elemais, which ioineeth to the maritime coasts of Persis, as is aboue said. The city of Susa is from the Persian sea 250 miles. On that side whereas the Armada of *Alexander* the Great came vp the great riuier Palitigris to Susa, there stands a Village on the lake Chaldais, name Aphe, from which to Susa is 65 miles and an halfe by water. The next that border vpon the Susians Eastward are the Cossians: and aboue the Cosses Northward lieth Mesobaten vnder the hill Cambalidus, which is a branch and dependant of the mountain Caucasus; and from thence is the most easie and ready passage into the country Bactriana. The riuier Eulæus makes a partition betwixt the high country of Persis called Elemais, and Susiane. This riuier issueth out of the Medians country, & in the midst of his course loseth himself vnder the ground: but being once vp againe he runneth through Mesobaten, and inuironeth the fort & castle of Susa, with the Temple of *Diana*, which is had in great reuerence and honour aboue all other Temples in those parts: yea, and the very riuier it selfe is in much request, and the water thereof ceremoniously regarded, in such wise, as the kings drinke of no other, and therefore they fetch it a great way into the country. And it receiueh into it the riuier Hedypnus, which commeth along the Priuiledged place whereinto the Persians vse to retyre for sanctuarie, and one more out of the Susianes country. A towne there is planted neere vnto it, called Magoa, 15 miles from Charax: yet some there be that would haue this towne to stand in the vtmost marches of Susiana, euen close to the mountaines and desarts. Bencath the riuier Eulæus lieth Elemais, ioyning to Persis in the very maritime coast; 240 miles it is from the riuier Oroates to Charax: the towns in it be Seleucia and Sofrate, both scituate vpon the hanging of the hill Casyrus. The flat coast and leuell thereof, which lieth before it, is, as we haue said before, no lesse dangerous, and vnaccessible than the Syrts, for quauemires, by reason of the great store of mud and sand together, which the riuers Brixia and Ortacea bring downe with them.ouer and besides, the country Elemais is so fenny, and standeth with water so wet, that there is no way through it to Persis, but a man must fetch a great circuit and compasse about it to come thereto. Moreouer, it is much haunted and annoied with serpents, which breed and come downe in those riuers: And as troublesome as the passage is all the country ouer, yet that part yeeldeth the worst aduenues, and is least frequented, which is called Characene, of the towne Charax, which limits the kingdomes of Arabia, whereof we will speake anon more at large, after wee haue set downe the opinion of *M. Agrippa*, which he hath deliuered as touching these quarters: for he hath written, that Media, Parthia, and Persis are bounded on the East side with the riuier Indus; on the West with Tigris; on the North part with the two mountaines, Taurus and Caucasus; and on the South coast with the red sea: also that they extend in length 1320 miles, and in bredth eigh hundred forty. Moreouer, that Mesopotamia by it selfe alone is inclosed Eastward with the Riuier Tigris, and Westward with Euphrates; hauing on the North side the mountaine

Taurus.

- A Taurus, and on the South the Persian sea: lying out in length 800 miles, and in bredth 360: now to returne vnto Charax, the inmost towne within the Persian gulfe, from which Arabia called Eudemonia, happie, begins and runneth forth in length; scituate it is vpon a mount artificially reared by mans hands between the confluent of Tygris on the right hand, and Eulæus on the left, and yet notwithstanding it carrieth a pourprile or precinct of three miles compasse. Founded first it was by *Alexander* the great, who hauing drawne Coloners to inhabite it out of the kings city Durine (which then was ruinat) and leauing there behind him those soldiers which were not fit for seruice, nor able to follow in the march, ordained, that this towne should be called Alexandria: and the territory about it Pellæum, of the towne where himselfe was born: and withall appointed, that it should be peopled only with Macedonians. But this towne of his by him founded, was ouerthrowne and destroyed by the two riuers aforesaid. Afterwards *K. Antiochus* the first rebuilt it again, and named it of himselfe Antiochia. But when it was decayed a second time by these riuers, *Spasines*, son of *Sogdonacus*, who held Arabia, bordering neere by as an absolute king, and not (as *Iuba* reporteth) as a duke or gouernor vnder *Alexander*, raised great wharfes, and opposed mightie dams and caufies against those riuers, and so re-edified the towne a third time. Which done, he called it after his own name Charax of Spasines: and verily hee fortified thus the site and foundation thereof, three miles in length, and little lesse in breadth. At the beginning it stood vpon the sea-coast, and from the water side not aboue ten stadia, and euen from thence it hath certain false ballard galleries: but by the report of *Iuba* in his time, 50 miles. Howbeit, at this day both the Arabian Embassadors, and also our merchants that come from thence, say it is from the sea shore 125 miles. In such sort, that it cannot be found in any place of the world again, where the earth hath gained more, nor in so short a time, of the water, by reason of the store of mud brought down with riuers. And the more maruell it is, that considering the sea floweth, and the tide riseth far beyond this towne, yet those made grounds are not beaten back, and carried away againe. In this very towne I am not ignorant that *Dionysius* the latest of our moderne Geographers was born, whom *Augustus* the Emperor sent of purpose beforehand into the East countries to discover those parts, and record faithfully in writing whatsoever he there found, for the better aduertisement of his elder son, who was vpon his voyage and expedition of Armenia, to war against the Parthians and Arabians. Neither haue I forgotten, that in my first entrance into this worke in hand, I made some protestation to follow those who had written of their owne countries, as men lightly most diligent and of best intelligences in that behalfe. Howbeit, in this place I chuse rather to follow our martiall captaines that haue warred there, and report me also to *K. Iuba*, who hath written certain books to *C. Caesar* *Caligula*, as touching the occurrences in the Arabian voiage.

CHAP. XXVIII.

¶ Arabia, Nomades, Nabatei, and Omani: Tylos and Ogyris two Islands.

- A Arabia commeth behind no country in the world, for largenesse and greatnesse, especially reaching out in length a mighty way. For it beginneth at the fall and descent of the mountaine Amanus ouer-against Cilicia and Comagene, as we haue before said: where it is peopled with many nations brought from thence thither by *Tigranes* the great, to inhabite that quarter, and in old time descended naturally, and reached as far as to our sea & the Egyptian coast, as we haue shewed; yea, and extendeth into the midland parts of Syria to the mountain Libanus, where the hills reach vp to the very clouds: vpon which bound the Ramisians, then the Taraneans, and after them the Patami. As for Arabia it selfe, being like a demie Island, runneth out between two seas, the red and the Persian, by a certain artificiall workmanship of nature, framed according to Italy in likenesse of forme and bignesse: yea, and lieth along the sea coasts in manner of Italy. And more than that, it regardeth the same quarter and line of heauen, without any difference at all. This tract thereof, for the rich seat it hath, is named *Felix*, i. Happy. The nations therein dwelling, from our sea-coasts to the desarts of Palmyrcum, wee haue treated of already. Therefore ouerpassing them, we will discouise of the rest forward. Now then, the Nomades & those robbers that so lie vpon the Chaldaeans & trouble them, the people called Scenitæ, as we haue before said, do confine vpon. And euen they also make no certain place of abode and habitation, but are called Scenitæ, of their tabernacles and booths which they

resort of merchants. Moreover, the Hemnates and Analites, whose townes are Domada and E-
 rage: also the Thamusiens, with their towne Badanatha: the Carreans, and their towne Charia-
 ri: the Achoali, and a city of theirs Phoda. Furthermore, the Minæi, descended as some thinke
 from *Minos* king of Crete: whose citie Charnæi hath 14 miles in compasse. Other townes like-
 wise be there standing a far off, and namely, Mariaba, Baramalacum, a town ywis of no mean ac-
 count: likewise Carnon, and Ramei, who are thought to come from *Rhadamanthus* the brother
 of *Minos*. Ouer and besides, the Homerites, with their towne Massala: the Hamirei, Gedrani-
 tæ, Anapra, Ilisanitæ, Bochilitæ, Sammei, and Amatheï, with these townes Nessa and Cennef-
 feri. The Zamanenes, with these townes, Saiaæ, Scantate, and Bacasmani: the towne Rhiphear-
 ma, which in the Arabian tongue signifieth Barley: also the Antei, Rapi, Gyrei, and Marhatai.
 The Helmadenes, with the towne Ebode. The Agarturi in the mountaines, hauing a towne 20
 miles about, wherein is a fountaine called Emitchabales, that is as much to say, as The Cam-
 elstown. Ampelone, a colony of the Milesians: the towne Atrida: and the people Calingij,
 whose towne is named Mariaba, as much to say as, Lords of all. Towns moreover, Pallon & Mu-
 rannimal, neere vnto a riuer, by which men thinke that Euphrates springeth and breaketh forth
 aboue ground. Other nations besides, namely, Agrei and Ammonij: with a towne, Athenæ: and
 the Caurarani, which signifieth, Most rich in droues of cattell. Then the Caranites, Cæfanes,
 and Choanes. There were sometime also certaine townes in Arabia, held by Greeks, and name-
 ly, Arethusa, Larissa, and Chalcis, which all in the end came to ruine and were destroyed in di-
 uers and sundry wars. The onely man among the Romans vntill this day that warred in those
 parts, was *Abius Gallus* a knight of Rome. As for *Caius Caesar* the son of *Augustus* the Emperor,
 he did but looke only into Arabia, and no more: but *Gallus* wasted townes that were not once
 named by Authors that wrote before, namely Egra, Anestum, Essâ, Magusum, Tamuracum,
 Laberia, and the aboue-named Marieba, which was in circuit six miles about: likewise Cari-
 petæ, the farthest that he went vnto. As for all other matters, he made report vnto the Senate of
 Rome, according as he had found and discovered in those parts; to wit, that the Nomades liue
 of milke and venison: the rest of the Arabians presse wine, like as the Indians do, out of dates:
 and oile of Sefama, a kinde of graine or pulse in those countries. That the Homerites country
 of all others is most populous and replenished with people: the Minæans haue plenteous and
 fruitfull fields, full of date trees and goodly hortyards stored with all sorts of fruit: but their
 principall riches lieth in cattell. The Cembanes and Arians are good warriors and martiall
 men, but the Chatramotites that way excell all the rest. The Carreans haue the largest territo-
 ries and most fertile fields for come. As for the Sabæans, their wealth standeth most vpon their
 woods and trees, that bring forth the sweet gums of Frankincense and myrrhe: also in mines of
 gold: hauing water at commandement to refresh their lands, and plenty besides of hony & wax.
 As concerning the sweet odours and spices that come from thence, we will speake thereof in a
 seuerall booke by it selfe. The Arabians weare miters or turbants ordinarily vpon their heads,
 or else go with their haire long and neuer cut it: as for their beards, them they shauē, saue only
 on their vpper lippe, which they let grow still: and yet some of them there be that suffer their
 beards to grow long and neuer cut them. But this one thing I maruell much at, that being such
 an infinit number of nations as they be, the one halfe of them liue by robberie and theeuing,
 howsoeuer the other liue by traffick and merchandise. Take them generally, they be exceeding
 rich; for with them the Romans and Parthians leaue exceeding sums of gold and siluer, for the
 commodities out of their woods and seas which they sell vnto them: but they themselues buy
 nothing of them againe. Now will we speake of the other coast opposite vnto Arabia. *Timosthe-
 nes* hath set downe, that the whole gulf or arm of the sea called Red, was from one end to the
 other foure daies sailing: and from side to side, two daies: that the streights of the firthe were
 seuen miles ouer. But *Eratothe-
 nes* saith, that taking the measure at the very mouth, it is euerie
 way 1300 miles.

CHAP. XXIX.

¶ The gulf of the Red Sea: likewise of the Trogloditick and Æthiopian Seas.

A *Rtemidorus* auoucheth, that the Red Sea toward Arabia side, is 1450 miles: but on the
 coast of the Troglodites 1182, vntill you come to the citie Ptolemais. Most Geogra-
 phers haue set downe the breadth thereof to bee 462 miles: and that the mouth of it,
 where

A where it openeth wide, full against sun-rising in winter [i. South-west] some say, is 7 miles broad,
 and others 12. As for the posture situation thereof, thus it lyeth: beyond the branch or arme
 thereof called Ælaniticus, there is another creeke which the Arabians call Æant, vpon which
 standeth the towne Heroon. In old time there was a city called Cambisî, betweene the Nelians
 and Marchandians, into which the sicke and feeble souldiers of our armie were conuied, as to
 a place of retreat and repose. Beyond which, you enter into the land of Tyra: and there is the
 port Dancon to be seene, from which *Sesostri* a king of Ægypt, was the first that imagined and
 deuised to draw one arme of it with a channell nauigable, into Nilus, in that part where it run-
 neth to the place called Delta, and that for 62 miles space, which is between the said riuer and
 the red sea. This enterprise of his was followed by *Darius* king of the Persians: yea and by *Pto-
 lomeus* king of Ægypt, second of that name, who made a channell 100 foot ouer, and 30 deep, for
 37 miles in length and an halfe, euen to the bitter fountaines. But this desigae was interrup-
 ted and the ditch went no farther, for feare of a generall deluge and inundation: for found it
 was, that the red sea lay aboue the land of Ægypt three cubits. Some alledge not that to be the
 cause, but this, namely, That if the sea were let into Nilus, the sweet water thereof (whereof they
 drinke only and of none else) should be corrupted thereby and marred. Yet neuerthelesse, al-
 though this worke went not forward, the way is well beaten all the country ouer betweene the
 Red sea, and the Ægyptian, for trafficke: and three seuerall ordinarie waies there are between:
 the one from Pelusium ouer the sands, where, vnles there be reeds set vp pitched in the ground
 to giue guidance and direction, there would no path be found, for euer & anon the wind blow-
 eth the sand ouer the tracts of mens feet and couereth all. A second beginneth 2 miles beyond
 the mountaine Casius, which after 60 miles commeth into the former Pelusiacke way. (Vpon
 this great rode way, the Arabians called Autei, do inhabit.) The third taketh his head and be-
 ginning at Gereum, which they call Adipson, and holdeth on through the said Arabians, & is
 60 miles neerer way, but full of craggie hills and altogether without waters. All these foresaid
 waies lead to the city Arsinoe, built vpon the gulf Charandra by *Ptolomeus Philadelphus*, and
 bare his sisters name: and verily hee was the first that discovered those parts, and searched nar-
 rowly into the region Trogloditicum: and the riuer that passeth by Arsinoe, he called *Pto-
 lomeus*. Within a litle of this place, there is a litle town named Ennum, for which, some there
 be that write, Philotera. Beyond them, are the Azarei: Arabians of the wilder sort & halfe Tro-
 glodites, by reason they marry their wiues from out of the Troglodites country. Beeing past
 these coasts, you shall finde the Islands Sapyrene and Scytala: and within a litle thereof, de-
 parts vntil you come to Myos-hormos, where there is a fountaine called Taduos, the mount
 Eos, the Island Lambe, many hauens besides, and Berenice a town, bearing the name of the mo-
 ther to *K. Ptolomeus Philadelphus*, to which there is a way lying from Coptos, as we haue said: &
 last of all the Arabians called Autei, and Gnebadei. Now it remaineth to speake of the region
 Trogloditicum, which the antient men of old time called Michoe, & others Midoe: & therein
 standeth the mountaine Pentedaetylos. Vpon the coast of this country, there lie to be seen cer-
 taine Islands called Stenæ-deiræ: and others no fewer in number named Halonnefi: also Car-
 damine, and Topazos, which Island gaue the name to the precious stone called the Topaze.
E Then come you to an arme of the sea betweene two lands, full of pettie Islands, whereof that
 which is called Mareu, is well serued with water sufficient: another, Eratonos, is altogether dry
 and vnprouided of fresh water. These Islands tooke name of two captains and gouernors there
 vnder the king. Within-forth farther into the firm land, inhabit the Candei, whom they call
 Ophiophagi, because they are wont to feed on serpents: and in truth there is not another coun-
 try that breeds them more than it. *K. Iubaw* ho seemeth to haue taken great paines in the dili-
 gent perusing and discovery of these parts, omitted in all this tract (vnlesse there be some fault
 and defect in them that copied out his first originall) to speake of a second city named Bere-
 nice, with the addition of Panchryfos; as also of a third called Epidires, and yet renowned it is
 in regard of the place wherupon it is seated: for scituat it is vpon a knap of land bearing far into
 the red sea, euen where the mouth of it is not about 4 miles & an halfe, from Arabia. Within
F the prospect of this tract there is the Island Cytis, which also bringeth forth good store of the
 Topaze stones. Beyond this quarter, nothing but woods and Forrests, where *K. Ptolomeus* surna-
 med *Philadelphus* built the city Ptolemais, onely for to chafe and hunt the Elephant, neere to
 the lake Monoleus; and in regard of his game there, he named it Epi-theras. This is the verie
 country

country mentioned by me in the second book: wherein for 45 daies before Mid-summer, or the entrance of the Sun into Cancer, and as many after, by the fixt houre of the day, that is to say, about noone, no shadowes are to be seen: which being once past, all the day after they fall into the South. As for other daies of the yere besides, they shew into the North: whereas in that citie Berenice which we mentioned first, vpon the very day only of the Sun-kead, at the sixth houre or noon-tide, the shadowes are cleane gone and none to be seene (for otherwise there is no alteration at all to be obserued throughout the yere) for the space of 600 miles all about Ptolemais. A strange & notable thing worth obseruation, that it should be so but in one houre all the yere long, and a matter that gaue great light and direction to the world, yea and ministered occasion to a singular inuention and subtil conclusion: for *Eratosthenes* vpon this vndoubted argument and demonstration of the diuersitie of shadowes, set in hand hereupon to take the measure of the whole globe of the earth, and put it downe in writing to all posteritie. Beyond this city Ptolemais, the sea changerh his name and is called Azanium; ouer which the cape sheweth it selfe, which some haue written by the name of Hispalus: also, anon appeareth the lake Mandalum, and in it the Island Colocastis; but in the deep sea many more, wherein are taken many tortoises. Farther vpon this coast is the towne Suchæ, and then you may discover in the sea the Island Daphnis, and the city Aduliton, built by certaine Egyptian slaues who ran away from their masters and took no leaue: and verily this is the greatest and most frequented mart towne of all the Troglodites country, and put the Egyptians to them: and it is from Ptolemais 5 daies sailing. Thither is brought great store of yuorie, or the Elephants tooth, and of the horn of the Rhinoceros: there many a man haue plenty of the sea-horse hides, of tortoise shels, of little Monkeys or Marmosets: there also a man may be sped with bondslaues. A little beyond are the Ethiopians, called Aroreræ: also the Islands named Aliaæ: and besides them other Islands, namely, Bacchias, Antibacchias, and Stratonis: being past them, there is a gulf in the coast of Ethiopia, as yet not discovered or knowne by any name: a thing that may make vs maruel much, considering that our merchants search into farther corners than so. Also a promontory, wherein there is a fountaine of fresh water named Curios, much desired of the sailers that passe that way, and in great respect for the refreshing that it yeeldeth vnto them: beyond it, is the harbor or port of Ius, distant from the towne of the Adulites aboue said, ten days rowing with ores; and thither is the Troglodites myrrhe brought, and there laid vp. Before this haven, there lie in the sea two Islands, named Pseudopylæ: and as many farther within, called Pyliæ: in the one of them be certaine pillars of stones, ingrauen with strange and vnkowne Letters. When you are past this haven, you come to an arme of the sea called Abalites: within it is the Island Diodori, and other lying desart and vnpeopled. Also along the continent, there is much wildernesse: but being past them, you come to the towne Gaza: the promontorie also & port Mossylites, vnto which store of cynamon and canell is brought. Thus far marched *K. Sesostris* with his army. Some writers make mention of one town more in Ethiopia beyond all this, vpon the sea side, called Baradaza. *K. Iuba* would haue the Atlantick sea to begin at the promontorie or cape aboue named, Mossylites: on which sea (as he saith) a man may faile very well with a West-north-west winde, by the coasts of his kingdomes of Mauritania or Maroccho, as farre as to the coasts of Gibraltar called Gades: and sure he speaketh so confidently thereof, as I will not altogether discred it his resolution in this behalfe. From a promontorie of the Indians called Lepteacra, and by others Drepanum, vnto the Isle of Malchu, hee saith plainly, that by a straight and direct course it is 15 hundred miles, and neuer reckon those parts that are burnt with the Sun. From thence to a place called Sceneos, he affirmeth it is 225 miles: and from it to the Island Sadanum, 150 miles; and thus by this means he concludeth, that in all, to the open and knowne sea, it is 1885 miles. But all other writers besides him were of opinion, that there could not possibly be any sailing vpon it, for the exceeding heat of the Sun. Ouer and besides, the Arabians named Afcitæ, doe much harme and annoyance from out of the Islands which they hold, vnto merchants that trafficke that way: for these Arabians, according as their name doth import, couple bottles made of good ox leather, two by two together, and going vpon them with ease as it were a bridge vnder them, scoure the seas, and shooting their empoysoned arrowes, practise pyracie, to the great losse and mischief of merchants & sailers. The same *Iuba* writeth moreover, that there be certaine people of the Troglodites, named Therothoes, for their hunting of wilde beasts, of their exceeding and wonderful swiftnesse in chasing of Deere

vpon

A vpon land: as the Ichthyophagi for coursing of fish in the sea, swimming as naturally as if they were water creatures. Moreover, he nameth other nations in those parts, as the Bargeni, Zageres, Chalybes, Saxinæ, Syreces, Daremes and Domazanes. Furthermore, he affirmeth, that the people inhabiting along the sides of Nilus from Syene vnto Meroe, are not Ethiopians, but Arabians, who for to seeke fresh water, approached Nilus; and there dwelt: as also that the citie of the Sunne, which we said before in the description of Egypt, standeth not farre from Memphis, was first founded and built by the Arabians. Contrariwise, other Geographers there be, who affirme that the farther side or banke of Nilus is no part of Ethiopia, and they lay it as a dependant annexed to Affrick. But be it as will be, I wil not greatly busie my head thereabout, but suffer euery man to abound in his own fence, and haue his own way: only I will content my selfe with this, to set downe the townes on both sides thereof, in that order as they are declared vnto me. And first to begin with that side toward Arabia: after you are past Syene, enter you shall vpon the countrie of the Catadupi, and so forward into the land of the Syenites. Wherin these towns stand in order as followes: Tacompson, which some haue called Thatie, Aranium, Sefanium, Sandura, Nasandum, Anadoma, Cumara, Beda and Bochiana, Leuphithorga, Tantaraene, Machindira, Noa, Gophoa, Gystatæ, Megeda, Lea, Rhemnina, Nupfia, Direa, Patara, Bagada, Dumana, Rhadata, wherein a golden car is worshipped as a god. Boron in the midland part of the continent, and Mallos, the next towne to Meroe. Thus hath *Bion* digested and set them downe. But king *Iuba* hath raunged them otherwise in this manner. First, Megarichos a towne situate vpon a hill betweene Egypt and Ethiopia, which the Arabians vse to call Myrson: next to it Tacompson: then Aranium, Sefanium, Pide, Mamuda, and Corambis; nere vnto it a fountaine of liquid Bitumen: Hammodara, Prodda, Parenta, Mama, Thessara, Gallæ, Zoron, Graucome, Emeum, Pidiboræ, Hebdometacometæ, and the Nomades, who ordinarily are encamped vnder tents and paulions. Cyste, Pemma, Gadagale, Paloio, Primmis, Nupfis, Dafelis, Paris, Gambrenes, Magases, Segasmala, Cranda, Denna, Cadeuma, Thema, Batha, Alana, Macum, Scammos, and Gora within an Island. Beyond which, Abala, Androcanis, Seres, Mallos & Agoce. And thus much on the side of Arabia. Now for Affrick side, they are in this wise reckoned. First, Tacomplos, according to the others name, or a parcell rather of the former: then, Magora, Sea, Edofa, Pelenaria, Pyndis, Magufa, Bauma, Linitima, Spyntuma, Sydopra, Genfoa, Pindicitoræ, Eugo, Orfima, Suasa, Maunia, Rhuma, Vrbubuma, Mulona, which town the Greeks were wont to call, Hypaton, Pagoargas, Zanones, & there begin the Elephants to come in, Mambliæ, Berrefa, Cetuma. There was moreover a towne sometime named Epis, situate against Meroe: but rased it was and vtterly destroyed before that *Bion* wrote his Geography. See what cities and towns of name were recorded in times past to haue bin in those parts, vntil you come to the Isle Meroe. And yet at this day there is neither stick nor stone to be found of any of them in a manner on neither side. Only desarts and a vast wildernesse in stead of them, by report made vnto *Nero* the Emperor by the Prætorian souldiers, sent thither from him vnder the leading of a Tribune or Colonel, to discover those quarters of Ethiopia, & to relate accordingly: at what time as among other his designs, that Prince intended an expedition with his army against the Ethiopians. And yet before his time, euen in the daies of *Augustus Cæsar* of happie memory, the Romanes pierced thither with a power of armed men vnder the conduct of *Pub. Petronius*, a knight of Rome, and gouernour of Egypt, deputed by the said Emperour. Where he forced by assault and conquered all those townes in Ethiopia which he then found standing in this order following: namely, Pselcis, Primis, Abaccis, Plithuris, Cambusis, Attena, Stadiis, where the riuer Nilus runs down with such a mighty fall, that with the noife thereof the inhabitants there by lose their hearing and become deafe. Besides these he won also and sacked Napata. And albeit he marched forward still a great way into the countrie, euen 870 miles beyond Syene, yet this Romane armie of his laid not all waite in those parts, & left the country so desart as now it is. No, no: It was the Egyptians warres and not the Romanes that gaue the waite to Ethiopia: and albeit sometimes it woon and otherwhiles lost, one time bare the scepter and ruled, another time vnderwent the yoke, and were subdued: yet was it of great name in the world and puissant, vntill the reigne of king *Memnon*, who ruled at the time of the Troiane war: yea, and Syria was subject vnto it, as also the coast of our sea in king *Cephus* daies, as appeareth by the fabulous tales that go as touching *Andromeda*. Semblably the Geographers varie and disagree much about the measure and dimension of Ethiopia. And first of all others, *Dalio*, albeit

Q

be it

beit he passed far beyond Meroe: after him, *Aristocreon*, *Bion*, and *Basilis*. As for *Simonides* (the younger and the later writer) had sojourned the Meroe five yeares, when he wrote of *Ethiopia*. For *Timosthenes* the Admirall of *Ptolomæus Philadelphus* his naue, hath left in record, that from Syene to Meroe is 60 daies iourney, without any further particularizing of the measure by miles. But *Eratosthenes* precisely noteth, that it is 625 miles. *Artemidorus* but 600. *Schoßus* affirmeth, That from the frontiers of Egypt it is 1675 miles. From whence, the last rehearsed Writers count forward but 1270. But all this difference and dispute about this point, is lately determined & ended by the report of those traueellers whom *Nero* sent of purpose to discover those countries; & they made relation of the truth vpon their certain knowledge, that it is 874 miles from Syene in this maner particularly by iournies. Namely, from the said Syene to Hiera-Sycaminon 54 miles: from thence to Tama 75 miles: from Tama to the Eunymites country, the first of all the *Ethiopian*s, 120. Forward to Acina 54. To Pitara 25. To Tergedum 106 miles. Where by the way it is to be noted, that in the midst of this tract lieth the Island Gagandus: where they began first to haue a sight of the birds called Parats; & beyond another Isle in the same way which is called Artigula, they might see monies & marmosets: but being once beyond Tergedum, they met with the beasts Cynocephali. From thence to Napata 80 miles: this is the only little town among all the rest before named. From which to the Island Meroe is 360 miles. They reported moreover, that about Meroe (& not before) the grasse and herbs appeared fresh and green, yea, and the woods shewed somewhat in comparison of all the way besides, and that they espied the tracts of Elephants & Rhinoceroses where they had gone. As for the town it selfe Meroe, they said it was within the Isle from the very entrie therof 70 miles: & that iust by, there was another Island called Tatu, which yeelded a bay or haven to land at for them that took the arme & channell of Nilus on the tight hand. As for the building within Meroe, there were but few houses in it: that the Isle was subject to a lady or queen named Candace, a name that for many yerres already went from one queen to another successiue. Within this town there is the temple of great holinesse and deuotion in the honor of *Iupiter Hammon*: and in all that tract many other chappels. Finally, so long as the *Ethiopian*s swaied the scepter and reigned, this Island was much renowned & very famous. For by report, they were wont to furnish the *Ethiopian* king with armed men 250000, & to maintain of Artisans 400000. Last of all there haue bin counted 45 kings of the *Ethiopian*s, and so it is reported at this day.

CHAP. XXX.

¶ The manifold, strange, and wonderfull formes and shapes of men.

ALl *Ethiopia* in generall was in old time called *Etheria*: afterwards *Atlantia*: and finally of *Vulcan* son *Ethiops*, it took the name *Ethiopia*. No wonder it is, that about the coasts thereof there be found both men and beasts of strange and monstrous shapes, considering the agilitie of the suns fierie heat, so strong and powerfull in those countries, which is able to frame bodies artificially of sundry proportions, and to imprint and graue in them diuers forms. Certes, reported it is, that far within the country Eastward there are a kinde of people without any nose at all on their face, hauing their visage all plain and flat. Others again without any upper lip, and some tonguelesse. Moreover, there is a kinde of them that want a mouth, framed apart from their nose-thrills: and at one and the same hole, and no more, taketh in breath, receiuethe drinke by drawing it in with an oaten straw; yea, and after the same maner feed themselves with the grains of oats, growing on the own accord without mans labour and tillage, for their only food. And others there be, who in stead of speech and words, make signes, as well with nodding their heads, as mouing their other members. There are also among them, that before the time of *Ptolomæus Lathyrus* king of Egypt, knew no use at all of fire. Furthermore, writers there be, who haue reported, that in the country neere vnto the meeres and marshes from whence Nilus issueth, there inhabit those little dwarfs called Pygmei. But to return againe to the utmost coasts of *Ethiopia*, where we left: there is a continuall ranage and course of mountains all red like fire, as if they were euer burning. Moreover, beyond Meroe there is a country lying above the Trogilodites and the red sea: where, after you be three daies iourney from Napata toward the coast of the said red sea, you shall find that in most places they saue raine water for their ordinarie use to drinke, and otherwise: all the country betwene is very plenteous and full

A of gold mines. All beyond this region is inhabited by the Atabuli, a people also of *Ethiopia*. As for the Megabares, whom some haue named Adiabares, they lie against Meroe, and haue a towne bearing the name of *Apollo*. Among them are certain Nomades encamping vnder tents and tabernacles, who liue of Elephants flesh. Iust against them in a part of *Africa* are the long liuing Macrobians. Again, being past the Megabares, you come vnto the Memnonnes & Daveli: & 20 daies iourney from them, to the Critenses. Beyond whom you meet with the Dochi, and the Gymnetes who are euer naked. Soon after you shall find the Anderæ, Mathitæ, Mefagebes, Hipporeæ, who be all ouer blacke, and therefore they colour and paint their bodies with a kinde of red chalk or ruddle called Rubrica. But vpon the coast of *Africa* are the Medimni. Beyond whom you shall come to another sort of Nomades liuing vnder tents, who feed of no other thing but the milk of certain creatures headed like dogs, called Cynocephali: also to the Olabi and Syrbotæ, who are reported to be 8 cubits high. Moreover, *Aristocreon* saith, that on Libya side, five daies iourney from Meroe, there is a town called Tole: & 12 daies iourney from thence, there standeth Efar, a town built by the Egyptians, who fled thither to auoid the cruelty and tyrannie of *K. Psammeticus*. And reported it is, that the Egyptians held it for 300 yerres. Also, that the same fugitiues founded the towne Daron on the contrary side in the coast of Arabia. But that which *Aristocreon* nameth Efar, *Bion* called Sapa, and saith withall, that the very word Sapa signifieth in the *Ethiopian* language, strangers or aliens come from other parts. Hee affirmeth besides, that their capital city is within an Island, Sembobitis, and that Sai within Arabia, is the third city of that nation. Now between the mountains and the river Nilus, are the Symbarians and the Phalanges: but vpon the very hills liue the Asachæ, who haue many other nations vnder them: and they are by report seuen daies iourney from the sea. They liue vpon the venison of Elephants flesh, which they vse commonly to hunt and chase. As for the Island within Nilus, of the Sembarites, it is subject to a queen. And eight daies iourney from thence lieth the country of the *Ethiopian*s, named Nubari. Their chiefe town Tenupis is seated vpon the river Nilus. Beyond the Nubians, you enter vpon the countrie of the Sambræ: where all the foure-footed beasts, yea, euen the very Elephants, are without ears. Vpon the coast of *Africa* inhabit the Ptoembati and Ptoemphani: who haue a dog for their king, and him they obey, according to the signes which he maketh by mouing the parts of his bodie, which they take to be his commandements, and religiously they do obserue them. Their head citie is Aurispi, far distant from Nilus. Beyond them are the Achisarmi, Phaliges, Marigeri, and Casamarri. *Bion* affirmeth, That beyond Ptoembobitis, there be other townes in the Islands of that coast, toward Meroe, all the way as you passe for 20 daies iourney. The towne of the next Island is Sembaritarum, vnder the queen: likewise another called Afar. Also there is a second Island hauing in it the towne Daron: a third which they call Medæ, wherein standeth the town Afel: and a fourth named Garode, like as the towne also. Then along the banks of Nilus are many townes, to wit, Navos, Modunda, Andabis, Setundum, Colligar, Secande, Navestabe, Cumi, Agrospi, Egipa, Candrogari, Araba, and Summara. The region about Sirbithim, where the mountains do end, is reported to haue vpon the sea coast certaine *Ethiopian*s called Nisicastes and Nisres, that is to say, men with three or foure eies apiece: not for that they are so eied indeed, but because they are excellent archers, & haue a speciall good eie in aiming at their marke, which lightly they wil not misse. *Bion* affirmeth moreover, That from that clime of the heauen which beares about the greater Syrtis, & bendeth toward the South Ocean sea, they be called Dalion, to wit, the Ciforians and Longopores, who drinke and vse rain water only. And beyond Ocalices for five daies iourney, the Visbalks, Isuelians, Pharuseans, Valians and Cifpians. All the rest are nothing but deserts not inhabited. But then he telleth fabulous and incredible tales of those countries. Namely, that Westward there are people called Nigroæ, whose king hath but one eie, and that in the mids of his forehead. Also he talketh of the Agriophagi, who liue most of panthers and lions flesh. Likewise of the Pomphagi, who eat all things whatsoever. Moreover, of the Antiropophagi, that feed on mans flesh. Furthermore, of the Cynamolgi, who hate heads like dogs.ouer and besides, the Artabatites who wander and go vp and downe in the footes like fourefooted sauge beasts. Beyond whom, as he saith, be the Hesperij, & Peroæi, who, as we said before, were planted in the confines of Mauritania. In certain parts also of *Ethiopia* the people liue of Locusts only, which they powder with salt, and hang vp in smoke to harden; for their yerely prouision, and these liue not about 40 yerres at the most. Finally, *Agrippa* saith that

that all Ethiopia, and take the land with it of *Prester Iehan* bordering vpon the red sea, containeth in length 2170 miles: & in bredth, together with the higher Egypt, 1291. Some Geographers haue taken the bredth in this manner. From Miroc to Sirbitum, 12 daies iournie vpon Nilus: from thence to the country of the Dauillians another 12, and from them to the Ethiopian Ocean 6 daies. But in general all writers in a manner do resolute vpon this, that betweene Ocean and Meroe, it is 725 miles: and from thence to Syene, as much as we haue set downe before. As for the posture and scituation of Ethiopia, it lies Southeast & Southwest. In the meridian South parts thereof, there be great woods of Ebene especially, alwaies greene. Toward the mids of this region, there is a mighty high mountain looking ouer the sea, that burns continually, which the Greeks cal Theon ochema, i. The chariot of the gods: from the which it is counted foure daies iourny by sea to the promontory or cape called Hesperion-Ceras, which confines vpon Africk, nere to the Hesperian Ethiopians. Some writers hold, that this tract is beautified with pretty little hills, and those pleasantly clad & garnished with shadowie groues, wherein the *Ægipanes* and *Satyres* do conuerse.

Cap. de bonne
Esperance

CHAP. XXXI. The Islands in the *Æthiopian Sea*.

Ephorus, Eudoxus, and Timosthenes, do all agree in this, that there be very many Islands in all that sea. *Clitarchus* witnesseth, that report was made to *Alexander the Great*, of one aboue the rest, which was so rich and well monied, that for an ordinary horse the inhabitants would not stick to giue a talent of gold: also of another, wherein was found a sacred hill adorned with a goodly wood vpon it, where the trees distilled and dropped sweet water of a wonderfull odoriferous smell. Moreover, full against the Persian gulf, lieth the Isle named Cerne, opposit vnto *Æthiopia*, but how large it is, or how far off it beareth into the sea from the continent, is not certainly knowne: this only is reported, that the Ethiopians and none but they, are the inhabitants thereof. *Ephorus* writeth, that they who would faile thither from the red sea, are not able for extreme heate to passe beyond certain columnes or pillars, for so they call the little Isles there. Howbeit *Polybius* auoucheth, that this Island Cerne where it lieth in the westmost coast of the Mauritanian sea ouer-against the mountaine Atlas, is but 8 stadia from the land. And *Cornelius Nepos* affirmeth, that likewise it is not aboue a mile from the land, ouer-against Carthage: & besides, that it is not aboue two miles in circuit. There is mention made also by authors, of another Isle before the said mountain Atlas, named also therupon Atlantis. And siue daies sailing from it, appeare the desarts of the Ethiopian Hesperians, together with the foresaid cape, which we named Hesperion-Ceras, where the coasts of the land begin first to turn about their forefront to wind Westward, and regard the Atlanticke sea. Iust ouer-against this cape, as *Xenophon Lampscenus* reporteth, lye the Islands called Gorgates, where sometimes the Gorgones kept their habitation, and 2 daies sailing they are thought to be from the firme land. *Hanno*, a great commander and generall of the Carthaginians, landed there with an army: who made this report from thence, That the women were all ouer their bodies hairy: as for the men, he could not catch one of them, so swift they were of foot that they escaped out of all sight: but he flead two of these Gorgone women and brought away their skins, which for a testimoniall of his being there, and for a wonder to posteritie, he hung vp in *Tunoes* temple, where they were seen vntill Carthage was won and sacked. Beyond these Isles, there are by report, two more discovered, by the name of Hesperides. But so vncertaine are all the intelligences deliuered concerning these parts, that *Strabo Scobolus* affirmeth, that it is 40 good daies sailing from the Islands of these Gorgones along the coast of Atlas, vnto the Isles of the Hesperides; and from thence to Hesperion-Ceras, but one. As little resolution and certaintie there is, as touching the Islands of Mauritania. In this only they all jumpe and accord, that *K. Iuba* discovered some few of them ouer-against the Autolotes, in which he meant and purposed to die *Gætulian* purple.

CHAP. XXXII.

¶ Of the Islands Fortunata, or Canarie.

Some Authors there bewho thinke, that the Islands Fortunata, and certaine others besides them, are beyond the Antolotes: among whom, the same *Scobolus* aboue rehearsed was so bold, as to speake of their distances: and namely, that the Island Iunonia is from Gades 750 miles:

A 750 miles: and that from it Westward, the Isles Pluvialia and Capraria, are as much. Also that in the Island Pluvialia there is no fresh water, but only that which they haue by showrs of rain. He saith moreover, that from them to the Fortunate Islands are 250 miles; which lie 8 miles from the coast of Mauritania to the leift hand, called the coast of the Sun, or Valley of the sun, for that it is like a valley or hollow leuell flore of earth, whereupon also it is called Planaria, resembling an euen plain. And in very truth, this vally containeth in circuit 300 miles: wherein are trees to be seen that grow vp in height to 144 foot. As for the Islands named Fortunata, *Iuba* learned thus much by diligent inquisition, that they lie from the South nere to the West 625 miles from the Islands Purpuraria, where they die purple; so as to come thither, a man must saile 250 miles aboue the West, and then for 75 miles more bend his coust Eastward: he saith also, that the first of these Islands is called Ombrion, wherein ate to be seen no token or shew at all of houses. Also that among the mountains, it hath a lake or meere: and trees resembling the plant Ferula, out of which they presse water: that which issueth out of the black trees of that kinde, is bitter; but out of the whiter sort, sweet and potable. As for a second, he writeth that it is named Iunonia, wherein there is one little house or chappell made of stone: beyond it, but nere by, there is a third of the same name, but lesse than the other: and then you come to a fourth called Capraria, full of great Lizards. Within a kenning from these, lieth the Island Niuaria, which tooke this name of the snow that lieth there continually, and besides, it is full of mists and fogs. The next to it and the last of all, is Canaria, so called, by reason of a number of dogs of mighty bignesse, of which *K. Iuba* brought away two; & in this Island there are some marks remaining of buildings which giue testimonie that sometime it was inhabited and peopled. And as all these Islands generally do abound plentifully in fruitfull trees, & flying fouls of all sorts: so this aboue the rest named Canaria, is replenished with rowes of date trees that beare abundance of dates, and likewise with pine trees that yeeld store of Pine nuts. Furthermore he affirmeth, that there is great plenty of hony in it: that the riuers therein are well stored with fish, and the Sturgeon especially: in which there groweth the red Papyrus as ordinarily as in Nilus. Howbeit in conclusion he saith, that these Isles are much annoied with great whales and such monsters of the sea, that daily are cast vpon the shore, which lie aboue ground & putrifie like carrion. Thus hauing at large gone through the description of the globe of the earth as well without as within, it remaineth now to knit vp briefly with the measure and compasse of the seas.

CHAP. XXXIII.

¶ A summarie of the earth, digested according to the dimensions thereof.

Polybius saith, that from the streights of Gibraltar, vnto the very mouth and firth of *Mæotis*, it is found by a direct and straight course to be 3437 miles and an halfe. Begin there again, and hold on a right course Eastward to Sicily, it is 1260 miles and an halfe. From thence forward to the Island Creta, 375 miles: forward to Rhodes, 146 miles and an halfe: to the Chelidonie Isles as much, and so to Cyprus 325 miles: from whence to Seleucia Pieria in Syria 115 miles. Which particulars being laid together, make by computation the grosse sum of 2340 miles. Howbeit, *Arrippa* counteth 3440 miles for all this distance aboue-said, beginning at the straits of Gibraltar aboue-said, and carrying the length straight forward to the gulf of Issa. In which reckoning of his, I wot not whether ther be an error in the number, forasmuch as the same writer hath set down from the streit of Messine in Sicilie to Alexandria in Egypt, 1250 miles. As for the whole circuit that may be comprehending therein, all the gulfs and creekes before-named, from the same point where we first began, as far as to the lake *Mæotis*, is 15600 miles. *Artemidorus* addeth thereto 756 miles. And the same Geographer writeth, that take the lake *Mæotis* to the rest, all commeth to 17390 miles. Loe, what the measure is of the seas taken by Philosophers and learned men, without armor and weapon in hand; of men I say, who haue not feared to hazard themselves boldly and prouoke Fortune, in traueising the seas so farre off. Now are we to compare respectiue the greatnesse of each part of the world in seuerall: notwithstanding that I shall finde much ado and difficulty enough therein, considering the disagreement of authors in that behalf. But most plainly shal this appeare which we seek for, by joining longitude & latitude together: according to which prescript rule to begin with

Europe, it may wel contain in largenes 8148 miles. Africk (taking the middle and mean computation between them all that haue set it down) containeth in length 3748 miles. As for the bredth of so much as is known and inhabited, in no place where it is widest exceedeth it 250 miles. True it is, that Agrippa would haue it to contain 910 miles in breadth, beginning at the bounds of Cyrene, and so comprehending in this measure the desarts thereof as far as to the Garamants, so far as is knowne and discovered, and then the whole measure collected into one generall sum, amounteth to 4608 miles. As for Asia, confessed it is and resolved vpon by all Geographers, that in length it carrieth 63750 miles: and verily in bredth (if you account from the Ethiopian sea to Alexandria scituate vpon Nilus, so as your measure run through Meroe and Syrene) it taketh 1875 miles: wherby it appeareth euidently, that Europe is little wanting of halfe as big again as Asia: and the same Europa, is twise as much again as all Africa & a fixt part ouer. Reduce now all these sums together, it wil be found cleare, that Europ is a third part of the whole earth, & an eight portion ouer and somwhat more: Asia, a fourth part, with an ouer-deale of 14: and Africk a fiftth part, with an ouer-plus of a sixtieth portion. To this calculation, we wil set to, as it were to boot, one subtile deuise & inuention more of the Greeks, which sheweth their singular wit (to the end we should omit nothing that may serue our turn in this Geographic of ouers) and that is this: after that the posture and site of euery region is knowne and set downe, how a man may likewise come to the knowledge what societie and agreement there is between the one & the other, either by length of daies and nights, by the shadow at noon day, or by equality of climats of the world. To bring this about effectually, I must part and digest the whole earth into certain sections or euen portions, answerable to those in heauen; whereof there be very many) which our Astronomers and Mathematicians call Circles; but the Greeks, Parallels.

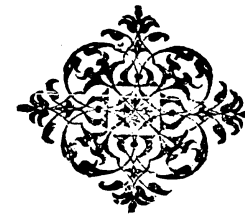
CHAP. XXXIV.

¶ The diuision of the earth into Climats or lines Parallele, and equall shadowes.

FOR to make an equall partition of the world, begin we wil at the Meridionall Indians, & go directly as far as Arabia, and the inhabitants of the red sea Vnder this climat are comprehended the Gedrosians, Persians, Carmanes, and Elimians: Parthyene, Aria, Susiane, Mesopotomia, Seleucia synnamed Babylonia, Arabia, so far as Petra inclusiuely, Coele-Syria, & Pelusium in Egypt: the low Low-countries, which are called the tract of Alexandria: the maritime coasts of Africk: all the towns of Cyrenaica, Thapsus, Adrumetum, Clupea, Carthage, Vtica, both Hippos, Numidia, both realmes of Mauritania, the Atlanticke sea, and Hercules pillars. In all the circumference of this climat and parallele, at noon tide vpon an Equinoctiall day, the stile in the diall which they call Gnomon 7 foot long, casteth a shadow not aboue 4 foot. The longest night or day in this climate, is 14 houres: and contrariwise the shortest, ten. The second circle or parallele line, beginneth at the Indians Occidentall, and passeth through the mids of Parthia, Persepolis, the hithermost parts of Persis (in respect of Rome) the hither coast of Arabia, Iudaea, and the borders neere vnto the mountaine Libanus. Vnder the same are contained also Babylonia, Idumaea, Samaria, Hierusalem, Ascalon, Ioppe, Casarea, Phenice, Ptolemais, Sydon, Tyrus, Berytus, Betrys, Tripolis, Byblus, Antiochia, Laodicea, Seleucia, the Sea coasts of Cilicia, Cyprus the South part of Candy, Lilybæum in Sicilia, the North parts of Africke and Numidia. The Gnomon in a diall vpon the Equinoctiall day 35 foot of length, maketh a shadow 24 foot long. The longest day or night is 14 houres Equinoctiall, and the fift part of an houre. The third circle beginneth at the Indians next vnto the mountaine Imaus, and goeth by the Caspian gates or streights hard by Media, Cataonia, Cappadocia, Taurus, Amanus, Iffus, the Cilician straits, Soli, Tarsus, Cyprus, Pisidia, Syde in Pamphilia, Lycaonia, Patara in Lycia, Xanthus, Caunus, Rhodus, Cous, Halicarnassus, Gnidus, Doris, Chius, Delus, the mids of the Cyclades, Gythium, Malea, Argos, Laconia, Elis, Olympia, Messene, Peloponnesus, Syracusa, Carinae, the mids of Sicily, the South part of Sardinia, Cardei, and Gades. In this climat the Gnomon of 100 inches, yeeldeth a shadow of 77 inches. The longest day hath Equinoctiall houres 14 & an halfe: with a 30 part ouer. Vnder the fourth circle or parallele lye they that are on the other side of Imaus, the South parts of Cappadocia, Galatia, Mysia, Sardis,

- A Sardis, Smyrna, Sipylus, the mountaine Tmolus in Lydia, Caria, Ionia, Trallis, Colophon, Ephesus, Milerus, Samos, Chios, the Icarian sea, the Isles Cyclades lying Northward, Athens, Megara, Corinth, Sicyon, Achæa, Patra, Isthmos, Epirus, the North parts of Sicily, * Narbonensis Gallia toward the East, the maritime parts of Spaine beyond new Carthage, and so into the West. To a Gnomon of 21 foot, the shadowes answer of 17 foot. The longest day is fourteen Equinoctiall houres, and two third parts of an houre. The 5 diuision containeth vnder it, from the entrance of the Caspian sea, Baetra, Iberia, Armenia, Mysia, Phrygia, Hellepontus, Troas, Tenedus, Abydus, Scepsis, Ilium, the hill Ida, Cyzicum, Lampfacum, Sinope, Anisum, Heraclea in Pontus, Paphlagonia, Lemnus, Imbrus, Thasus, Cassandria, Thessalia, Macedonia, Larissa, Amphipolis, Thessalonice, Pella, Edeffa, Beræa, Pharsalia, Carystum, Eubœa, Bœotia, Chalcis, Delphi, Acarnania, Ætolia, Apollonia, Brundisium, Tarentum, Thurij, Locri, Rhegium, Lucani, Naples, Puteoli, the Tuscan sea, Corsica, the Balear Isles, the middle of Spain. A Gnomon of 7 foot giueth shadow six foot. The longest day is 15 Equinoctiall houres. The sixt parallell compriseth the city of Rome, and containeth withall the Caspian nations, Caucasus, the North parts of Armenia, Apollonia vpon Rhindacus, Nicomedia, Nicæa, Chalcedon, Bizantium, Lyfimachia, Cherrhonesus, the gulfe Melane, Abdera, Samothracia, Maronea, Ænus, Bessica, the midland parts of Thracia, Pœonia, the Illyrians, Dyrrhachium, Canusium, the vtmost coasts of Apulia, Campania, Hetruria, Pise, Luna, Luca, Genua, Liguria, Antipolis, Massilia, Narbon, Tarracon, the middle of Spain called Tarraconensis, & so through Lusitania.
- C To a Gnomon of 9 foot, the shadow is answerable 8 foot. The longest day hath 15 Equinoctiall houres, and the 9 part of an houre, or the fift, as Nigidius is of opinion. The 7 diuision begins at the other coast of the Caspian sea, and falls vpon Callatis, Bosphorus, Borysthenes, Tomos, the backe parts of Thracia, the Tribals country, the rest of Illyricum, the Adriaticke sea, Aquileia, Altinum, Venice, Viceria, Patavium, Verona, Cremona, Ravenna, Ancona, Picenum, Marfi, Peligni, Sabini, Vmbria, Ariminum, Bononia, Placentia, Mediolanum, and all beyond Apenninum: also ouer the Alps, Aquitane in Gaule, Vienna, Pyreneum, and Celtiberia. The Gnomon of 35 foot, casteth a shadow 36 foot in length; yet so, as in some part of the Venetian territories, the shadow is equall to the Gnomon. The longest day is 15 Equinoctiall houres, and three fift parts of an houre. Hitherto haue we reported the labors in this point of antient
- D Geographers, and what they haue reported. But the most diligent and exactest modern Writers that followed, haue assigned the rest of the earth not yet specified, to three other sections or climats. The first, from Tanais through the lake Mœtis and the Sarmatians, vnto Borysthenes, and so by the Dakes and a part of Germany, containing therein France and the coasts of the Ocean, where the day is 16 houres long. A second, through the Hyperboreans and Britain, where the day is 17 houres long. Last of all is the Scythian parallell, from the Rhiphaean hills into Thule: wherein (as we said) it is day and night continually by turnes, for fixe moneths. The same writers haue set downe two parallell circles, before those points where the other began, and which we set downe. The one through the Islands Meroe and Ptolemais vpon the red sea, built for the hunting of Elephants, where the longest daies are but 12 houres and an halfe: the second passing through Syrene in Ægypt, where the day hath 13 houres. And the same authors haue put to euery one of the other circles, euen to the very last, half an houre more to the daies length than the old Geographers.

Thus much of the Earth.





THE SEVENTH BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS
SECVNDVS.

The Proeme.

THus, as you see, we haue in the former books sufficiently treated of the vniuersall world, of the Lands, Regions, Nations, Seas, Islands, and renowned Cities therein contained. It remains now to discourse of the liuing creatures comprised within the same, and their natures: a point double, for it would require as deepe a speculation as any part else thereof, what soeuer, if so be the spirit and minde of man were able to comprehend and compass all things in the world. And to make a good entrance into this treatise and history, methinks of right we ought to begin at Man, for whose sake it should seeme that Nature made and produced all other creatures besides: though this great fauour of hers, so bountifull and beneficiall in that respect, hath cost them full deare, inasmuch as it is hard to iudge, whether in so doing she hath done the part of a kinde mother, or a hard and cruell step-Dame. For first and formost, of all other liuing creatures, man she hath brought forth all naked, and clothed him with the good and riches of others. To all the rest she hath giuen sufficient to clad them euery one according to their kinde; as namely, shells, cods, hard hides, prickles, shag, bristles, haire, downe feathers, quills, scales, and fleeces of wooll. The very trunks and stumps of trees and plants she hath defended with barke and rinde, yea and the same sometimes double, against the iniuries of heate and cold: Man alone, poore wretch, she hath layed all naked upon the bare earth, euen on his birth day, to cry and wraule presently from the very first houre that hee is borne in such sort, as among so many liuing creatures there is none subiect to shed teares and weepe like him. And verily to no babe or infant is it giuen once to laugh before he be forty daies old, and that is counted very early, and with the soonest. Moreover, so soone as he is entred in this manner to enioy the light of the Sunne, see how he is immediately tyed and bound fast, and hath no member at libertie: a thing that is not practised upon the yong whelpes of any beast among vs, be he neuer so wilde. The childe of man thus vntowardly borne, and who another day is to rule and command all other, loe how he lieth bound hand and foot, weeping and crying, and beginning his life in miserie, as if he were to make amends and satisfaction by his punishment vnto Nature, for this onely fault and trespass, that he is borne aline. O folly of all follies, euer to thinke (considering this simple beginning of ours) that we were sent into this world to liue in pride, and carry our heads aloft! The first hope that we conceiue of our strength, the first gift that Time affoordeth vs, maketh vs no better yet than foure footed beasts. How long is it ere we can go alone? how long before we can prattle and speake, feed our selues, and chew our meat strongly? what a while continueth the mould and crowne of our heads to beate and paine, before our braine is well settled; the vndoubted marke and token that bewraith our exceeding great weaknesse aboue all other creatures? What should I say of the infirmities and sicknesses that do soone seise upon our feeble bodies? what need I speake of so many medicines and remedies deuised against these maladies: besides the new diseases that come euery day, able to checke and frustrate all our prouision of physike what soeuer? As for all other liuing creatures, there is not one, but by a secret instinct of nature knoweth his own good, and wherto he is made able; some make vse of their swift feet, others of their slight wings, some are strong of limbe; others are apt to swim, and practise the same: man only knoweth nothing, vntill he be taught; hee can neither speake, nor goe, nor eat, otherwise than he is trained to it: and to be short, apt and good at nothing he is naturally, but to pule and cry. And hereupon it is, that some haue bene of this opinion.

A opinion, That better it had been, and simply best for a man, neuer to haue been borne, or else speedily to die. None but we doe sorrow and waile, none but we are giuen to excessse and superfluitie infinitely in euery thing, and shew the same in euery member that we haue. Who but we againe are ambitious and vain-glorious? who but we are conctous and greedie of gathering good? we and none but we desire to liue long and neuer to die, are superstitious, carefull of our sepulture and buriall, yea and what shall betide vs when we are gone. Mans life is most fraille of all others; and in leass securitie he liueth: no creature lusteth more after euery thing than he: none feareth like vnto him, and is more troubled and amazed in his fright: and if he be once vpon anger, none more raging and wood than he. To conclud, all other liuing creatures liue orderly and well, after their owne kinde: we see them flocke and gad together, and ready to make head and stand against all others of a contrary kinde: the Lyons as fell and sauage as they be, fight not one with another; serpents sting not serpents, nor bite one another with their venomous teeth: nay the very monsters and huge fishes of the sea, war not among themselves in their owne kinde: but belecue me, Man at mans hand receiveth most harme and mischiefe.

CHAP. I.

The strange and wondrous shipes of sundry nations.

IN our Cosmographie and reports of nations and countries, wee haue spoken in generall of all mankind, spread ouer the face of the whole earth: neither is it our purpose at this present to decipher particularly all their customs and manners of life, which were a difficult enterprize, considering how infinit they be, and as many in manner as there be societies and assemblies of men. Howbeit I thinke it good, not to ouer-passe all, but to make relation of some things concerning those people especially, who liue farthest remote from our seas; among whom I doubt not but I shall find such matter, as to most men will seeme both prodigious and incredible. And verily who euer beleeued that the Aethiopians had bin so blacke, before he saw them with his eyes: nay what is it, I pray you, that seemeth not a wonder at the first sight? How many things are judged impossible before they are seene done and effected? And certes, to speake a truth, The power and majestic of Nature, in euery particular action of hers & small things, seemeth incredible, if a man consider the same seuerally, and enter not into a generall conceit of her wholly as she is. For to say nothing of the painted peacocks feathers, of the sundry spots of tygres, luzernes, and panthers, of the variable colours and markes of so many creatures besides: let vs come to one only point, which to speake of seemes but small, but being deeply weighed and considered, is a matter of exceeding great regard, and that is, The varietie of mens speech; so many tongues and diuers languages are amongst them in the world, that one stranger to another seemeth well-nere to be no man at all. But come to view and marke the varietie that appeares in our face and visage, albeit there be not past ten parts or little more therein, see how among so many thousands as we are, you shall not find any two persons, who are not distinct in countenance and different one from another: a thing that no artificer nor painter (be he neuer so cunning and his craftinafter euery way) can performe, but in a few pictures, and take what heed he can with all his curious affection. And yet thus much must I aduertise the readers of this mine history by the way, that I will not pawne my credit for many things that herein I shall deliuer, nor bind them to belecue all I write as touching strange and forrein nations: refer them rather I will to mine authors, whom in all points (more doubtfull than the rest) I will cite and alledge, whom they may belecue if they list: onely let them not thinke much to follow the Greeke writers, who from time to time in this behalfe haue been more diligent in penning, and more curious in searching after antiquities.

CHAP. II.

Of the Scythians, and the diuersitie of other nations.

THAT there bee Scythians, yea, and many kindes of them that feed ordinarily of mans flesh, wee haue shewed already in our former discourses. A report haply that would be thought incredible, if we did not consider and thinke withall, how in the very middle and heart of the world, euen in Sicily and Italy, here hard by, there haue bene such monsters of men,

men, namely, the Cyclopes and Lystrigones: nay, if we were not credibly informed, that euen of late daies, and go no farther than to the other side of the Alpes, there be those that kill men for sacrifice after the maner of those Scythian people; & that wants not much of chewing and eating their flesh. Moreouer, nere vnto those Scythians that inhabit toward the pole Articke, and not far from that climate which is vader the very rising of the North-east wind, and about that famous caue or whole out of which that wind is said to issue, which place they call Gesclichron, [i. the cloister or key of the earth] the Arimaspians by report do dwell, who as we haue said before, are known by this marke, for hauing one eie only in the mids of their forehead: and these maintain war ordinarily about the mettall mines of gold, especially with griffons, a kind of wilde beasts that flie, and vse to fetch gold out of the veins of those mines (as commonly it is received:) which sauage beasts (as many authors haue recorded, and namely, *Herodotus* & *Aristotle* the Proconneian, two writers of greatest name) strue as eagerly to keepe and hold those golden mines, as the Arimaspians to disseize them therof, and to get away the gold from them. About those, are other Scythians called Anthropophagi, where is a countrie named Abarimon, within a certain vaile of the mountain Imaus, wherein are found sauage & wild men, liuing and conuersing vsually among the bruit beasts, who haue their feet growing backward, & turned behind the calves of their legs, howbeit they run most swiftly. These kinde of men can endure to liue in no other aire nor in any climate else than their own, which is the reason that they cannot be drawne to come vnto other kings that border vpon them, nor could be brought vnto *Alexander* the great: as *Beton* hath reported, the marshall of that princes campe, & who also put downe his gists and iournies in writing. The former Anthropophagi or eaters of mans flesh, whom we haue placed about the North-pole, ten daies iourne by land about the riuer Borysthenes, vse to drink out of the skuls of mens heads, and to weare the scalpes haire & al, in stead of mandellions or stomachers before their breasts, according as *Isgonus* the Niccan witnesseth. The same writer affirmeth moreover, That in Albanie there be a sort of people borne with eies like owles, whereof the sight is fire red: who from their childhood are grey headed, and can see better by night than day. He reporteth also, that tenne daies iourne beyond Borysthenes, the Sauramates neuer eat but one meale of meat in three daies. *Crates* of Pergamus saith, That in Hellespont about Parium there was a kind of men (whom he nameth Ophiogenes) that if one were stung with a serpent, with touching only, will ease the paine: and if they doe but lay their hands vpon the wound, are wont to draw forth all the venome out of the body. And *Varro* testifies, that euen at this day there be some there who warish & cure the stinging of serpents with their spittle, but there are but few such, as he saith. *Agatharcides* writes, that in Affricke the Psyllians (so called of king *Psyllus*, from whose race they were descended, and whose sepulchre or tombe is at this day present to be seene in a part of the greater Syrtis) could do the like. These men had naturally that in their own bodies, which like a deadly bane and poyson would kill all serpents: for the very aire & sent that breathed from them, was able to stupifie and strike them starke dead. And by this means they vsed to try the chastitie and honestie of their wiues. For so soon as they were deliuered of children, their manner was to expose and present the silly babes new borne, vnto the most full and cruell serpents they could find: for if they were not right, but gotten in adultery, the said serpents would not auoid & fly from them. This nation verily in generall hath been defeated, & killed vp in manner all by the Nasamonnes, who now inhabit those parts wherein they dwelt: howbeit a kind remains still of them, descended from those that made shift away and fled, or else were not present at the said bloody battell, but there are very few of them at this day left. The Marsians in Italy at this present continue with the like naturall vertue against serpents: whom being reputed for to haue descended from ladie *Circus* son, the people in this regard do highly esteeme, & are verily perswaded, that they haue in them the same facultie by kinde. And what great wonder is this, considering that all men carry about them that which is poyson to serpents: for if it be true that is reported, they will no better abide the touching with mans spittle, than scalding water cast vpon them: but if it happen to light within their chawes, or mouth, especially if it come from a man that is fasting, it is present death. Beyond those Nasamonnes, and their neighbours confining vpon them (the Machlyes) there be found ordinarily Hermaphrodites, called Androgyni, of a double nature, and resembling both sexes, male and female, who haue carnal knowledge one of another interchangeably by turns, as *Callisthanes* reports. *Aristotle* saith moreover, that on the right side of their breast they haue a little

A the teat or nipple like a man, but on the left they haue a full pap or dug like a woman. In the same Affricke, both *Isgonus* and *Nymphodorus* doe auouch, there be certain houses and families of forcerers: who, if they chance to blesse, praise, and speak good words, bewitch presently with all; in so much as sheepe therewith die, trees wither, and infants pine and winder away. *Isgonus* adds furthermore, That such like there be among the Triballians and Illyrians, who with their very eyesight can witch, yea, and kil those whom they look wisely vpon any long time, especially if they be angered, and that their eies bewray their anger: and more subiect to this daunger be men growne, than children vnder fourteene yeares of age. This also is in them more notable and to be obserued, that in either eie they haue two sights or apples. Of this kind and property, as *Apollonides* mine author saith, there be certaine women in Scythia named Bithyæ. *Philarchus* witnesseth, That in Pontus also the whole race of the Thibians, and many others besides, haue the same quality, & doe the like: and known they are (saith he) by these markes. In one of their eies they haue two sights, in the other the print or resemblance of an horse. He reports besides of these men, that they will neuer sinke or drowne in the water, be they charged neuer so much with weighty and heauy apparel. Not vnlike to these there are a people in Æthiopia called Pharnaces, whose sweat if it chance to touch a mans body, presently he falleth into a phthisick or consumption of the lungs. And *Cicero* a Roman writer here among vs testifieth, that generally all women that haue such double apples in their eies, haue a venomous sight, and doe hurt therewith. See how nature, hauing engrafted naturally in some men this vnkind appetite (like wild beasts) to feed commonly vpon the bowels and flesh of men, hath taken delight also & pleasure to giue them inbred poisons in their whol body, yea & venom in the very eies of some, that there should be no naughtinesse in the world againe, but the same might be found in man. Not farre from Rome city, within the territory of the Falisci, there be some few houses, & families called Hirpiæ, which at their solemne yearly sacrifice celebrated by them in the honour of *Apollo* vpon the mount Sorecte, walke vpon the pile of wood as it is on fire, in great iolity, and neuer a whit are burnt withall. For which cause it is ordained by an expresse aret or act of the Senat, that they should be priuiledged, and haue immunity of warfare and all other seruices whatsoeuer. Some men there be that haue certaine members and parts of their bodies naturally working strange and miraculous effects, and in some cases medicinable. As for example, king *Pyrrhus*, whose great toe of his right foot was good for them that had big, swelled, or indurate spleenes, if he did but touch the parties diseased, with that toe. And they say moreover, that when the rest of his body was burnt (after the manner) in the funerall fire, that great toe the fire had no power to consume: so, that it was bestowed in a little case for the nones, and hung vp in the temple for a holy relique. But principally about all other countries, India and the whole tract of Æthiopia is full of these strange and miraculous things. And first & formost the beasts bred in India be very big, as it may appeare by their dogs, which for proportion are much greater than those in other parts. And trees grow there to that tallnesse, that a man cannot shoot a shaft ouer them. The reason hereof is the goodnesse and fatnesse of the ground, the temperat constitution of the aire, and the abundance of water: which is the cause also that vnder one fig tree [beleue it that list] there may certaine troupes and squadrons of horsemen stand in couert, shaded with the boughes. And as for reeds, they be of such a length, that between eury ioint they will yeeld sufficient to make boats able to receiue three men apeece, for to row therein at ease. There are to be seene many men there aboute fise cubits tall: neuer are they known once to spit: troubled they are not with pain in the head, tooth-ach, or griefe of the eies; and seldome or neuer complaine they of any forance in other parts of the body, so hardy are they, and of so strong a constitution thorough the moderat heat of the Sun.ouer and besides, among the Indians be certain Philosophers, whom they call Gymnosophists, who from the Sun rising to the setting thereof are able to endure all the day long, looking full against the Sunne, without winking or once mouing their eies: & from morning to night can abide to stand sometimes vpon one leg, and sometimes on the other in the sand, as scalding hot as it is. Vpon a certaine mountaine named Milus, there be men whose feet grow the tother way backward, and of either foot they haue eight toes, as *Megasthenes* doth report. And in many other hills of that country, there is a kind of men with heads like dogs, clad all ouer with skins of wild beasts, who in lieu of speech vse to bark: armed they are and well appointed with sharp and trenchant nailes: they liue vpon the prey which they get by chasing wild beasts, & fowling. *Ctesias* writes that

that there were discovered and knowne of them about 120000 in number. By whose report also, in a certaine country of India the women beare but once in their life, and their infants presently waxe grey so soone as they are borne into the world. Also, that there is a kind of people named Monocelli, that haue but one leg apeece, but they are most nimble, and hop wondrous swiftly. The same men are also called Sciopodes, for that in hottest season of the Summer, they ly along on their back, and defend themselves with their feet against the Suns heate: and these people as he saith are not farre from the Troglodites. Againe, beyond these Westward, some there be without heads standing vpon their necks, who cary eies in their shoulders. Among the Westerne mountains of India the Satyres haunt, (the country wherein they be, is called the region of the Cartaduli) creatures of all other most swift in footmanship: which one whiles run with all foure, otherwhiles vpon two feet only like men: but so light footed they are, that vnlesse they be very old and sick, they can neuer be taken. *Tauron* writeth, That the Choromandæ are a sauage and wild people: distinct voice and speech they haue none, but in stead thereof, they keep an horrible gnashing and hideous noise: rough they are and hairy all ouer their bodies, eies they haue red like the houlers, and toothed they be like dogs. *Eudoxus* saith, That in the Southern parts of India, the men kind haue feet a cubit long, but the women so short & smal, that thereupon they be called Struthopodes, i. sparrow footed. *Megasthenes* is my Author, that among the Indian Nomades there is a kind of people, that in stead of noses haue only two smal holes, and after the manner of snakes they haue their legs & feet limmer, wherewith they crawl and creep, and named they are Syriæ. In the vtmost marches of India, Eastward, about the source & head of the riuer Ganges, there is a nation called the Astomes, for that they haue no mouths: all hairy ouer the whole body, yet clothed with soft cotton and down that come from the leaues of trees: they liue only by the aire, and smelling to sweet odors, which they draw in at their nostrils. No meat nor drinke they take, only pleasant fauours from diuers and sundry roots, floures, and wild fruits growing in the woods they entertaine: and those they vse to carry about with them when they take any farre journey, because they would not misse their smelling. And yet if the sent be any thing strong and stinking, they are soone therewith ouercome, & dy withal. Higher in the country, and about these, even in the edge and skirts of the mountains, the Pygmæi *Spythamæi* are reported to be: called they are so, for that they are but a cubit * or three * shaftments (or spannes) high, that is to say, three times nine inches. The clime wherein they dwel is very wholesome, the air healthy, and euer like to the temperature of the Spring: by reason that the mountains are on the North side of them, & beare off all cold blasts. And these pretty people *Homæ* also hath reported to be much troubled & annoyed by cranes. The speech goeth, that in the Spring time they set out all of them in battell aray, mounted vpon the backe of rammes and goats, armed with bowes and arrowes, and so downe to the sea side they march, where they make foule worke among the egges & yong cranelings newly hatched, which they destroy without all pittie. Thus for three months this their journey and expedition continueth, and then they make an end of their valiant seruice: for otherwise if they should continue any longer, they were neuer able to withstand the new flights of this foule, grown to some strength and bignesse. As for their houses and cottages, made they are of clay or mud, fouls feathers, and birds egge shels. Howbeit, *Aristotle* writes, That these Pygmæans liue in hollow caues & holes vnder the ground. For all other matters he reports the same that all the rest. *Isoconus* saith, that certain Indians named *Cyni*, liue a hundred and fortie yeares. The like he thinketh of the *Æthyopian* *Macrobij*, and the *Seres* as also of them that dwell on the mount *Athos*: and of these last rehearsed, the reason verily is rendred to be thus, because they feed of vipers flesh, & therefore is it that neither lice breed in their heads, nor other vermine in their cloths, for to hurt & annoy their bodies. *Onesicritus* affirmeth, That in those parts of India where there are no shadowes to be seene, the men are five cubits of stature, and two hand breadths ouer: that they liue 130 yeares, and neuer age for all that and seem old, but die then, as if they were in their middle and settled age. *Crates* of Pergamus nameth those Indians who liue about an hundred yeare, *Gymnetes*: but others there be, and those not a few, that call them *Macrobij*. *Ctesias* saith there is a race or kindred of the Indians named *Pandore*, inhabiting certaine vallies, who liue two hundred yeares: in their youthfull time the haire of their head is white, but as they grow to age, waxeth black. Contrariwise, others there be neer neighbours to the *Macrobij*, who exceed not fortie yeares, and their women beare but once in their life time. And this also is auouched by *Aenarchides*,

Aenarchides, who affirmeth moreouer, that all their feeding is vpon locusts, and that they are very quicke and swift of foot. *Clitarchus* and *Megasthenes* both name them *Mandri*, and thinke they haue 300 villages in their country. Moreouer, that the women bring forth children at seven yeares of age, and wax old at forty. *Artemidorus* affirmeth, that in the Island *Taprobana* the people liue exceeding long without any malady or infirmite of the body. *Darius* maketh report, That certaine Indians ingender with beasts, of which generation are bred certaine monstrous mungrels halfe beasts and halfe men. Also, that the *Calingian* women of India conceiue with childe at five yeares of age, and liue not about eight. In another tract of that countrey there be certaine men with long shagged tailes, most swift and light of foot: and some againe that with their eares couer their whole body. The *Orites* are neighbours to the Indians, diuided onely from them by the riuer *Arbis*, who are acquainted with no other meate but fish, which they split and slice into pieces with their nailes, and rost them against the Sun, and then make bread thereof, as *Clitarchus* reporteth. *Crates* of Pergamus saith likewise, that the *Troglodites* about *Ethiopia* be swifter than horses: and that some *Æthiopian* are about eight cubites high: and these are a kinde of *Ethiopian* Nomades, called *Syrbotæ*, as he saith, dwelling along the riuer *Astapus* toward the North pole. As for the nation called *Menismini*, they dwel from the Ocean sea twenty dayes journey, who liue of the milke of certain beasts that we call *Cynocephales*, hauing heads and snouts like dogs. And whole herds and flocks of the females they keepe and feed, killing the male of them all, saue onely to serue for maintenance of the breed. In the deserts of *Africke* ye shall meet oftentimes with *Fairies*, appearing in the shape of men and women, but they vanish soone away like fantastical delusions. See how Nature is disposed for the nones to deuise full wittily in this and such like pastimes to play with mankind, thereby not only to make her self merry, but to set vs a wondring at such strange miracles. And I assure you, thus dayly and houely in a manner playeth she her part, that to recount euery one of her sports by themselves, no man is able with all his wit and memory. Let it suffice therefore to testifie and declare her power, that we haue set downe those prodigious and strange workes of hers shewed in whole nations: and then go forward to discourse of some particulars approved and knowne in man.

CHAP. III.

Of prodigious and monstrous births.

That women may bring forth three at one birth appeares evidently by the example of the three twins *Horatij* and *Curiatij*. But to go about that number is reputed and commonly spoken to be monstrous, and to portend some mishap: but only in *Egypt*, where women are more than ordinary fruitfull, by drinking of *Nilus* water, which is supposed to help generation. Of late yeares, and no longer since than in the later end of the reigne of *Aug. Cesar*, at *Ostia* there was a woman (a Commoners wife) deliuered at one birth of two boies & as many girles; but this was a most prodigious token, and portended no doubt the famine that ensued soone after. In *Peloponnesus* there is found one woman that brought forth at foure births 16 Children, and the greater part of them all did well and liued. *Trogus* saith, that in *Egypt* it is an ordinarie thing for a woman to haue seven at a birth. It falleth out moreouer, that there come into the world children of both sexes, whom wee call *Hermaphrodites*. In old time they were knowne by the name of *Androgyni*, and reputed then for prodigious wonders, howsoeuer now men take delight and pleasure in them. *Pompey* the great, in his Theatre which hee adorned and beautified with singular ornaments and rare deuices of antique worke, as wel for the admirable subiect and argument thereof, as the most curious and exquisite hand of cunning and skillfull artificers, among other images and pourtraicts there set vp, represented one *Eutiche* a Woman of *Tralesis*, who after she had in her life time borne thirty births, her corps was caried out by twenty of her children to the funerall fire to be burnt, according to the manner of that countrey. As for *Alcipe* she was deliuered of an Elephant, marie that was a monstrous and prodigious token, and foreshewed some heauy fortune that followed after. Also in the beginning of the *Marians* war there was a bondwoman brought forth a Serpent. In sum, there be many misshapen monsters come that way into the world, of diuers and sundry formes. *Claudius Cesar* writeth, That in *Thessalie* there was borne a monster called an *Hippocentaure*, that is, halfe a man

a man and halfe a horse, but it died the very same day. And verily after he came to weare the diadem, we our selues saw the like monster sent vnto him out of Egypt, embalmed and preferred in honey. Among many strange examples appearing vpon record in Chronicles, we reade of a childe in Sagunt, the same yeare that it was forced and rased by *Anabal*, which so loone as it was come forth of the mothers wombe presently returned into it againe.

CHAP. IIIII.

¶ Of the change of one Sex to another, and of Twins borne.

IT is no lie nor fable, that females may turne to be males: for we haue found it recorded, that in the yearely Chronicles called *Annals*, in the yeare when *Publius Licinius Crassus*, and *C. Cassius Longinus* were Consuls, there was in Cassinum a maid childe, vnder the very hand and tuition of her parents, without suspicion of being a changeling became a boy: and by an Ordinance of the Soothsayers called *Aruuspices*, was confined to a certain desert Island, and thither conveyed. *Licinius Mutianus* reporteth, that he himselfe saw at Argos one named *Arescus*, who before time had to name *Arescusa*, and a married wife: but afterwards in processe of time came to haue a beard, and the generall parts testifying a man, and thereupon wedded a wife. Likewise (as he saith) he saw at Smyrna a boy changed into a girle. I my selfe am an eye witnesse, That in Africke one *L. Cossicius* a citisen of Tisdruta, turned from a woman to be a man vpon the very marriage day, who liued at the time I wrot this booke. Moreouer, it is obserued, that if women bring twins, it is great good hap if they all liue, but either the mother dieth in childbed, or one of the babes, if not both. But if it fortune that the twinnes be of both sexes, the one male, the other female, it is ten to one if they both escape. Moreouer this is well knowne, that as women age sooner than men, and seeme old, so they grow to their maturitie more timely than men, and are apt from procreation before them. Last of all, when a woman goeth with childe, if it bee a man childe, it stirreth ofner in the wombe, and lieth commonly more to the right side: whereas the female moueth more seldom, and beareth to the left.

CHAP. V.

¶ The Generation of Man, the time of childe-birth from seuen moneths to eleuen, testified by many notable examples out of historie.

All other creatures haue a set time limited by Nature, both of going with their yong, and also of bringing it forth, each one according to their kinde: Man only is borne all times of the yeare, and there is no certaine time of his abode in the wombe after conception; for one commeth into the world at the seuen moneths end, another at the eighth, and so to the beginning of the ninth and tenth. But before the seuenth moneth there is no infant euer borne that liueth. And none are borne at seuen moneths end, vnlesse they were conceived either in the very change of the moone, or within a day of it vnder or ouer. An ordinary thing it is in Egypt for women to go with yong eight moneths, and then to be deliuered. And euen in Italy also now adaies children so borne liue and dowell; but this is against the common receiued opinion of all old writers. But there is no certainty to ground vpon in all these cases, for they alter diuers waies. Dame *Vesilia* (the widow of *C. Herditius*, wife afterward to *Pomponius*, and last of all married to *Orfitus*, all right worshipful citizens, and of most noble houses) had 4 children by her three husbands, to wit *Sempronius*, whom she bare at the seuenth moneth, *Suillius Rufus* at the eleuenth: and seuen moneths also she went with *Carbulo*, yet they liued all, and these two last came both to be Consuls. After all these sons, she bare a daughter, namely *Casonia* (wife to the Emperor *Caius Caligula*) at the eighth moneths end. They that are borne thus in this moneth haue much ado to liue, and are in great danger for forty dayes space: yea, and their mothers are very sickly, and subiect to fall into vntimely trauell all the fourth moneth and the eighth, and if they fall in labor and come before their time they die. *Massurius* writeth, that *L. Papyrius*, the Pretor or Lord chiefe Iustice, when a second heire in remainder made claim, and put in plea for his inheritance of the goods, made an award, and gaue iudgement against him, in the behalfe of an Infant heire, borne after the decease of his father, vpon this, That the mother came in and testified, how she was deliuered of that childe within thirteene moneths

A moneths after the death of the Testator: the reason was, because there is no definite time certaine for women to go with childe.

CHAP. VI.

¶ Of Conceptions: and signes distinguishing the sex in great belied women before they are deliuered.

IF ten dayes after a woman hath had the company of a man shee feelee an extraordinary ache in the head, and perceiue giddinesse in the brain as if all things went round; finde a dazling and mistinesse in the eyes, abhorring and loathing meat, and withall a turning and wambling in the stomacke; it is a signe that she is conceived, and beginneth to breed: if the goe with a boy better coloured will she be all the time, and deliuered with more ease, and by the 40 day she shall feelee a kinde of motion and stirring in her wombe. But contrarie it falleth out in the breeding of a girle, she goeth more heauily with it, and findeth the burthen heauier, her legs and thighes about the share will swell a little. And ninetie dayes it will be before she absolutely perceiueeth any mouing of the infant. But be it male or female shee breeds, they put her to much paine and grieuance when their haire beginneth to bud forth, and euer at the full of the Moone: and euen the very infants after they are borne are most amisse and farthest out of frame about that time. And verily great care must be had of a woman with child all the time she goeth therewith, both in her gate, and in euery thing else that can be named: for if women feed vpon ouer-salt and powdered meat they wil bring forth a child without nailes: and if they hold not their wind in their labor, longer it will be ere they be deliuered, and with more difficultie. Much yawning in the time of trauell is a deadly signe, like as to sneeze presently vpon conception threatneth abortion or a slip.

CHAP. VII.

¶ Of the conception and generation of Man.

IAm abashed much, and very sorry to thinke and consider what a poore and ticklish beginning man hath, the proudest creature of all others, when the smel only of the snuffe of a candle put out is the cause oft times that a woman falls into vntimely trauel. And yet see, these great tyrans, and such as delight only in carnage and bloudshed haue no better original. Thou then that presumest vpon thy bodily strength, thou that standest so much vpon Fortunes fauors, and hast thy hands full of her bountifull gifts, taking thy self not to be a foster-child and nurceling of hers, but a naturall son borne of her owne body: thou I say that buisiest thy head euermore, and settest thy minde vpon conquests and victories: thou that art vpon euerie good successe and pleasant gale of prosperity puffed vp with pride, and takest thy selfe for a god, neuer thinkest that thy life when it was hung vpon so single a thred, with so small a matter might haue miscarried. Nay more than that, euen at this day art thou in more danger than so, if thou chance to be but stung or bitten with the little tooth of a Serpent; or if but the verie kernell of a raisin go downe thy throat wrong, as it did with the poet *Anacreon*, which cost him his life. Or, as *Fabius* a Senator of Rome, and Lord chiefe Iustice besides, who in a draught of milk forsuned to swallow a small haire, which strangled him. Well then, thinke better of this point, for he verily that will euermore set before his eyes and remember the frailty of mans estate, shall liue in this world vprightly and in euen ballance, without inclining more to one side than vnto another.

CHAP. VIII.

¶ Of those that be called Agrippæ.

TO be borne with the feet forward is vnnaturall and vnkinde: and such as come in that order into the world the Latines were wont to name *Agrippæ*, as if a man should say, borne hardly and with much ado. And in this maner *M. Agrippa* (as they say) came forth of his mothers wombe, the only man almost known to haue brought any good fortune with him, and prospered in the world of all that euer were in that sort borne. And yet as happy as hee was,

and how well fouer he chieued in some respects, he was much pained with the gout, and passed all his youth and many a day after in bloody wars, and in danger of a thousand deaths. And hauing escaped all these harmfull perils, vnfortunate he was in all his children, and especially in his two daughters the *Agrippina* both, who brought forth those wicked Imps so pernicious to the whole earth, namely *C. Caligula* and *Domitius Nero*, two Emperours, but two fiery flames to consume and waste all mankind. Moreouer, his infelicitie herein appeared, that he liued so short a time, dying as he did a strong and lusty man, in the 51 yeare of his age, tormented and vexed with the adulteries of his owne wife, oppressed with the heauy and intolerable seruitude that he was in vnder his wifes father. In which regards it seems he paid full deare for the preface of his vntoward birth and natiuitie. Moreouer, *Agrippina* hath left in writing, That her son *Nero* also, late Emperor, who all the time of his reigne was a very enemy to all mankind, was borne with his feet forward. And in truth by the right order and course of Nature, a man is brought into the world with his head first, but is carried forth with his feet foremost.

CHAP. IX.

¶ Births cut out of the wombe.

BVt more fortunate are they a great deale whose birth costeth their mothers life, parting from them by means of incision: like as *Scipio Africanus* the former, who came into the world in that manner; and the first that euer was surnamed *Caesar*, was so called for the like cause. And hereof comes the fore-name also of the *Caesars*. In like sort also was that *Manlius* borne who entred Carthage with an army.

CHAP. X.

¶ Who are Vopiscii.

THe Latines were wont to call him Vopiscus [or rather Opiscus] who being one of two twins, hapned to stay behinde in the wombe the full terme, when as the other miscarried by abortiue and vntimely birth. And in this case there chance right strange accidents, although they fall out very seldome.

CHAP. XI.

¶ Examples of many Infants at one birth.

Few creatures there be besides women, that seeke after the male, and can skill of their companie after they be once conceived with yong: one kind verily or two at the most there is knowne to conceiue double one vpon the other. We find in books written by Physitians, and in their records who haue studied such matters, and gathered obseruations, that there haue passed or bin cast away from a woman at one only slip, 12 distinct children: but when it falleth out that there is some pretty time betwixt two conceptions, both of them may carry their full time, and be borne with life, as appeared in *Hercules* and his brother *Iphiclus*; as also in that harlot who was deliuered of two infants, one like her owne husband, the other resembling the Adulterer: likewise in a Proconnesian bond-seruant, who was in one day gotten with childe by her master, and also by his Bailie or Procurator; and being afterwards deliuered of two children, they bewrayed plainly who were their fathers. Moreouer, there was another who went her full time, euen nine moneths for one childe, but was deliuered of another at the five moneths end. Furthermore in another, who hauing dropped downe one childe at the end of seven moneths, by the end of the ninth came with two twinnes more.ouer and besides it is commonly seen, that children be not alwaies answerable to the parents in euery respect: for of perfect fathers and mothers who haue all their limmes, there are begotten children vnperfect and wanting some members: and contrariwise, parents there are maimed and defectiue in some part, who neuertheless beget children that are found and entire, and with all that they should haue. It is seen also, that infants are at a default of those parts their parents misse: yea and they carry often times certaine markes, moles, blemishes, and skarres of their fathers and mothers,

as

As like as may be. Among the people called Dakes the children visually beare the markes imprinted in their armes, of them from whom they descend, euen to the fourth generation.

CHAP. XII.

¶ Examples of many that haue been very like and resembled one another.

IN the race and family of the *Lepidi* it is said there were three of them (not successiue one after another, but out of order after some intermission) who had euery one of them at their birth a little pannicle or thin skin growing ouer their eye. Some haue bin known to resemble their grandfres, and of two twins one hath bene like the father, the other the mother; but he that was borne a yere after hath bin so like his elder brother, as if he had bin one of the twins. Somewomen there be that bring all their children like to themselves; and others againe as like to their husbands: and some like neither the one nor the other. You shall haue Women bring all their daughters like to their fathers, and contrariwise their sonnes like to themselves. The same is notable, and yet vndoubted true, of one *Nicæus* a famous Wrestler of Constantinople, hauing to his mother a woman begotten in adulterie by an *Æthiopian*, and yet with white skin nothing different from other women of that countrey, was himselfe black, and resembled his grandfire the *Æthiopian* abouesayd. Certes, the cogitations and discourses of the minde make much for these similitudes and resemblances whereof we speake, and so likewise many other accidents and occurrent objects are thought to be very strong and effectual therin, whether they come in sight, hearing, and calling to remembrance; or imaginations only conceived and deeply apprehended in the very act of generation, or the instant of conception. The wandering cogitation also and quicke spirit either of father or mother, flying to and fro all on a sudden from one thing to another at the same time, is supposed to be one cause of this impression, that maketh either the foresaid vniforme likeness, or confusion and varietie. And hereupon it commeth, and no maruell it is, that men are more vnlike one another, than other Creatures: for the nimble motions of the spirit, the quicke thoughts, the agilitie of the minde, the varietie of discourse in our wits, imprinteth diuers formes, and many marks of sundry cogitations: whereas the imaginatiue facultie of other liuing creatures is immouable, & alwaies continueth in one: in all it is alike, and the same still in euery one, which causeth them alwaies to engender like to themselves, each one in their severall kindes. *Artenon* a mean man amongst the Commons, was so like in all points to *Antiochus* King of Syria, that *Laodicea* the Queen, after that *Antiochus* her husband was killed, serued her owne turne by the said *Artenon*, and made him play the part of *Antiochus*, vntill she had by his meanes, as in the Kings person, recommended whom she would, and made ouer the kingdome and crown in succession and reuerfion to whom she thought good. *Vibius* a poore commoner of Rome, and *Publicius* one newly of a bond slaue made a free-man, were both of them so like vnto *Pompey* the Great, that hardly the one could be discerned from the other, so liuely did they represent that good visage of his so full of honestie, so fully expressed they and resembled the singular maiestie of that countenance which appeared in *Pompeius* his forehead. The like cause it was that gaue his father also the syname of *Menogenes*, his Cooke, albeit he was surnamed already *Strabo*, for his squint eyes: but hee would needs beare the name of a defect and infirmitie euen in his bond-seruant, for the loue he had vnto him by reason of his likeness. So was one of the *Scipio's* also surnamed *Scrapius* vpon the like occasion, after the name of one *Serapia*, who was but a base slaue of his, and no better than his swine heard, or dealer in buying and selling of swine. Another *Scipio* after him of the same house came to be surnamed *Salutio*, because a certaine jester of that name was liken vnto him. After the same manner one *Spinter*, a player of the second place or part, and *Pamphilus* another player of the third part, or in the third place, gaue their names to *Lentulus* and *Metellus*, who both were Consuls together in one yeare, for that they resembled them so truly. And certes mee thinkes this fell out very vntowardly, and was but a ridiculous pageant, and a very vnseemly shew vpon a stage, to see both Consuls liuely represented there at once in the persons of these two players. Contrariwise, *Rubrius* the stage player was surnamed *Plancus*, because he was so like to *Plinius* the Orator. Againe, *Burbuleius* and *Menogenes*, both players of Entertuldes, resembled *Curio* the father or the elder, and *Metellala Censorius*, for all he had been Censor that.

P 3

that the one could not shift and anoid the syname of *Burbulcius*, and the other of *Monogenes*. **G** There was in Sicily a certaine fisherman who resembled in all parts *Suria* the Pro-consull, not only in visage and feature of the face, but also in mowing with his mouth when hee spake, in drawing his tongue short, and in his huddle and thicke speech. *Cassius Senerus* that famous orator was reproched for being so like vnto *Mirmillo* a drouer or keeper of kine and oxen. *Toranius* a merchant slaue-seller, sold vnto *M. Antonius* (now one of the two great Triumvirs) two most beautiful and sweet faced boyes, for twins, so likewere they one to the other, albeit the one was borne in Asia, and the other beyond the Alps. But when *Antony* afterwards came to know the same, and that this fraud and couzenage was bewraied and detected by the language & speech of the boyes, he fell into a furious fit of choler, and all to berated the foresaid *Toranius*. And when among other challenges he charged him with the high price he made him pay (for they cost him two hundred Sesterces, as for twins, when they were none such) the wily merchant being his craftmaster answered, That it was the cause why he held them so deare, and sold them at so deare a rate: for (quoth he) it is no maruell at all that twobrethren twins that lay both together in one belly do resemble one the other; but that there should be any found borne as these were in diuers countries, so like in all respects as they, he held it for a most rare and wonderfull thing. This answer of his was deliuered in so good time, and so fitly to the purpose, that *Antonie* the great man, who neuer was well but when he outlawed citifens of Rome, and did confiscat their goods, he I say that erewhile was all enraged and set vpon reuiling and reprochfull termes, was not only appeased, but also contented so with his bargaine, that he prised those two boies as much as any thing else in all his wealth.

CHAP. XIII.

¶ The cause and manner of generation.

Some bodies there be by a secret of nature so disagreeing, that they are vnfit for generation one with another. And yet as barren as they be so coupled together, fruitfull they are enough being ioyned with others. Such were *Augustus* the Emperor and his wife *Linia*. In like manner some men there be as well as women, that can skill of getting and breeding none but daughters: and others there be againe that are good at none but sonnes: and many times it falleth out that folke haue sonnes and daughters both, but they by turnes, this yeare a son, the next yeare a daughter, in order. So [*Cornelia*] the mother of the *Gracchi*, who for twelue childbeds kept this course duly: and *Agrippina*, the wife of *Cesar Germanicus*, for nine, euer changing from the male to the female. Some women are barren all their youth; and others again beare but once in their whole life. Some neuer go their full time with their children; and such women, if peraduenture by helpe of physicke or other good means, and choice keeping, they overcome this infirmitie, bring daughters ordinarily and no other. The Emperor *Augustus* among other singularities that he had by himselfe during his life, saw ere he died the nephew of his neece, that is to say his progenie to the fourth degree of lineall discent: and that was *M. Scyllanus*, who hapned to be borne the same yeare that he departed out of this world. He hauing been Consull, and afterward Lord Gouvernor of Asia, was poysoned by prince *Nero*, to the end that he might thereby attaine to the empire. *Qu. Metellus Macedonicus* left behind him six children, and by them eleuen nephewes: but daughters in law and sons in law, and of all such as called him father, seuen. In the Chronicles of *Augustus Cæsars* acts for his time, we finde vpon record, that in his twelfth Consulship, when *L. Sylla* was his companion and colleague in gouernment, vpon the eleuenth day of Aprill, *C. Crispinus Helarus* a gentleman of Fesute, came with solemne pompe into the Capitoll, attended vpon with his nine children, seuen sons and two daughters; with 27 Nephewes the sonnes of his children, and 29 nephewes more, once remoued, who were his sons nephewes, and twelue Nieces besides that were his childrens daughters, and with all these solemly sacrificed.

CHAP.

CHAP. XIII.

¶ Of the same matter more at large.

A Woman commonly is past childe-bearing after 50 yeares of her age. And for the most part their monthly termes stay at forty. As for men, it is cleare and wel knowne, that king *Masiniissa* when he was about 86 yeres old, begat a son whom he called *Methymathmas*: & *Cato Censorius* that famous Censor begat another vpon the daughter of *Salonius* his vassal, when hee was past 80 yeares of age. And hereof it commeth, that the race which came of his other children were surnamed *Liciniani*, but the off-spring of this last sonne, *Salonini*, from whom *Cato Vticensis* (who slew himselfe at Vtica) is lineally descended. Moreouer, it is not long since, that dame *Cornelia* of the house and lineage of the *Scipio's*, bare vnto *Lu. Saturninus* her husband (who died whiles he was Prouost of the city of Rome) a son named *Volusius Saturninus*, and who afterwards liued to be Consull, who was begotten when his father was 62 yeares old with the better. To conclude, there haue bene amongst meaner persons very many knowne to haue gotten children after fourscore and fise.

CHAP. XV.

¶ Of Womens monethly sicknesse.

C Fall liuing creatures a woman hath a flux of blood euery moneth: and hereupon it is, that in her wombe onely there are found a false conception called *Mola*, a Moone-calf, that is to say, a lump of flesh without shape, without life, and so hard withal, that vneth a knife will enter and pierce it either with edge or point. Howbeit, a kinde of mouing it hath, and staeth the course of her moneths: and sometime after the manner of a childe indeed, it costeth the woman her life: otherwhiles it waxeth in her belly as she groweth, and ageth with her; now and then also it slippeth and falleth from her with a laske and loosenesse of the guts. Such a thing breeds likewise in the bellies of men, vpon the hardnesse of liuer or spleen, which the Physicians call *Scirrhus*, i. an hard wedge and cake vnder their short-ribs. And such an one had *Oppius Cato* a nobleman of Rome, late Pretour. But to come againe to women, hardly can there be found a thing more monstrous than is that flux & course of theirs. For if during the time of their sicknesses, they happen to approach or go ouer a vessel of wine, be it neuer so new, it wil presently soure if they touch any standing corne in the field, it wil wither and come to no good. Also let them in this estate handle graffes, they will die vpon it: the herbes and young buds in a garden if they do but passe by, will catch a blast, and burne away to nothing. Sit they vpon or vnder trees whiles they are in this case, the fruit which hangeth vpon them will fall. Do they but see themselves in a looking glasse, the cleare brightnesse thereof turneth into dimnesse, vpon their very sight. Look they vpon a sword, knife, or any edged tooles, bee it neuer so bright, it waxeth duskyish, so dorth also the liuely hue of yvorie. The very bees in the hie die. Yron & Steele presently take rust, yea, and brasse likewise, with a filthy, strong, and poisoned stink, if they lay but hand thereupon. If dogs chance to taste of womens fleures, they run mad therewith; and if they bite any thing afterwards, they leaue behinde them such a venome, that the wounds are incurable: nay the very clammy slime Bitumen, which at certaine times of the yere floteth and swimmeth vpon the lake of Sodom, called *Asphaltites* in Iury, which otherwise of the owne nature is pliable enough, soft and gentle, and ready to follow what way a man would haue it, cannot be parted and diuided asunder (for by reason of the viscositie, it cleaueth and sticketh like glue, and hangeth all together, & pluck as much as a man will at it) but only by a thred that is stained with this venomous blood: euen the silly Pismires (the least creatures of all others) hath a perceiuaunce & sence of this poison, as they say; for they cast aside & will no more come to that corn, which they haue found by tast to be infected with this poison. This malady, so venomous and hurtful as it is, followeth a woman still euery 30 daies; and at 3 moneths end, if it stay so long, it commeth in great abundance. And as there be some women that haue it oftner than once a month, so there are others again that neuer see ought of it. But such lightly of generation: and the mans seed serueth in stead of a runner to gather it round into a curd: which afterwards in proceffe of time

time quickneth and grows to the form of a body, which is the cause that if women with childe haue this flux of the moneths, their children are not long liued, or else they proue feeble, sickly and full of filthie humours, as *Nigidius* writeth.

CHAP. XVII.

¶ In like manner of births: and infants in the mothers wombe.

THe same *Nigidius* is of opinion, that a womans milke, nource to her owne child & giuing it sucke, will not corrupt and be naught for the babe, if she conceiue againe by the same man to whom she brought the former childe. Also it is held, that in the beginning & end of the foresaid menstruall fleures, a woman is very apt to conceiue. Moreouer, it is commonly receiued for an infallible argument in women, that they are fruitfull and with childe, if when they annoint their eies with their owne spittle as with a medicine, the same appeare infected and to change the colour thereupon. Furthermore, doubtlesse it is, that childre n breed their fore teeth in the seuenth moneth after they are borne, and first those in the vpper chaw, for the most part: likewise that they shed the same teeth about the seuenth yere of their age, & others come vp new in the place. Certaine it is also, that some children are borne into the world with teeth, as *M. Curius*, who thereupon was surnamed *Dentatus*, and *Cn. Papyrius Carbo*, both of them very great men and right honourable personages. In women the same was counted but an vn-lucky thing, & prelaged some misfortune, especially in the daies of the KK. regiment in Rome: for when *Valeria* was borne toothed, the wizards and Soothsayers being consulted thereabout, answered out of their learning by way of Prophecie, That look into what citie she was caried to nource, she should be the cause of the ruine and subuersion thereof; whereupon had away shee was and conuicied to *Suessa Pometia*, a city at that time most flourishing in wealth and riches: and it proued most true in the end, for that city was vtterly destroyed. *Cornelia* the mother of the *Gracchi* is sufficient to proue by her own example, that women are neuer borne for good whose genitall parts for procreation are growne together, and yeeld no entrance. Some children are borne with an entire whole bone that taketh vp all the gum, instead of a row of distinct teeth, as a son of *Prusias* king of the Bythinians, who had such a bone in his vpper chaw. This is to be obserued about teeth, that they onely check the fire and burn not to ashes with other parts of the body: and yet as inuincible as they are and able to resist the violence of the flame, they rot and become hollow with a little catarhe or waterish rheume that droppeth and distilleth vpon them: while they may be made, with certaine mixtures and medicines called *Dentifices*. Some weare their teeth to the very stumps onely with vse of chawing; others againe loofe them first out of their head; they serue not onely to grind our meat for our daily food and nourishment, but necessary also they be for the framing of our speech. The fore-teeth stand in good stead to rule and moderate the voice by a certaine consent and tuncable accord, answering as it were to the stroke of the tongue: and according to that row and ranke of theirs wherein they are set, as they are broader or narrower, greater or smaller, they yeeld a distinction and varietie in our words, cutting and hewing them thicke and short, framing them pleasant, plaine, and ready, drawing them out at length, or smuddering and drowning them in the end: but when they bee once false out of the head, man is bereaued of all means of good vtterance and explanation of his words. Moreouer, there are some prelagages of good or bad fortune, gathered by the teeth: men ordinarily haue giuen them by nature 32 in all, except the nation of the *Turduli*. They that haue about this number, may make account (as it is thought) to liue the longer. As for women, they haue not so many: they that haue on the right side in the vpper iaw two eie-teeth, which the Latines call Dogs-teeth, may promise themselves the flattering fauours of Fortune, as it is well seene in *Agrippina* the mother of *Domitius Nero*: but contrariwise, the same teeth double in the left side about, is a signe of euill lucke. It is not the custome in any countrey to burne in a funeral fire the dead corps of any infant before his teeth be come vp; but hereof will we write more at large in the Anatomie of man, when wee shall discourse purposely of euerie member and part of the body. *Zoroastres* was the onely man that euer wee could heare of, who laughed the same day that he was borne: his brain did so euidently pant and beat, that it would beare vp their hands that laid them vpon his head: a most certain prelage & fore-token of that great learning that afterward, he attained vnto. This also is held for certain and resolued vpon that a man at three yeares of age, is come to one moitie of his growth and height. As also this

A is obserued for an vndoubted truth, that generally all men come short of the full stature in time past, and decrease still euery day more than other: and seldome shall you see the son taller than his father; for the ardent heat of the elementarie fire (whereunto the world enclineth already now toward the later end, as somtimes it stood much vpon the waterie element) deuoureth and consumeth that plentiful humor and moisture of naturall seed, that engendreth all things: and this appeareth more euidently by these examples following. In *Crete*, it chanced that an hill claue asunder in an earth-quake, and in the chink thereof was found a body standing, 46 cubits high; some say it was the body of *Orion*; others, of *Otus*. We find in chronicles & records of good credit, that the body of *Orestes* being taken vp, by direction from the Oracles, was seuen cubits long. And verily that great and famous poet *Homer*, who liued almost 1000 yeres ago, complained and gaue not ouer, That mens bodies were lesse of stature euen then, than in old time. The *Annales* set not downe the stature and bignesse of *Nevius Pollio*; but that he was a mighty gyant, appeareth by this that is written of him, namely, that it was taken for a wonderful strange thing, that in a great rout & presse of people that came running together vpon him, he had like to haue bin killed. The tallest man that hath bin seen in our age, was one named *Gabbara*, who in the daies of prince *Claudius* late Emperour, was brought out of Arabia; nine foot high was hee, and as many inches. There were in the time of *Augustus Caesar* 2 others, named * *Pusio* and *Secundilla*, higher than *Gabbara* by halfe a foot, whose bodies were preserved and kept for a wonder in a charnell house or sepulchre within the gardens of the *Salustians*. Whiles the same *Augustus* sate as president, his niece *Iulia* had a little dwarfish fellow not about 2 foot and a hand bredth high, called *Conopas*, whom she set great store by and made much of: as also another the dwarfe named *Andromeda*, who somtime had been the slaue of *Iulia* the princeesse, and by her made free. *M. Varro* reporteth, that *Manius Maximus*, and *M. Tullius*, were but two cubits high, & yet they gentlemen and knights of Rome: and in truth we our selues haue seen their bodies how they lie embalmed and chested, which testifieth no lesse. It is well knowne that there be some that naturally are neuer but a foot and a halfe high; others again somewhat longer; and to this heighth they came in three yeres, which is the full course of their age, and then they die. Wee reade moreover in the *Chronicles*, that in *Salamis* one *Euthimenes* had a son, who in three yeres grew to be three cubits high, but he was in his gate slow and heauy, and in his wit as dull and blockish; howbeit in his time vndergrowne he was, and his voice changed to be great, and at three yeares end died suddenly of a generall crampe or contraction of all the parts of his body. It is not long since I saw my selfe the like in all respects (sauius that vndergoing aforesaid) in a son of one *Cornelius Tacitus*, a Roman knight, and a procurator or general receiuer and Treasurer for the State in *Gaule Belgique*; such the Greeks call *ἑκταπῆλος*, *i. Ectrapelos*; wee in Latine haue no name for them.

CHAP. XVI.

¶ Certaine notable obseruations in bodies of men and women.

WE see tried by experience, that take measure of a man from the sole of the foot vp to the crowne of the head, so far it is between the ends of his two middle and longest fingers, when he stretcheth out his armes and hands to the full. As also, that some men and women be stronger of the right side than of the left: others againe that be as strong of one as the other; and there be, that are altogether left handed, and best with that hand; but that is seldome or neuer seen in women. Moreouer, men weigh heauier than women; and in euerie kind of creature, dead bodies be more heauy than the quicke: and the same parties sleeping weigh more than waking. Finally, obserued it is, that the dead corps of a man floteth on the water with the face vpward; but contrariwise women swim groueling, as if Nature had prouided to saue their honesty and cower their shame, euen when they are dead.

CHAP. XVIII.

¶ Examples of diuers extraordinarie cases in mans body.

WE haue heard, that some mens bones are folliid and massie, and so do liue without any marrow in them: you may know them by these signes, they neuer feele thirst, nor put forth any sweat; and yet we know that a man may conquer and master his thirst if hee list:

* Ten foot and an halfe.

* Such an one as little John, for so the nick-name signifieth.

lift: for so a gentleman of Rome one *Iulius Viator*, descended from the race of the Vocontians our allies; being false into a kind of dropie between the skin and the flesh during his minority and nonage, and forbidden by the Physicians to drink; so accustomed himselfe to obserue their direction, that naturally he could abide it: in so much, that all his old age euen to his dying day he forbore his drink. Others also haue bin able to command and ouer-rule their nature in many cases, and breake themselves of diuers things.

CHAP. XIX.

¶ Strange natures and properties of diuers persons.

IT is said, that *Craffus* (grandfather to that *Craffus* who was slaine in Parthia) was neuer known to laugh all his life time, and thereupon was called *Agelastus*; and contrariwise, many haue bin found that neuer wept. Also that sage and renowned wise man *Socrates*, was seene alwaies to carry one and the selfe same countenance, neuer more merry and cheerefull nor more solemn and vnquiet, at one time than at another. But this obstinate constancy and firm carriage of the mind, turneth now and then in the end into a certain rigour and austerity of nature, so hard and inflexible that it cannot be ruled, and in very truth despoileth men of all affections; and such are called of the Greekes, *Apathes*, who had the experience of many such: and (that which is a marvellous matter) those especially that were the great pillars of philosophy and deep learned Clerks, namely *Diogenes* the Cinicke; *Pyrrho*, *Heraclitus* and *Timo*; and as for him he was so far gone in his humor, that he seemed professedly to hate all mankind. But these were examples of a corrupt, peruerse, & froward nature. As for other things, there be sundry notable obseruations in many; as in *Antonia* the wife of *Drusus*, who as it was well knowne, neuer spit: in *Pomponius* the poet, one that had sometimes bin Consul, who neuer belched. But as for such as naturally haue their bones not hollow, but whole and solid, they be very rare and seldom seene, and called they are in Latine *Cornei*, i. hard as hornes.

CHAP. XX.

¶ Of bodily strength and swiftnesse.

VARRO in his treatise of prodigious and extraordinary strength, maketh report of one *Tritamnerus*, a man that of body was but little and lean withall, howbeit of incomparable strength, much renowned in the fence schoole, and namely, in handling the Samnites weapons, wearing their manner of armor, and performing their feats and masteries of great name. He maketh mention also of a sonne of his, a souldier, that serued vnder *Pompeius* the Great, who had all ouer his body, yea and throughout his armes and hands, some sinewes running streight out in length, others crossing ouerthwart lattise-wise; and he faith moreouer of him, that when an enemy out of the camp gaue him defiance and challenged him to a combat, he would neither put on defensiuie harness, ne yet arme his right hand with offensive weapon; but with naked hand made meanes to foile and overcome him, and in the end when hee had caught hold of him, brought him away perforce into his own camp with one finger. *Iunius Valens* a capitaine, pensioner or centurion of the gard-souldiers about *Augustus Caesar*, was wont alone to beare vp a charriot laden with certain hogheads or a butt of wine, vntill it was discharged thereof, & the wine drawne out: also his manner was with one hand to stay a coach against all the force of the horses straining and straining to the contrary; and to perform other wonderful masteries, which are to be seen engrauen vpon his tombe; and therefore (qd. *Varro*) being called *Hercules Rusticellus*, he tooke vp his mule vpon his back and carried him away. *Fufius Saluius* hauing two hundred pound weights at his feet, and as many in his hands, and twise as much vpon his shoulders, went withall vp a paire of staires or a ladder. My selfe haue seene one named *Athanasius*, do wonderfull strange matters in the open shew and face of the world, namely, to walke his stations vpon the stage with a cuirace of lead weighing 500 pound, booted besides with a pair of buskins or greiues about his legges that came to as much in weight. As for *Milo* the great wrestler of Crotona, when he stood firm vpon his feet, there was not a man could make him stir one foot; if he held a pomegranat fast within his hand, no man was able to stretch a finger of his and force it out at length. It was counted a great matter, that *Philippides* ran 1140 stadia, to wit,

A wit, from Athens to Lacedæmon in two daies, vntill *Lanis* a courtier of Lacedæmon, and *Philonides* footman to *Alexander* the great, ran between Sicyone and Olis in one day, 1200 stadia. But now verily at this day we see some in the grand cirque, able to indure in one day the running of 160 miles. And but a while agoe we are not ignorant, that when *Foncius* & *Pipianus* were Consuls, a yong boy but 9 yeres old, between noon and euening ran 75 miles. And verily a man may wonder the more at this matter, and come to the full conceit thereof, if he do but consider, that it was counted an exceeding great iourney that *Tiberius Nero* made with three chariots (shifting from one to the other fresh) in a day and a night, riding post haste vnto his brother *Drusus* then lying sicke in Germany, and all that was but 200 miles.

CHAP. XXI.

¶ Examples of good Eie-sight.

WE find in histories as incredible examples as any be, as touching quicknesse of Eie-sight: *Cicero* hath recorded, that the whole Poeme of *Homer* called *Ilias*, was written in a piece of parchment, which was able to be couched within a nut shel. The same writer maketh mention of one that could see and discern out-right 135 miles. And *M. Varro* nameth the man, and faith he was called *Strabo*, who affirmeth thus much moreouer of him, that during the Carthaginian war he was wont to stand and watch vpon *Lilybæum*, a cape in Sicily, to discouer the enemies fleet loosing out of the haven of Carthage, and was able to tel the very just number of the ships. *Callicrates* vsed to make Pismires and other such like little creatures, out of yvorie so artificially, that other men could not discern the parts of their body one from another. There was one *Myrmecides*, excellent in that kinde of workmanship: who of the same matter wrought a chariot with foure wheelles and as many steedes, in so little roome, that a silly flie might couer all with her wings. Also he made a ship with all the tackling to it, no bigger than a little bee might hide it with her wings.

CHAP. XXII.

¶ Of Hearing.

AS for hearing, there is one example wonderfull. For the bruit of that battell, whereupon *Sybaris* was forced & sacked, was heard the very same day as far as *Olympia* [in Greece.] As touching the news of the Cimbrians defeate, as also the report and tidings of the victorie ouer the Persians, made by the Roman Castores, the same day that it was achieued, were held for diuine reuelations rather than humane reports, and the knowledge thereof came more by way of vision than otherwise.

CHAP. XXIII.

¶ Examples of Patience.

MANY are the calamities of this life, incident to mankind, which haue afforded infinite trials of mens patience, in suffering paines in their body. Among others, for women, the example of *Leena* the courtisan, is most rare and singular, who for all the dolorous tortures that could be deuised, would neuer bewray *Harmodius* and *Aristogiton*, who slew the tyrannous king. And for men, *Anaxarchus* did the like, who being for such a cause examined vpon the racke, in the midst of his torments bit off his own tongue with his teeth, the only means whereby he might haply reueale and disclose the matter in question, and spit it in the face of the tyrant that put him to his torture.

CHAP. XXIII.

¶ Examples of Memorie.

AS touching memorie, the greatest gift of Nature, and most necessary of all others for this life, hard it is to iudge and say who of all others deferred the chiefe honor therein: considering how many men haue excelled, and woon much glory in that behalfe. King *Cyrus* was

CHAP. XXVI.

¶ The commendation of Pompey the great.

AS concerning all the titles and victorious triumphs of Pompey the great, wherein hee was equall in renowne and glory, not onely to the acts of Alexander the great, but also of Hercules in a manner, and god Bacchus: if I should make mention thereof in this place, it would redound not to the honour onely of that one man, but also to the grandeur and Maieftie of the Roman empire. In the first place then, after he had recovered Sicily, and reduced it vnder obedience (where his first rising was, and where hee began to shew himselfe in the quarrell of the Common weale, and to side with Sylla) hauing also conquered and subdued Africke, and raunged it vnder the obedience of Rome, where he acquired the surname of Magnus, by reason of the great booty and pillage which he brought from thence; being no higher of birth and calling, than a Roman gentleman or man of armes, entred with triumphant chariot into Rome: a thing that was neuer scene before in a man of that place and qualitie. Immediately after this, he made a voyage into the West, and hauing brought vnder obedience of the Romans 876 great townes, which he forced by assault betwene the Alpes and the marches of Spaine, he erected trophies and triumphant columnes vpon the mountain Pyrenæus, with the title and inscription of these victorious exploits, and neuer made one word of his victorie ouer Sertorius, so braue a mind he carried with him. And after the ciuill troubles and broiles appeased & quenched (which drew after them all forreine wars) he triumphed againe the second time, being as yet but a knight of Rome: so oftentimes a generall of command & conduct, before he euer serued as soldier in the field. These famous deeds atchieued, sent out he was in another expedition, to scoure & cleere all the seas, and so forward into the East parts. From whence he returned with more titles still of honor to his country, after the manner of those that winne victories at the solemne festiuall * Games; for as the victors vse not themselves to accept the chaplets and guirlands in their own names, but to be crowned therewith in the behalf of their native countries; euen so, Pompeius, in that temple which he caused to be built of the bootie and pillage woon from the enemies, and dedicated to * Minerva, entituled the citie with the whole honour, and attributed all to them in an inscription or table engrauen in this manner: Pompeius the Great, Lord Generall, hauing finished the warres which continued thirtie yeares, during which he had discomfited, put to flight, slaine, or receiued to mercie vpon submission 2183000 men: sunke or taken 846 saile, woon and brought to his deuotion, of cities, townes and castles, to the number of 1538: subdued and put vnder subiection all lands and Nations betwene the lake Maotis and the red sea, hath dedicated of right and good desert this temple to Minerva. This is the brieue and summarie of his seruice in the East. As for the triumph, wherein he rode the third day before the Calends of October, in the yeare wherein M. Messala and M. Piso were Consuls, the tenure and title ran in this form: Whereas Cn. Pompeius hath cleared all the sea coasts from Pyrats and rourers, and thereby recovered vnto the people of Rome the lordship and soueraignetic of the seas; and withall subdued Pontus, Armenia, Paphlagonia, Cappadocia, Cilicia, Syria, the Scythians, Iudæa, and the Albanois: the Island Creta, and the Bastarnians, hath triumphed ouer them all, as also for the vanquishing of the 2 kings Mithridates and Tigranes. But the greatest glorie of all glories in him was this (as himselfe deliuered openly in a full assembly, at what time as he discoursed of his owne exploits) That whereas Asia when he receiued it, was the vtmost frontier prouince and limit of the Roman Empire, hee left the same in the very heart & mids thereof, and so deliuered it vp to his country. Now if a man would set Caesar on the other side against him, & likewise rehearse his noble acts, who indeede of the two seemed greater in the sight of the world, he had need verily to fetch a circuit about the world, and comprehend the whole globe thereof, which were an infinit piece of work, and in all reason impossible.

CHAP. XXVII.

¶ The praise of Cato, the first of that name.

IN sundry other kindes of vertues many men haue diuersly excelled. But Cato, the first of the Porcian house, was thought to be the only person who was able to perform three things in the highest degree that are most commendable in a man. For first and formost he was a singular good

Olympia Nemæa, Pythia, Isthmia.

* Or Victorie.

was able to call euery souldier that he had through his whole army by his owne name. L. Scipio could do the like by all the citizens of Rome. Semblably, Cincas, Embassador of king Pyrrhus, the very next day that he came to Rome, both knew and also saluted by name all the Senate, & the whole degrees of Gentlemen and Caualerie in the citie. Mithridates the king, reigned ouer two and twentie nations of diuers languages, and in so many tongues gaue lawes and ministred justice vnto them, without truchman: and when he was to make speech vnto them in publicke assembly respectiue to euery nation, he did performe it in their own tongue without interpreter. One Charmidas or Charmadas, a Grecian, was of so singular a memory, that he was able to deliuer by heart the contents word for word of all the books that a man could call for out of any librarie, as if he read the same presently within book. At length the practise hereof was reduced into an art of Memory: deuised and inuented first by Simonides Melicus, and afterwards brought to perfection and consummate by Metrodorus Sepsus, by which a man might learne to rehearse againe the same words of any discourse whatsoeuer after once hearing: and yet there is not a thing in man so fraile and brittle againe as it, whether it be occasioned by discafe, by casual injuries or occurrents, or by feare, through which it faileth somtime in part, and otherwhiles decayeth generally, and is clean lost. One with the stroke of a stone, fell presently to forget his letters onely, and could reade no more; otherwise his memorie serued him well enough. Another with a fall from the rooffe of a very high house, lost the remembrance of his owne mother, his next kinsfolks, friends, and neighbors. Another in a sicknesse of his, forgot his own seruants about him: and Messala Corvinus the great Orator, vpon the like occasion, forgot his own proper name. So fickle and slipperie is mans memorie: that oftentimes it assaieth and goeth about to leese it selfe, euen whiles a mans body is otherwise quiet and in health. But let sleep creepe at any time vpon vs, it seemeth to be vanquished, so as our poore spirit wandreth vp and downe to seeke where it is, and to recouer it againe.

CHAP. XXV.

¶ The praise of C. Iulius Caesar.

FOR vigor and quicknesse of spirit, I take it, that C. Caesar Dictatour, went beyond all men besides. I speake not now of his vertue and constancie, neither of his high reach and deep wit, whereby he apprehended the knowledge of all things vnder the cope of heauen; but of that agilitie of minde, that prompt and ready conceit of his, as nimble and actiue as the verie fire. I haue heard it reported of him, that he was wont to write, to reade, to indite letters, and withall to giue audience to suiters & heare their causes all at one instant. And being employed, as you know he was, in so great and important affairs, he ordinarily indited letters to foure secretaries or clerkes at once: and when he was free from other greater businesse, he would otherwise finde feuen of them work at one time. The same man in his daies fought 50 set battels with banners displayed against his enemies: in which point, he alone out-went M. Marcellus, who was scene 40 times saue one in the field. Besides the carnage of citizens that hee made in the ciuill wars when he obtained victory, he put to the sword 1192000 of his enemies, in one battell or other. And certes for mine owne part, I hold this for no speciall glory and commendation of his, considering so great iniurie done to mankind by this effusion of blood, which in some part he hath confessed himselfe, in that he hath forborne to set downe the ouerthrowes & blood-shed of his aduersaries (fellow citizens) during the ciuill wars. Yet Pompey the great deserues honour more iustly for scouring the seas, and taking from the rourers 846 saile of ships. But to returne againe to Caesar, ouer and aboue the qualities of worth before rehearsed, an especiall property of his owne he had for clemency and mercy, wherein he so far forth furmounted all other men, that hee repented thereof in the end. As for his magnanimity, it was incomparable, and he left such a presient behind him, as I forbid all men to match or second it. For to speake of his sumptuosities, of his largesses, of the magnificent shewes exhibited to the people, the exceeding cost & charges therein bestowed, with all the stately furniture thereto belonging, were a point of him that fauored such lauish expence and superfluities. But herein appeared his true hauintesse of mind indeed, and that vnmatchable spirit of his, that when vpon the battell at Pharalia, as wel the cofers & caskets with letters & other writings of Pompey, as also those of Scipio's before Thapsus, came into his hands, he was most true to them, and burnt all without reading one scrip or scrol.

CHAP.

Carnader, according to Cincero and Quintilian.

good Oratour: see only, a most braue captaine and renowned commander in the field: and last of all, a right worthy Senatour and approued counsellor. And yet in my conceit, all these excellent parts seeme to haue shined more bright (although he came after the other) in *Scipio Aemilianus*. To say nothing of this blessed gift besides, that he was not hated and spighted of so many men, as *Cato* was. But if you will seeke for one especiall thing in *Cato* by himselfe, this is reported of him, That he was judicially called to his answer 44 times, and neuer was there man accused oftner than he, yet went he euer cleare away and was acquit.

CHAP. XXVIII.

¶ Of Valour and Fortitude.

AN endlessse peece of worke it were to know and set downe who bare the prize for valiancy, & namely if we admit the fabulous tales of poets. As for the poet *Ennius*, he had in greatest admiration, *T. Caecilius Tenuer*, and especially his brother: and in regard of those two, he compiled the sixt booke of his *Annales* to the rest. But *L. Sicius Dentatus*, a Tribune of the Commons, not long after the banishment of the kings, when *Sp. Tarpeius* and *A. Asterius* were Consuls, by most voices surpasse in this kind, if it be true that a number of men report of him: namely, that he serued in 120 foughten fields: 8 times maintained combat with his enemy, giuing defiance, and euermore got the vpper hand: carrying before him the glorious markes of 45 skarres receiued by wounds, and neuer a one in the backe parts of his body. Moreouer, he woon the spoile of 34 feuerall enemies: and had giuen him of his captains, for his prowesse and good seruice, 18 headlesse speares, 25 caparisons and furnitures of great horses, 83 chains, 160 bracelets for to adorne his arms: 26 crowns, or triumphant chaplets, whereof 14 were ciuicke, for rescuing of Roman citizens in jeopardy of death, 8 of beaten gold, 3 other mural, for mounting first ouer the enemies wall: and last of all, one obsidionall, for enforcing the enemy to leue and breake vp his siege and depart; also with a stipend or pension, fee out of the Exchequer & chamber of the city; and lastly, the prise or ransom of ten prisoners, with 20 oxen besides to make vp the reward; and in this glorious pompe and shew he followed nine captain Generals going before him, who by his means triumphed all. Ouer and besides (which I suppose was the worthiest act that euer he did) he accused in open court before the body of the people, one commander and great captaine, named *T. Romulus* (notwithstanding he had bin a Consul) and conuicted him for his ill management and conduct of the wars. As for *Manlius Capitolinus*, he was as many honourable testimonies of valour, but that he lost them all againe, with that vnhappy end of his life that he made. Before he was full 17 yeres of age, hee had gained already two complete spoiles of his enemies. He was the first Roman knight or man of armes, that was honored with a mural crowne of gold for scaling ouer the wall in an assault; with six ciuicke chaplets for sauing the life of citizens six times out of the enemies hands. Moreouer, he receiued 37 gifts of the people for his good seruice, and carried the skarres in the fore-part of his body of 33 wounds. He rescued *P. Seruilius*, Generall of the Roman Cauallerie, & in the rescue was himselfe wounded for his labor, in shoulder and thigh both. Aboue all other hardy acts, he alone guarded and defended the Capitoll, and thereby the whole State of Rome, against the Gauls: a braue peece of seruice, but that he marred all againe in aspiring to be king ouer the same. In these aboue rehearsed examples, certes vertue hath carried a great stroke, but yet fortune hath been the mightier, and preuailed more in the end. And in my iudgement verily, none may right & iustly prefer any man before *M. Sergius*; albeit *Catiline* his nephewes son diseredited that name of his, & derogated much from the honor of his house. The second time that he went into the field and serued, his had was to lose his right hand: and in two other seruices hee was wounded no fewer than 23 times: by meanes whereof hee had little vse of either hand, and his feet stood him in no great stead. Howbeit, thus maimed and disabled as hee was for to be a souldiour, hee went many a time after to the warres, attended with one slaue onely, and performed his deuoir. **M**Twife was he taken prisoner by *Annibal* (for he dealt not I may tell you with ordinary enemies) and twife brake he prison and made escape, notwithstanding, that for twentie moneths space he was euery day ordinarily kept bound with chaines and fetters. Four times fought hee with his left hand onely, vntill two horses one after another, were killed vnder him. Then hee made himselfe a right hand of yron, which he fastened to his arme, and fighting with the help of it, he raised

A raised the siege from before *Cremona*, and saued *Placentia*. In France he forced 12 fortified camps of the enemies. All which exploits appeare vpon record in that Oration of his which he made in his Pretorship, at what time as his Colleagues and companions in gouernement would not permit him to be at the solenne sacrifices, because he had a maim, and wanted a lim. But what heaps of crowns and chaplets, thinke you, would he haue gathered together, if he had bin committed and matched with any other enemies but *Annibal*: Certes, to know a man of worth indeed, much materiall it is to consider in what time hee liueth, and is imploied, for the prooffe of his valour. For what store of ciuicke coronets and garlands, yeelded either the battell of *Trebia* and *Ticinus*, or of *Thrasymenus* the lake? What crowne could haue bin gained and woon at the iourney of *Cannæ*, where the best seruice was by good footmanship to flie & run away? To conclude, all others may vaunt verily, that they haue vanquished men; but *Sergius* may boast, that he hath conquered and ouercome euen Fortune her selfe.

CHAP. XXIX.

¶ The commendation of some men for their quicke wits.

WHo is able to make a muster as it were of them that haue been excellent in wit: so difficult a matter it is to run through so many kinds of sciences, and to take a suruey of curious handi-works in such varietie, of most rare and singular artifices? Vnlesse haply we agree vpon this, and say, that *Homer* the Greeke poet excelled all other, considering either the subiect matter, or the happy fortune of his worke. And hereupon it was, that *Alexander* the Great (for in this so proud a censure and comparison, I shal do best to cite the iudgment of the highest, and of those that be not subiect to enuie) hauing found among the spoils of *Darius* the king, his persumier or casket of sweet ointments, and the same richly imbellished with gold and costly pearls and precious stones, when his friends about him shewed him many vses whereto the said coffer or cabinet might be put vnto, considering that *Alexander* himselfe could not away with those delicate perfumes, being a warriour, and slurred with bearing armes, and following warfare: when, I say, his gallants about him could not resolute well what seruice to put it to: himselfe made no more ado but said thus, I will haue it to serue for a case of *Homers* bookes: judging hereby, that the most rare and precious worke proceeding from that so admirable a wit of man, should be bestowed and kept in the richest box and casket of all others: the same prince, in the forcing and sackage of the citie of *Thebes*, caused by expresse commandement, That the dwelling house & whole family of *Pindarus* the Poet should be spared. He built againe the natiue city wherein *Aristotle* the Philosopher was borne: and in so glorious a shew of his other worthy deeds, would needs intermingle this testimony of his bounty, in regard of that rare clerke who gaue light to all things in the world. The murderers of *Archilochus* the poet, the very Oracle of *Apollo* at *Delphi* disclosed and reuealed. When *Sophocles* the prince of all tragicall Poets was dead in Athens, at what time as the citie was besieged by the *Lacedæmonians*, god *Bacchus* appeared sundry times by way of vision in a dreame to *Lysander* their king, admonishing him to suffer his delight, and him whom he set most store by, for to be entered. **E** Whereupon the king made diligent enquire who lately was departed this life in Athens: and by relation of the citizens soone found it out and perceiued who it was that the foresaid god meant, and so gaue them leaue to bury *Sophocles* in peace, and to performe his funeralls without any molestation or impeachment.

CHAP. XXX.

¶ Of Plato, Ennius, Virgil, M. Varro, and M. Cicero.

Denis the tyrant, borne otherwise to pride and cruelty, being aduertised of the coming and arriual of *Plato*, that great clerke and prince of learning, sent out to meet him a ship adorned with goodly ribbands, and himselfe mounted vpon a charriot drawne with four white horses, receiued him as if he had bin a King, at the haue, when hee dis barked and came aland. *Isocrates* sold one Oration that he made for 20 talents of gold. *Aeschines* that famous orator of Athens in his time, hauing at *Rhodes* rehearsed that accusatorie oration which he had made

made against *Demosthenes*, read withall his aduersaries defence againe, by occasion whereof he was confined to Rhodes, and there liued in banishment: and when the Rhodians that heard it wondred thereat, Nay (qd. *Aeschines*) you would haue marvelled much more at it, if you had heard the man himselfe pronouncing it, & pleading *Vina voce*: yeelding thus as you see a notable testimony of his aduersary, in the time of his aduersitie. The Athenians exiled *Thucydides* their Generall Captaine: but after he had written his Chronicle, they called him home again, wondering at the eloquence of the man, whose vertue and prowesse they had before condemned. The KK. of Egypt and Macedonie gaue a singular testimony how much they honoured *Menander* the Comical poet, in that they sent Embassadors for him, and a fleet to waite him for his more securitie: but he wane unto himselfe more fame and glory by his owne settled iudgement, for that he esteemed more of his owne priuat study and following his book, than of all those fauors offered vnto him from great princes. Moreover, there haue bin great personages and men of high calling at Rome, who haue shewed the like in token, how they esteemed and regarded the learned crew of forrein nations. *Cn. Pompeius*, after he had dispatched the war against *Mithridates*, intended to go and visit *Posidonius*, that renowned professor of learning; and when hee should enter into the mans house, gaue streight commandement to his Liſtors or Huiſhers, that they should not (after their ordinary maner with all others) rſp at his dore; and this great warriour, vnto whom both the East and West parts of the world had submitted, vailed boner, as it were, and bafed his armes and ensignes of state which his officers carried, before the veric dore of this Philosopher. *Cato*, surnamed *Censorius*, vpon a time when there came to Rome that noble embassage from Athens, consisting of three, the wisest sages among them; when hee had heard *Carnedes* speake (who was one of those three) gaue his opinion presently, That those embassadors were to be dispatched and sent away with all speed; for feare least if that man argued the case, it would be an hard piece of worke to found and find out the truth, so pregnant were his reasons, and so witty his discourses. But Lord! what a change is there now in mens manners and dispositions! This *Cato*, the renowned Censor, both now and at all times else, could not abide to haue any Grecian within Italy, but alwaies gaue iudgement to them all in generall to be expelled: but after him there comes his nephew once remoued, or his nephewes sonne, who brought one of their Philosophers ouer with him, when he had bin military Tribune or knight marſhall: and another likewise vpon his embassage to Cypres. And verily a wonder it is and a memorable thing to consider how these two *Catoes* differed in another point: for the former of them could not away with the Greek tongue, the other that killed himselfe at *Vtica*, esteemed it as highly. But to leaue strangers, let vs now speak of our own countymen, so renowned in this behalfe. *Scipio Africanus* the elder, gaue expresse order, and commanded, That the statue of *Ennius* the poet should be set ouer his tomb, to the end, that the great name and stile of *Africanus*, or indeed the booty rather that hee had woun and carried away from a third part of the world, should in his monument vpon the reliques of his ashes be read together with the title of this poet. *Augustus Caesar* late Emperor, expressely forbad that the Poeme of *Virgil* should be burned, notwithstanding that he by his last wil and testament on a modesty, gaue order to the contrary: by which means there grew more credit and authority vnto the Poet, than if himselfe had approued and allowed his owne verses. *Asinius Pollio* was the first that set vp a publicke Library at Rome, raised of the spoile and pillage gained from the enemies. In the Library of which gentleman, was erected the image of *M. Varro*, euen whiles he liued: a thing that won as great honor to *M. Varro* in mine opinion (considering that amongst those fine wits, whereof a great number then flourished at Rome, his hap only was to haue the garland at the hands of a noble citizen and an excellent Orator beside:) as that other nauall crowne gained him, which *Pompey* the Great bestowed vpon him for his good seruice in the pyrats war. Infinite examples more there are of vs Romans, if a man would seeke after them and search them out: for this only nation hath brought forth more excellent and accomplished men in euery kinde, than all the lands besides of the whole world. But what a sin should I commit, if I proceeded farther and speake not of thee, O *M. Cicero*? and yet how should I possibly write of thee according to thy worthinesse: would a man require a better prooffe of thy condigne praises, than the most honorable testimony of the whole body of that people in generall, and the acts onely of thy Consulship, chosen out of al other vertuous deeds throughout thy whole life? Thine eloquence was the cause that all the Tribes renounced the law *Agraria*, as touching the diuision of Lands among

A among the commons, albeit their greatest maintenance and nourishment consisted therein. Through thy persuation they pardoned *Roscius*, the first author of that seditious bill and law, whereby the States and degrees of the city were placed distinctly in their seats at the Theatre: they were content I say, and tooke it well, that they were noted and pointed at for this difference in taking place and rowms, which he first brought in. By means of thy orations, the children of proscrip and outlawed persons were ashamed and abashed to sue for honorable dignities in common-weale: thy witty head it was that put *Catiline* to flight, and banished him the city: thou, and none but thou didst out-law *M. Antonius*, and put him out of the protection of the State. All haile therefore, O *M. Tullius*, faire chieue thee, thou that first was saluted by the name of *Parens patrie*, i. Father of thy countrey: first that deserued triumph in thy long robe, & the laurel garland, for thy language: the only father indeed of eloquence & of the Latin tongue: and (as *Caesar* Dictator sometime thine enemy hath written of thee) hast deserued a crown aboue all other triumphs, by how much more praise-worthy it is, to haue amplified and set out the bounds and limits of Roman wit and learning, than of Roman ground and dominion.

CHAP. XXXI.

¶ Of a certaine Maiesſtie in behaiour and cariage.

T hose, who among other gifts of the minde haue surpassed other men in sage aduise and wisdom, were thereupon at Rome surnamed *Cati*, and *Corculi*. In Greece, *Socrates* carried the name away from all the rest, being deemed by the Oracle of *Apollo Pythius*, the wisest man of all others.

CHAP. XXXII.

¶ Of Authoritie.

A gaine, *Chilo* the Lacedemonian was of so great reputation among men, that his sayings were held for Oracles; and three precepts of his were written in letters of gold, & consecrated in the temple of *Apollo* at Delphi: where the first was this, *Know thy selfe*: the second, *Set thy minde too much on nothing*. The third, *Debt and Law are alwaies accompanied with misery*. His hap was to die for ioy, vpon tidings that his son wan the best prize, and was crowned victour at the solemne game Olympia; and when he should be interred, all Greece did him honour, and solemnized his Funerals.

CHAP. XXXIII.

¶ Persons of a diuine spirit and heavenly nature.

A mong women, *Sybill* was excellent at diuination, and for a certaine fellowship and societie with coelestiall wights, of great name. As for men, among the Greeks, *Melampus*: and with vs Romans, *Martius*, carried as great an opinion.

CHAP. XXXIV.

¶ *Scipio Nasica*.

E *Scipio Nasica* was iudged once by the Senat (sworne to speak without passion and affection) to be the best & honestest man that euer was from the beginning of the world: howbeit the same man, as vpright as he was, suffered a repulse and disgrace at the peoples hands in his white Robe when he sued for a dignity; and to conclude, in the end his hap was not to depart this life in his owne countrey; no more than it was the will of God that *Socrates* the wisest man (so deemed by the Oracle of *Apollo*) should die out of prison.

CHAP. XXXV.

¶ Of Chastitie.

S *Plpitia*, daughter of *Paterculus*, and wife to *Fulvius Flaccus*, by al the voices in general of Roman dames, carried away the prize for continencie, and was elected out of the hundred principall matrons of Rome to dedicate and consecrate the image of *Venus*, according to

and ordinance out of *Sybilis* bookes. *Claudia* likewise, was by a religious and deuout experient proued to be such another, at what time as she brought the mother of the gods, *Cybele* to Rome.

CHAP. XXXVI.
Of Pietie or kindenesse.

IN all parts verily of the world, there haue been found infinite examples of naturall loue and affection, but one example thereof at Rome hath been knowne singular about all others, and incomparable. There was a poore young woman of the common sort, and therefore base and of no account, who lately had been in childbed, whose mother was condemned to perpetuall prison, and there lay, for some great offence that she had committed: this daughter of hers and young nourse aforesaid, obtained leaue to haue acceffe vnto her mother, and euermore by the gaoler was narrowly searched for bringing to her any victuall, because her iudgment was to be famished to death: thus she went and came so long, vntill at last she was found suckling of her mother with the milke of her breasts. This was reputed for such a strange and wondrous example, that the mother was releas'd and given to the daughter for her rare pietie and kindnes: both of them had a pension out of the city allowed them for their amaintenance for euer; and the place where this hapned was consecrated to *Pietie*: in so much, as when *C. Quintius* and *M. Acilius* were Consuls, there was a temple to her built, in the very place where this prison stood, iust whereas now standeth the Theatre of *Marcellus*. The father of the *Gracchi* happened to light vpon and take two serpents within his house, whereupon he sent out to the Sooth-sayers for to know, what this thing might presage: who made this answer, That if he would himselfe liue, the female snake should be killed; Nay marry (qd. he) not so, but rather kill the male; for my wife *Cornelia* is yong enough, and may haue more children. This said he, meaning to spare his wifes life, in consideration of the good she might do to the common-weale. And in truth; like as the wizards prophesied, so it fell out soone after, and their words tooke effect. *M. Lepidus* so entirely loued his wife *Apuleia*, that he died for very thought and griefe of heart, after shee was diuorced from him and turned away. *P. Rutilius* chanced to be somewhat ill at ease and sickish, but hearing of his brothers repulse, and that hee was put by his Consulship (for which he stood in suit) died suddenly for sorrow. *P. Catiens Philotimus* so loued his Lord and master, that notwithstanding he was by him made his sole heire of all that euer he had, yet for kind heart, cast himselfe into the funerall fire to be burnt with him.

CHAP. XXXVII.

Of diuers excellent men in many Arts and Sciences, and namely in Astrologie, Grammer, and Geometrie.

IN the skill and knowledge of sundry Sciences, an infinit number of men haue excelled; howbeit, we wil but take the very floure of them all, and touch those only whom meet it is to be named for their speciall desert. In Astrologie, *Berosus* was most cunning; in so much as the Atheniens for his diuine predictions and prognostications, caused his statue with a golden tongue, to be erected in the publicke schoole of their Vniuersitie. For Grammer, *Apollodorus* was singular, and therefore was highly honored of the States of Greece, called Amphictyones. In Physicke, *Hippocrates* excelled, so far forth as by his skill hee foretold of a pestilence that should come out of Sclauonia; and for to cure and remedie the same, sent forth his disciples and schollers to all the cities about. In recompence of which good desert of his, all Greece by a publick decree ordained for him the like honors, as vnto *Hercules*. For the very same cunning and science, king *Ptolome* gaue vnto *Cleombrotus* of Cea (at the solemne feast holden in the honour of the great mother of the gods) a hundred talents, and namely for curing the king *Antiochus*. *Critobulus* likewise acquired and got himselfe a great name, for drawing an arrow forth of king *Philips* eie, and curing the wound when he had don, so as the sight remained, & no blemish or deformity appeared. But *Asclepiades* the Prusian, surpassed all others in this kind, who was the first author of that new sect which bare his name, reiect'd the embassadors, the large promises & fauors offered of *K. Mithridates*: found out the way and means to make wine wholesome and medic-

A medicinable for sicke folke: and recovered a man to his former state of health, who was caried forth vpon his biere to be buried: and lastly he attained the greatest name; for laying a wager against fortune, and pawning his credit so farre as he should not be reputed a Physitian, in case he euer were known to be sicke or any way diseased. And in truth the wager hee woon; for his hap was to liue in health vntill he was very aged, and then to fall downe from a paire of staires, and so to die suddenly. A singular testimonie of skill and cunning *M. Marcellus* gaue vnto *Archimedes* that notable Geometrician and Engineer of Syracusa, who in the saccage and rifling of that city gaue expresse commandement concerning him alone, that no violence should be done vnto him: howbeit hee will failed of his execution, by occasion of a souldier, who in that hurly-burly slew him, not knowing who he was. Much commended and praised is *Ctesiphon* of Gnosos, for his notable knowledge in Architecture, and namely for the wonderful frame of *Dianacs* Temple at Ephesus. *Philon* likewise was highly esteemed for making the Arsenall at Athens, able to receiue 1000 ships. *Ctesibius* also was much accounted of for deuising winde Instruments; and by means of certain engins to draw and send water to any place. *Dinocrates* also the enginier eternised his name for casting the plot and deuising the modell of Alexandria in Egypt, at what time as *Alexander* the great founded it. To conclude, this mighty prince and commander *Alexander* streightly forbad by expresse edict, That no man should draw his pourtrait in colours but *Apelles* the painter: that none should engraue his personage but *Pyrgoteles* the grauer: and last of all, that no workman should cast his image in brasse but *Lysippus* a Founder. In which three feats many Artisans haue excelled for their rare workmanship.

CHAP. XXXVIII.

Singular works of Artificers.

King *Attalus* cheapned one picture wrought by the *Aristides* Theban, and 100 talents for it. *Cesar* the Dictator offered to *Timomachus* eight talents for two pourtraits, to wit, of *Medea* and *Ajax*, which he meant to set vp and consecrate in the temple of *Venus Genetrix*. King *Candaules* bought of *Butarchus* a painted table, wherein was drawne the defeat and destruction of the Magnetes, which tooke vp no great roome, and weighed out the poise thereof in good gold. King *Demetrius*, surnamed *Expugnator*, [i. the conqueror and great forcer of cities] forbore to set Rhodes on fire, because he would not burne one painted table the handiwork of *Protagenes*. *Praxiteles* was innobled for a rare Imager and cutter in stone and marble: he eternised his memoriall by making one image of *Venus* for the Gnidians, so liuely, that a certaine yong man became so amorous of it, and so doted thereon, that he went beside himselfe: which piece of worke was esteemed of such worth by *Nicomedes*, that whereas the Gnidians owed him a great sum of money, he would haue taken it for full paiement of the whole debt. The statue of *Iupiter Olympius* is to be seen, and dayly commendeth the workman *Phydias*. *Iupiter* likewise *Capitolinus*, and *Diana* in Ephesus yeeld good testimonies of *Menors* cunning: and the tooles or instruments of the said workman were consecrated (for their exquisite making) vnto them in their temples, and there remaine.

CHAP. XXXIX.

Of Seruants and Slaues.

I Haue not knowne or heard to this day, of a man borne a slaue, that was prised so high as *Daphnis* the Grammarian was: for *Cn. Priscus* held him at 300700 Sesterces to *M. Scaprus* a great and principall man of Rome. Howbeit in this our age certain stage players haue gon beyond this price, and that not a little: many they were such as had bought out their freedom before, and were not then slaues. And no maruell, for we finde vpon record, that the great Actor *Roscus* in former time might yerely dispend by the stage 500000 Sesterces. Vnlesse a man desire in this place to heare of the Treasurer and purueior general of the army in Armenia for the late wars of King *Tyridates*, who was enfranchised by means of *Nero*, for 120000 Sesterces, but it was the war that cost thus much, and not the man. Like as *Sutorius Priscus* gaue vnto *Seianus* 3500 Sesterces for *Pazon* one of his gelded Eunuchs: For a man would say that this was

was more to satisfie his filthy lust, than for any special beauty to be seen in the said *Pezon*. But he tooke the vantage of the time, and went cleare away with this impious villanie: for at what time as he bought him, the city was in perplexitie and sorrow, and no man for thinking of greater affaires and troubles, had any leisure to finde fault or say a word in reproofe of such enormities.

CHAP. XL.

¶ The excellencie of Nations.

Doubtlesse it is, and past all question, that of all Nations vnder the Sun, the Romans excell and are the only men for all kinde of vertues. But to determine who is the happiest man in all the world is aboue the reach of humane wit; considering that some take contentment and repose felicitie in this thing, others in that, and euery one measureth it according to his seuerall fancy and affection: but to say a truth, and iudge aright indeed, laying aside all the glossing flatteries of fortune, and without courting her to determin this point, There is no man to be counted happy in this world. Right well it is on our side, and Fortune dealeth in exceeding fauor with vs, if we may not iustly be called vnhappy: for put case there be no other miserie and calamitie besides, yet surely a man is euer in feare lest Fortune will frowne vpon him, and do him a shrewd turne one time or other: and admit this feare once, there can be no sound happinesse and contentment in the minde. What shall I say moreouer than this, that no man is at all times wise and in his perfect wits? Would God that this were taken of most men for a Poets word only, and not a true saying indeed. But such is the vanity and folly of poore mortall men, that they flatter themselves, and are very witty to deceiue themselves, making their accounts and reckonings of good and euill fortune like to the Thracians, who by certain white and blacke stones which they cast into a certaine vessell, and there laid vp for the better proofe and triall of euery dayes fortune; and at the last day and time of their death they fall to parting these stones one from another, and telling them apart, and according to the number of the white and blacke, giue iudgement and pronounce of each ones fortune. But what say they to this, that many times it falleth out, that the day marked with a white stone, for a good day, had in it the beginning & ouerture of some great misfortune and calamitie? How many men haue seemed to fall into Fortunes lap, and entred vpon great empires and dominions, which in the end turned to their afflictions and miseries? How many haue we seen ouerthrowne, punished extremely, and brought to vtter ruine, euen by means of their owne good parts and commendable gifts? Certes these be good things & great fauors, if a man could make full account to enioy them but one houre with contentment. But thus verily stands the case, and this is the ordinary course of this world: one day is the iudge of another, and the day of death iudgeth and determineth all: and therefore there is no trust in them, neither may wee assure our selues of any. To say nothing of this, that our good fortunes are not in number equall to our bad: and say there were as many of the one as of the other, Is there any one ioy to be weighed in true ballance against the least grief and sorrow that commeth? Foolish and sortish men that we are for all our curiositie! for we reckon our daies by tale and number, whereas we should ponder and peise them by weight.

CHAP. XLI.

¶ Of the highest tipe and pitch of felicity.

Lampido the Lacedemonian Lady is the only woman that euer was knowne to haue bene daughter to a King, a Kings wife, and mother to a King. Also *Phenice* was known alone to be the daughter, sister, and mother to them that wan the victorie and carried away the best prize at the Olympian games. In one house and race of the *Curices* there were known three excellent Orators one after another by descent from the father to the son. The only family and line of the *Fabij* affoorded three Presidents of the Senat in course, one immediatly vnder another, to wit, *M. Fabius Ambustus* the father, *Fabius Rullianus* the father, *Fabius Rullianus* the son, and *Q. Fabius Gurges* the nephew.

CHAP.

CHAP. XLII.

¶ Examples of Fortunes mutabilitie.

Infinite other examples we haue of the varietie and inconstancie of Fortune: for what great ioyes to speake of, gaue she euer, but vpon some mishap or other? Again, the greatest miseries and calamities that haue bin, haue they not ensued vpon the most ioyes and contents.

CHAP. XLIII.

¶ Of one twice outlawed and out of protection: as also of *Q. Metellus* and *L. Sylla*.

Fortune preferred for 36 yeares *M. Fiduſius* a Senator, outlawed by *Sylla*: yet hapned hee afterward to be outlawed the second time; for he out-liued *Sylla*, and continued vnto the time of *Marcus Antonius*: and for certain it is knowne, that by him hee was banished and outlawed againe, for no other reason but because he had been so before time. So kind was Fortune to *P. Ventidius*, as that she would haue him to triumph alone ouer the Parthians: but shee had before time so good as played with him, when shee saw him led (being a boy) as prisoner in *Cn. Pompeius Strabo* his triumph for the defeature and ouerthrow of the *Asulan*s. Although *Massurius* testifieth, that he was so led in triumph as a slaue twice: *Cicero* saith, that hee was at first but a Mulitier, and draue mules laden with meale for the oven, to serue the campe. Many other affirme, that in his youth hee was a poore souldier, and serued as a footman in his single trouſes and grieues. Moreouer, such good fortune had *Valbus Cornelius*, as to the senior Conſull accused, yea and a Iury was impanelled to go vpon him, so as he was in danger to be whipped, vpon their verdict. Well, this mans hap for all this was to be the first Roman Conſull of Forreiners, and namely *I*landers within the main Ocean: he (I say) attained to that honor, which our forefathers denied flatly to the Latines their neighbors. Among other notable examples, *L. Fulvius* may go for one, who was Conſull of the *Tusculans* when they reuolted and rebelled against the Romans: howbeit forsaking his owne citifens, and returning to Rome, was presented by the whole people aduanced to the same honour amongst them, and he was the man alone knowne to haue triumphed in Rome ouer them whose Conſull he was, euen the same yere that he himselfe was as a Roman enemy in the field. *L. Sylla* was the only man vntill our time that challenged vnto himselfe the syname of *Felix*. But how was hee adopted as it were into this name, forsooth euen by shedding and spilling so much innocent blood of Roman citifens, and by waging war against his native country? And whereupon I pray you grounded he this happinesse of his, and had so great an opinion thereof, if this were not it, that he was able to banish, that he was able to banish, confiscate, and put to death so many thousand citifens? O false and deceitfull interpretation, dangerous, vnhappy, and pernicious euen to posteritie and the time to come! For were not they more blessed and happy, who then fortun'd to lose their liues, (whose death at this day we pity, and whom we take compassion of) than *Sylla*, whom all men at this day hateth and abhorreth? Moreouer, was not his end more cruell and horrible than the sorrow of all those that by him were outlawed, and their goods forfeit? for his owne wretched body did eat, gnaw, and consume it selfe, and bred daily and hourelly lothsome vermine to put the fame to paine and torment. And say that he dissembled all this, and would not be knowne of it; and suppose we gaue credit that last dreame of his (wherein he lay as it were dead or in a trance) vpon which he gaue out this speech, that himselfe and none but he had the glory to surmount all enuy: yet in this one thing he plainly confessed that his felicitie came short & was defectiue, in that he had not time to consecrate the Capitoll Temple. *Q. Metellus* in that funerall oration of his which he made in praise and commendation (as the maner was) of *L. Metellus* his father, gaue these laudable reports of him, that he had been the foueraigne Pontife or high-Priest of Rome, twice Conſull, Dictator, Generall of the horse, one of the fifteen Quindecemvirs deputed for diuision of lands among the souldiers and Commons: and that in the first Punicke warre he shewed many Elephants in a triumph: moreover he left in writing, that hee had accomplished ten of the greatest and best points belonging to this life: in the seeking whereof

whereof and in attaining thereunto, all the great Sages of the world spend their whole life: for (saith he) his desire was, and he thereto aimed, namely, to be a most doubty and hardy warrior, an excellent orator, a right valiant captaine and commander: also, to haue the conduct, charge, and execution of the greatest and most important affaires, to be in the highest place of honor, to be singular in wisdom, to be accounted the principall and chiefe in Senat, to come to great riches by good and lawfull means, to leaue much faire issue behind him: and to conclude, to be simply the best man of all other, and the principall person in the city. To these perfections he (and none but he since Rome was Rome) attained. Now to confute this were a long and needlesse picke of worke, considering that one only mischance checked these fauors of Fortune, and fully disproued all: for the very same *Metellus* became blinde in his old age, for hee lost his eyes in a skare-fire, at what time hee would haue saued and got away the *Palladium*, i. Image of *Minerva*, out of the temple of *Vesta*. His act I confesse was vertuous and memorable, but the event was ill for him and miserable. In regard whereof I know not how he should be called vnhappy and wretched: and yet I see not why he should be named happy and fortunate. This I must needs say in conclusion, that the people of Rome granted vnto him that priuiledge, that nener man in the world was knowne to haue, namely, to ride in his coach to the Senat house so oft as he sate at the counsell table. A great prerogatiue I confesse, and most stately, but it was allowed him for want of his eyes.

CHAP. XLIV.

¶ Of another *Metellus*.

A Sonne likewise of this *Metellus*, who gaue out those commendations aforesaid of his father, may be put in the ranke of the most rare presidents of felicitie in this world: for besides the most honorable dignities and promotions hee was aduanced vnto in his life time, and the glorious addition and surname of *Macedonicus*, which he got in Macedonia; when he was dead, there attended vpon his dead corps at his funerals to inter him, foure of his sons; the one Pretor for the time being; the other three had been Consuls in their time: & of these three, two had triumphed in Rome, and the third had been Censor. These were points, I may tell you, of great note and regard, and few men are to be found in comparisn, that can come to any one of them. And yet see! in the very prime and floure of all these honors, it fortuneed that *Catinius Labo*, surnamed *Macerio*, a Tribune or protector of the Commons (whom he before by vertue of his Censorship had displaced out of the Senat) waited his time when he returned about noone from *Mars* field, and seeing no man stirring in the market place, nor about the Capitoll, tooke him away perforce to the cliffe *Tarpeius*, with a full purpose to pitch him downe headlong from thence and to breake his necke. A number came running about him, of that crue and company which was wont to salute him by the name of Father; but not so soone as such a case required, considering this so sudden an occurrent: and when they were come, went but slowly about any rescue, and kept a soft pace, as if they had waited vpon some corps to a buriall; and to make resistance and withstand perforce the Tribune, armed as he was with his sacrosanct and inuolable authoritie, they had no warrant by Law: insomuch as hee was like to haue perished and come to a present mischance, euen for his vertue, and faithfull execution of his Censorship, had there not been one Tribune of ten found, hardly and with much adoe to step between and oppose himselfe against his Colleague, and so by good hap rescued him out of his clutches, and saued him as it were at the very pits brinke, enen from the vtter point of death. And yet he liued afterwards of the courtesie and liberality of other men: for why, All his goods from that day forward were seised as forfeit and confiscate, by that Tribune whom before time he had condemned: as if hee had not suffered punishment and sorrow enough at his hands, to haue his necke so wrythed by him, as that the blood issued out at his very eares. Certes for mine owne part I would reckon this for one of his crosses and calamities, That hee was an enemy to the later *Africanus Emilianus*, euen by the testimonie and confession of *Macedonicus* himselfe: for after the death of the said *Africanus*, these were his words vnto his owne sonnes; Go your waies sirs and do honour to his Obsequies, for the funerall of a greater perennage, and a better Citisen, shall you neuer see. And this spake he to them when as they had conquered *Creta* and the *Balear Islands*, and thereof were surnamed *Creticus* and *Balearicus*, and

A and had worne the lawrell diadem in triumph; being himselfe already entituled with the stile of *Macedonicus*, for the conquest of Macedonia. But if we consider and weigh that onely wrong and iniurie offered him by the Tribune, who is it that can iustly deeme him happy, being exposed as he was to the pleasure, mercy, and force of his enemy, far inferior to *Africanus*, and so to come to confusion? What were all his victories to this one disgrace? what honors and triumphant chariots strooke nor Fortune downe with her foot, and ouerturned all againe, or at least wife set not back again with this her violent course, suffering a Roman Censor to be haled and tugged in the very heart of the city (the only way indeed to bring him to his death) to be harried I say vp to that capitoll hill there to make his end, whither aforetime hee ascended triumphant, but neuer committed that outrage vpon those prisoners and captiues whom hee lead in triumph, and for whose spoiles he triumphed, as to hale and pull them in that rude sort? And verily the greater was this outrage, and seemed the more heinous, in regard of the felicity that afterward ensued: considering, that this *Macedonicus* was in danger to haue lost so great an honor as he had in his sollemne and stately sepulture, namely when he was caried forth to his funerall fire by his triumphant children, as if he had triumphed once again at his buriall. In sum, that can be no sound and assured felicitie that is interrupted with any indignitie or disgrace whatsoeuer: much lesse by such an one as this was. To conclude, I wot not well whether there be more cause to glory for the modest carriage of men in those daies, or to grieue at the indignitie of the thing, in that among so many *Metelli* as there were, so audacious a villanie as this was of *Catinius* was neuer reuenged vnto this day.

CHAP. XLV.

¶ Of *Augustus Caesar* late Emperor.

As touching the late Emperor *Augustus*, whom all the world rangeth in this ranke of men fortunat: if we consider the whole course of his life we shall find the wheele to haue turned often, and perceiue many changes of variable fortune. First, his owne vnclie by the mothers side put him by the Generalship of the horse, and notwithstanding all his earnest suit preferred *Lepidus* to that place before him: secondly, he was noted and thought hardly of for those outlawries of Roman citizens, and thereby purchased himselfe much hatred and displeasure: tainted also he was for being one of those three in the Triumvirate, yoked and marched with wicked companions and most dangerous members to the weal publique: and this galled him the more, that in this fellowship, the Roman empire was not equally and indifferently parted among them three, but *Antonie* went away with the greatest share by odds. Also his ill fortune was in the battell before *Philippus* to fall sicke, to take his flight, and for three daies, diseased as he was, to lurke and lie hidden within a marish: whereupon (as *Agrippa* and *Mecenas* confesse) he grew into a kinde of dropsie, so as his belly and sides were puffed vp and swelled with a waterish humor, gotten and spread betwixt the flesh and the skin. Furthermore, he suffered shipwreke in Sicily, and there likewise he was glad to skulk within a caue in the ground. What should I say, how when he was put to flight at sea, and the whole power of his enemies at his heeles, he besought *Proculus* in that great danger to rid him out of his life: how he was perplexed for the quarrels and contentions at *Perusium*: in what feare and agonie hee was in the battell of *Actium* (a towne of *Albanie*) as also for the issue of the Pannonian warre, for the fall of a bridge and a towne both. So many mutinies among his soldiers; so many dangerous diseases: the iealousie and suspicion that he had euermore of *Marcellus*: the reproch & shame he sustained for confining and banishing *Agrippa*: his life so many times laid for by poison and other secret traines: the death of his children, suspected to haue bin by indirect meanes: the double sorrow and grief of heart thereby, and not altogether for his childlesse estate. The adulterie of his owne daughter, and her purpose of taking his life away, detected and published to the World: the reprochfull departure and slipping aside of *Nero* the sonne of his Wife: another adulterie committed by one of his owne Nieces.ouer and aboue all this, thus many more crosses and troubles comming one in the necke of another: namely, want of pay for his souldiers, the rebellion of *Sclauonia*, the mustering of slaues and bond seruants to make vp his army, for want of other able youths to leuy vnto the warres: Pestilence in Rome Citie: famine and drought vniuersally throughout Italy: and that which more is, a deliberat purpose

and resolution of his to famish and pine himselfe to death, hauing to that end fasted 4 dayes and 4 nights; and in that time receiued into his body the greater part of his owne death. Besides, the ouerthrow and rout of *Varius* his forces, the foule staine and blemish to the touch of his honor and maiestie very neere: the putting away of *Posthumius Agrippa* after his adoption, and the misse that he had of him after his banishment: then, the suspition that hee conceived of *Fabius* for disclosing his secrets: adde hereto the opinion and conceit he tooke of his owne wife and *Tiberius*, which surpassed all his other cares. To conclude, that god, and he who I wot not whether obtained heauen, or deferred it more, departed this life, and left behinde him as heire to the crowne his enemies sonne.

CHAP. XLVI.

¶ Whom the gods iudge most happy.

I Cannot ouerpasse in this discourse and consideration the Oracles of Delphos, deliuered from that heauenly god to chaastise and repress as it were the folly and vanitie of men: and two there be which giue answer to the point in question after this manner: First, that *Phedrus*, who but a while before died in the seruice of his countrey, was most happy. Moreouer, *Gyges* (the most puissant king in those daies of all the earth) sent a second time to know of the Oracle, who was the happiest man next him: and answer was made, That *Aglans Psophidius* was happier than the former. Now this *Aglans* was a good honest man well steeped in yeares, dwelling in a very narrow corner of Arcadia, where he had a little house and land of his own, sufficient with the yearely commodities thereof to maintaine him plentifully with ease, out of which hee neuer went, but employed himselfe in the tillage and husbandry thereof, to make the best benefit he could: in such sort that (as it appeared by that course of life) as he coueted least, so he felt as little trouble and aduersitie while he liued.

CHAP. XLVII.

¶ Who was canonised a god here vpon earth liuing.

BY the ordinance and appointment of the same Oracle, as also by the ascent and approbation of *Iupiter* the foueraigne god, *Enthyus* the famous wrestler (who alwaies wan the best prize at Olympia saue once) was reputed and consecrated a god while he liued, and knew thereof: born he was at Locri in Italy, where one statue of his, as also another at Olympia, were both in one day stricken with lightning: whereat I see *Callimachus* wondred, as if nothing else were worthy admiration, and gaue order that he should be sacrificed vnto as a god: which was performed accordingly both while he liued, and after hee was dead. A thing that I maruell more at than any thing else, That the gods were therewith contented, and would permit such a dishonour to their maiestie.

CHAP. XLVIII.

¶ Of the longest liues.

THE terme and length of mans life is vncertaine, not only by reason of the diuersity of climates, but also because Historians haue deliuered such varietie of mens ages, and euerie man by himselfe hath a seuerall time limited vnto him at the very day of his birth. *Hesiod* (the first writer, as I take it, who hath treated of this argument, and yet like a Poet) in his fabulous discourse touching the age of man faith forsooth, that a crow liues nine times as long as we; and harts or stags 4 times as long as hee, but Rauens thrice as long as they. As for his other reports touching the Nymphs and the bird Phoenix, they are more like poeticall tales, than true relations. *Anacreon* the Poet maketh mention, that *Arganthionius* king of the Tartarians, liued 150 yeares: and *Cynarus* likewise King of the Cyprians ten yeares longer. *Theopompus* affirmeth, that *Epimenides* the Gnosian died when he was 157 yeares old. *Hellanicus* hath written, That amongst the Epians in *Ætolia* there be some that continue full two hundred yeares: and with him accordeth *Damastes*: adding moreouer, that there was one *Pictoreus* among them, a man of exceeding stature, mighty and strong withall, who liued three hundred yeares.

Ephorus

A *Ephorus* testifieth, that ordinarily the kings of Arcadia were 300 yeares old ere they died. *Alexander Cornelius* writeth of one *Dando* a Sclauonian, who liued 500 yeares. *Xenophon* in his treatise of old age, makes mention of a King of the Latines, or as some say, ouer a people vpon the sea coasts, who liued 600 yeares; and because he had not liued loud enough already, he goes on still and faith, that his son came to 800. All these strange reports proceed from the ignorance of the times past, and for want of knowledge how they made their account; for some reckoned the Summer for one yeare, and the Winter for another. There were againe that reckoned euery quarter for a yeare, as the Arcadians, whose yeare was but three moneths. Ye shall haue some, and namely the Egyptians, that count euery change or new Moon for a yeare: and therefore no maruell if some of them are said to liue 1000 yeares. But to passe from these vncertainties, to things confessed and doubtlesse. Held it is in maner for a certain truth, that *Arganthionius* King of Calis reigned full 80 yeares, and it is thought he was 40 yeares old when he came vnto the crowne. And as vndoubted true it is, that *Masanis* sawe the crown 60 yeares. As also that *Gorgias* the Sicilian liued vntill he was 108 yeares old. As for *Q. Fabius Maximus* (a Roman) hee continued Augure 63 yeares. *M. Perpenna*, and of late daies *L. Volusius Saturninus*, out liued all those Senators which sate in counsell with them when they were Consuls, and whose opinions they were wont to aske. As for *Perpenna*, when hee died, hee left but 7 of those Senators aliue, whom he had either chosen or re-elected in his Censorship: and he liued himselfe 98 yeares. Where by the way one thing commeth into my mind worth the noting, That one *Lustrum* or 5 yeares space there was, and neuer but one, in which there died not a Roman Senator, and that was from the time that *Flaccus* and *Albinus* the Censors finished their suruey, & solemnly purged the city after the order, to the comming in of the next new Censors, being from the foundation of Rome 579 yeares. *M. Valerius Corvinus* liued 100 yeares complete: between his first and sixt Consulute were 46 yeares; he tooke his seat vpon the yuorie chaire of estate, and was created a magistrate Curule 21 times; and no man else so often. *Marcus* the Pontife or foueraigne priest liued full as long as he.

To come now to women: *Liuis* the wife of *Rutilius* liued 97 yeares with the better. *Statilia* a noble lady of Rome, in the time of *Claudius* the Emperor, was knowne to be 99 yeares of age. *Ciceroes* wife *Terentia* out-liued her husband vntill she was 103 yeares old. *Clodia* wife to *Ostius*, went beyond her, and saw 115 yeares, & yet she had in her youth 15 children. *Luceia* a common vice in a play, followed the stage and acted thereupon 100 yeares. Such another vice that plaid the foole & made sport between whiles in interludes, named *Galaria Copiola*, was brought again ro act her feats vpon the stage, when *Cn. Pompeius* and *Q. Sulpitius* were Consuls, at the solemn plaies vowed for the health of *Aug. Cesar* the Emperor, in the 104 yere of her age: the first time that euer she entred the stage, to shew proofe of her skill in that profession, was 91 yeares before, and then she was brought thither by *M. Pomponius* an *Ædile* of the Commons, in the yere that *C. Marius* and *Cn. Carbo* were Consuls. And once again *Pompeius* the Great, at the solemn dedication of his stately Theatre, trained the old woman to the stage for to make a shew, to the wonder of the world. Moreouer, *Africanus Padianus* is mine Author, that one *Samula* liued 110 yeares; and therefore I maruell the lesse, that one *Stephanio* (who was the first of the long robe that brought dancing and footing vpon the stage) plaid his part & danced in both the Secular plaies, as well those that were set out by *Augustus* late Emperor, as which *Claudius* exhibited in his 4 Consulute, considering that between the one and the other there were but 63 yeares: and yet liued *Stephanio* many a day after. *Mutianus* witnesseth, that in *Tempsis* (for so is the crest or pitch of the mountain *Tmolus* called) folke liued ordinarily 150 yeares. At that age *T. Fullo* of Bononia entred his name into the Subsidie book, at the time that *Cl. Cesar* held the generall tax: and that he was so old indeed, appeared truly as wel vpon record in the registers office, by conferring and laying together feuerall payments by him made from time to time, as also by certain things he had seen and known done in his life time (for the Emperor had a speciall care and regard, that way to find out the truth.)

CHAP. XLIX. Of diuers Horoscopes or Natiuities of men.

THIS point would require the conference and aduice of Astrologers: for *Epigenes* saith, it is not possible for a man to liue 122 yeares: and *Berosus* is of opinion, that one cannot passe 117. The proportion and reckoning holdeth still for good, which *Petofirus* and *Nesepsis* calcula-

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calculated and grounded vpon their Quadrant, which they call *Tetartemorion*, that is to say, the compasse in the Zodiaque of three signes: Orientall, which determine of the life or death of men, according to which account it is euident, that in the tract or clymat of Italy men may reach to 126. yeares. The aboue-named Astrologers affirmed, that a man could not possibly passe the space of 90 degrees from the Ascendent or erection of his natiuitie (which they call *Anaphoras*) and that euen this course through the degrees of three signes, is many times interrupted and cut short, either by the opposition and encounter of some wicked planets, or by the maligne aspects of them or the Sun. On the other side, *Asclepiades* and his sect affirme, that the length of our life proceedeth from the influence of the [fixed] stars: but as touching the utmost terme thereof they set downe nothing definitiue: many thus much they say, That the fewest sort of men liue any long time; for that the greatest number by far haue their natiuitie incident and liable to the dangerous houres and time, either of the moones occurrence (as in her Quadrature, Opposition, and Sextile aspect) or of daies according to the number of seuen or nine (which are daily and nightly marked and obserued): whereupon ensueth the rule of the dangerous graduall yeares, called *Clymaactericke*: and such as are in that wise borne, lightly liue not aboue 54 yeares. And here we may see by the doubtfulness and incertitude of this science of Astrologie, how vncertain this whole matter is which we haue in hand. Moreover, we found the contrarie by experience and many examples; and namely in the last taxation, numbring, and review of the prouinces subiect to Rome within Italy, that was taken vnder the *Cæsars Vespasians*, the father and the sonne, both Emperors and Censors. And here we need not to search euery corner, and to ransacke euery place very narrowly; we will onely giue instance and set downe the examples of the one moiety thereof, namely that tract which lieth betwene Apennine and the Po. At Parma three men were found that liued fixe score yeares: at Brixels, one that liued 125 yeares: at Plaisance one elder by a yeare: at Faventia there was one woman 132 yeares old: at Bononie, *L. Terentius* the sonne of *Marcus*; and at Ariminum, *M. Aponius*, reckoned each of them 150 yeares. *Tertullus* was knowne to be 137 yeares old. About Plaisance there is a towne situate vpon the hills, named *Velleiacium*, wherein six men brought a certificate, that they had liued an hundred yeares apiece: foure likewise came in with a note of an hundred and twenty yeares: one, of an hundred and fourteene, namely *M. Mutius*, son of *Marcus*, named *Galerius felix*. But because we will not dwell long in a matter so euident and commonly confessed: in the review taken of the eighth region of Italy, there were found in the rolle 54 persons of an hundred yeares of age: 57 of an hundred and ten: two, of 125: foure of 130: as many that were 135 or 137 yeares old: and last of all, three men of an hundred and fortie. But let vs leaue these ages, and consider awhile another inconstant variety in the nature of mortall men: *Homer* reporteth, that *Helior* and *Polydamas* were borne both in one night, men so different in nature and qualitie. Whiles *C. Marius* was Consul, and *Cn. Carbo* with him, who had been twice before Consul, the fifth day before the calends of Iune, *M. Cæcilius Rufus* and *C. Licinius Calvus* were borne vpon a day, and both of them verily proued great Orators: but they sped not alike, but mightily differed one from another in the end. And this is a thing seen daily to happen throughout the World, considering that in one houre kings and beggars are borne, likewise lords and slaues.

CHAP. L.

¶ Sundry examples of diuers Diseases.

P^{vb.} *Cornelius Rufus*, who was Consul together with *M. Curius*, dreamed that he had lost his sight, and it proued true indeed, for in his sleep he became blind & neuer saw again. Contrariwise *Phalerus*, [or *Iason Phereus*] being giuen ouer by the Physicians for an impostume he had in his chest, in dispaire of all health (purposing to kill himselfe for to be rid out of his paine) Rabbed his breast with a knife: but he found this deadly enemy to be his onely Physitian. *Q. Fabius Maximus* being long sicke of a quartane Ague, stricke a battell with the People of Saouy and Auvergne neere the riuier Isara, vpon the sixth day before the Ides of August, wherein

- A** wherein he slew of his enemies 13000, and therewith was deliuered from his feuer, and neuer had it after. Certes this gift of life that we haue from nature, be it more or lesse, is fraile & vncertain; and say that it be giuen to any in largest measure, it is but scant yet, and very short, yea and of but small vse, if wee consider the whole course thereof from the beginning to the end. For first, if we count our repose and sleep in the night season, a man can be truly said to liue but halfe his life; for surely a good moiety and halfe deale thereof which is spent in sleeping, may be likened well to death: and if he cannot sleep, it is a pain of all pains, and a very punishment. I reckon not in this place the yeares of our infancie, which age is void of reason and sense; ne yet of old age, which the longer it continueth, the more are they plagued that be in it. What should I speake of so many kindes of dangers, so many diseases, so many feares, so many persue cares, so many prayers for death, as that in maner we pray for nothing oftner? In which regards how can a man be said to liue the while? and therefore Nature knoweth not what better thing to giue a man than short life. First and formost, the senses wax dull, the members and limmes grow benumbed, the eye sight decayeth betimes, the hearing followeth soone after, then faile the supporters, the teeth also and the very instruments that serue for our food and nourishment: and yet forsooth all this time so full of griefe & infirmities is counted a part of our life. Hereupon it is taken for a miraculous example, and that to which again we cannot find a fellow, that *Xenophilus* the musitian liued 105 yeares, without any sickness or defect in all his body. For all other men, beleue me, are vexed at certain houres (like as no other creatures besides) with the pestiferous heats and shaking colds of the feuer in euery ioynt, sinew, and muscle of the body, which go and come, keeping their times in their feuerall fits, not for certain houres in the day only, but from one day to another, and from night to night; one while euery third day or night, otherwhiles euery fourth, yea and somtime a whole yeare together. Moreover, what is it but a very disease, to know the time and houre of a mans death, and so to die forsooth in wise dome? For maladies there be in which Nature hath set down certain rules and lawes: namely a quartane feuer neuer lightly begins in the shortest daies of the yeare, neither in the 3 moneths of winter [to wit, December, Ianuarie, Februarie.] Some diseases are not incident to those that are about 60 yeares of age: others againe do end and passe away when youths begin to be undergrowne, and especially this is obserued in young maidens. Moreover, old folke of all other are least subiect to take the plague. Furthermore, sicknesses there be that follow this region or that, assailing and infecting the inhabitants generally therein. There be some againe that surpris and take hold of seruants only, both all and some: others touch the best persons alone of the highest calling, and so from degree to degree. But in this place obserued usually it is by experience, That a pestilence beginning in the South parts, goeth alwaies towards the West, and neuer lightly but in winter, neither continueth it about three moneths.

CHAP. LI.

¶ Of the signes of death.

- E****N**ow let vs take a view of deadly tokens in sickness: in rage and furious madnesse, to laugh is a mortall signe: in frenzie, wherein men are bestraght of their right wits, to take care of the skirts, fringes, and welts of their garments, that they be in good order; to keepe a fumbling and pleiting of the bed-clothes, the neglect of such things as would trouble them in their sleepe, and breake it: the voluntarie letting go of their water; prognosticate death. A man may see death also in the eyes and nose most certainly of all other parts: as also in the manner of lying, as namely when the patient lieth alwaies on his backe with his face vpward. We gather signes also by the vneuen stroke of the arterie; as also when the pulse beateth so vnder the physicians hand as if he felt an ant creeping vnder it. Other signes also there be, which *Hippocrates* the prince and chief of all Physicians hath very wel obserued and set downe. Now whereas there be an infinite number of signes that presage death; there is not one knowne than can assure a man certainly of life and health. For *Cato* that famous Censor, writing to his sonne as touching this argement, hath deliuered, as it were out of an Oracle, That there is an obseruation of death to be collected euen in them that are in the most perfect health: for (saith hee) youth resembling age, is a certaine signe of vntimely death or short life. As for diseases, they

are so innumerable, that *Pherecydes* of the Island *Syros* died of a great quantity of Lice that came crawling out of his body. Some are knowne to be neuer free from the Ague, as *C. Metanas*. The same man for three yeares before hee died neuer laid his cies together for sleepe a minute of an houre. *Antipater Sidonius* the Poet, once a yeare during his life had an ague fit vpon his birth day: he liued for all that to be an old man, and vpon the day of his natiuitie died in such a fit.

CHAP. LII.

¶ Of such as were carried forth vpon the Biers to be buried, and reuiued againe.

A *Viola*, one that had bin Confull, came againe to himselfe when he was cast or put into the funerall fire to be burnt: but because the flame was so strong that no man could come neere to recouer him, he was burnt quicke. The like accident befell to *Lu. Lamia*, Pretor lately before. As for *C. Atilius Tubero*, that he was brought aliue againe from the like fire, after he had bin Pretor of Rome, both *Messala Rufus* and many besides constantly affirme. See how it goeth with mortall men: see, I say, our vncertaine state and condition, and how we are born, exposed, and subiect to these and such like occasions of fortune: insomuch as in the case of man there is no assurance at all, no not in his death. We reade in Chronicles, that the ghost of *Hermotimus Clazomenius* was wont vsually to abandon his body for a time, and wandering vp and downe into far countries, vsed to bring him newes from remote places, of such things as could not possibly be knowne vnlesse it had bin present there: and all the while his body lay as halfe dead, in a trance. This manner it continued so long, vntill the *Cantharidæ*, who were his mortall enemies, tooke his body vpon a time in that extasie, and burnt it to ashes; and by that means disappointed his poore soule when it came backe againe, of that sheath, as it were, or case where she meant to bestow her selfe. Moreouer, we finde in records, that the spirit or ghost of *Aristæus* in the Island *Proconessus*, was seen evidently to fly out of his mouth in forme of a Raven; and many a like tale followeth thereupon. For surely I take it to be no better than a fable, which is in like manner reported of *Epimenides* the Gnosian, namely, that when he was a boy, he being for heate and trauell in his iourney all wearie, laid him downe in a certain caue, where he slept 57 yeares. At length he wakened as it were vpon the next morning, and wondred at such a sudden change of euery thing he saw in the world, as if hee had taken but one nights sleepe. Hereupon, forsooth, in as many daies after as he slept yeares, he waxed old. Howbeit he liued in all 175 yeares. But to returne to our former discourse, women of all others by reason of their sex are most subiect to this danger, to be reputed for dead when there is life in them: and namely because of the disease of the matrice called the rising of the Mother: which if it be brought againe, and ferled streight in the place, they soone recouer and take breath againe. Not impertinent to this treatise is that notable and elegant booke among the Greeks compiled by *Heraclides*, where he writeth of a woman that for a seuen night lay for dead, and fetched not her breath sensibly, who in the end was raised againe to life. Moreouer *Varro* reporteth, that vpon a timewhen the twenty deputy Commissioners were diuiding lands in the territory of *Capua*, there was one there carried forth vpon his bier to be burnt, and came home againe vpon his feet. Also, that the like hapned at *Aquinum*. Likewise, that in Rome one *Corfidius*, who had married his owne Aunt by the mothers side, after he had taken order for his funeralls, and set out a certaine allowance therefore, seemed to yeeld vp his ghost and die: howbeit hee reuiued againe, and it was his chance to carry him forth indeed vnto buriall, who had provided the furniture before for his funerall. This *Varro* writeth besides of other miraculous matters, which verily are worth the rehearfall at large. One of them is this: Two brethren there were, by birth and calling gentlemen of Rome; whereof the elder, named *Corfidius*, hapned in all appearance to die: and when his last will and testament was once opened and published, the younger brother (who was his heire) was very busie and ready to set forward his funerall. In the mean time the man who seemed dead fell to clap one hand against another, and therewith raised the seruants in the house: when they were come about him, he recounted vnto them, that he was come from his younger brother, who had recommended his daughter to his tuition and guardenage: and moreouer, had shewed and declared vnto him, in what place he had secretly hidden certain gold

A gold vnder the ground, without the priuity of any man; requesting him withal to imploy that funerall prouision which he had prepared for him, about his own buriall and sepulture. As he was relating this matter, his brothers seruitors came in great hast to this elder brothers house; and brought word their master was departed this life: and the treasure before-said was found in the place accordingly. And verily there is nothing more common in our daily speech, than of these diuinations; but they are not to be weighed in equall ballance with these, nor to be reported or credited all so confidently, forsomuch as for the most part they are mere lies, as we will proue by one notable example. In the Sicilian voiage it fortuneth that *Gabienus*, one of the brauest seruitors that *Cæsar* had at sea, was taken prisoner by *Sex. Pompeius*, and by commandement from him his head was stricken off in a manner, and scarce hung to the neck by the skin, and so lay he all day long vpon the sands in the shore. When it grew toward euening, and that a great companie were flocked about him, he fetched a great groane, and requested that *Pompeius* would come vnto him, or at leastwise send some one of his deare familiars that were neere vnto him. And why? Come I am (quoth he) from the infernal spirits beneath, and haue a message to deliuer vnto him. Then *Pompeius* sent diuers of his friends to the man, vnto whom *Gabienus* related in this manner: That the infernal gods were well pleased with the iust quarrell, and cause of *Pompeius*, and therefore he should haue as good issue therof as he could wish. This, quoth he, was I charged and commanded to deliuer. And for a better prooffe of the truth in effect, so soon as I haue done mine errand I shall forthwith yeeld vp the ghost. And so it hapned indeed. Histories also make mention of them that haue appeared after they were committed to earth: But our purpose is to write of Natures works, and not to prosecute such miraculous end prodigious matters.

CHAP. LIII.

¶ Of sudden Deaths.

A S for sudden death, that is to say, the greatest felicitie and happines that can befall man, many examples wee haue thereof that alwaies seeme strange and maruellous; howbeit they are common. *Verrius* hath set forth a number of them, but I will keepe within a meane, and make choice of them all. Besides *Chilon* the Lacedemonian, of whom we spake before, the died suddenly for very ioy, *Sophocles* the poet, and *Demis* a king or tyran of Sicily: both of them vpon tydings brought vnto them, that they had won the best prize among the tragical Poets. Presently after that famous defeat at *Cannæ*, a mother died immediately vpon the sight of her son aliue, whom by a false messenger she heard to haue bin slain in that battell. *Diodorus* a great professed Logician, for very shame that hee could not presently assoile a friuolous question, nor answer to some demands proposed by *Stilbo*, swooned and neuer came again. Without any apparant cause at all that could be seen, diuers haue left their life: namely two of the *Cæsars*, the one Pretor for the time being, the other who had borne that dignity, the father of *Cæsar* the Dictator: both of them in the morning when they were new risen, and putting on their shooes, the one at *Pisæ*, the former at Rome. In like manner *Q. Fabius Maximus* in his very Consulship, vpon the last day of December, [which was the last also of his magistracie, had hee liued longer] in whose place *Rebilius* made sute to be Confull for a very few houres that remained of that yere. Semblably *C. Fulcinius Gurginus* a Senator. All of them in perfect health, so lustie and well liking that they thought to go forth presently, and of nothing lesse than to dy before. *Q. Amylius Lepidus*, euen as he was going out of his bed chamber, hit his great toe against the dore fill, and therewith died. *C. Aufidius* was gotten forth of his house, and as he was going to the Senat, stumbled with his foot in the Comitium or common place of assemblies, and died in the place. Moreouer, a certain Embassador of the Rhodians, who had to the great admiration of all that were present, pleaded their cause before the Senat, in the very entry of the Councill house, as he was going forth, fell downe dead and neuer spake word. *Cn. Babius Pamphilus*, who had bin Pretor, died suddenly as he was asking a boy what it was a clocke. *A. Pompeius*, so soon as he had worshipped the gods in the Capitoll, and said his Orafons, immediately died. So did *M. Inuentius Talsa* the Confull, as hee was offering sacrifice. And *Caius Scribanius Pansa*, as hee stood at a shop in the market place about eight of the clocke in the morning, leaning vpon his brother *P. Pansa* his shoulders. *Babius* the Iudge, as hee was adorning

ning the day of ones appearance in the court. *M. Terentius Corax*, whiles he was writing letters in the market place. No longer since than the very last ycare, a Knight of Rome, as hee was talking with another that had been Consul, and rounding him in the care, fell downe starke dead. And this hapned before the yorie statue of *Apollo*, which stands in the Forum of *Augustus*. But about all others it is strange, that *C. Iulius* a Surgeon should die as he was dressing of a fore eie with a salve, and drawing his instrument along the eye. What should I say of *L. Manlius Torquatus*, a man who had bin sometime Consul, whose hap was to die sitting at supper, even in reaching for a cake or wafer vpon the boord. *L. Durus Valla* the physition died whiles he was drinking a potion of mede or sweet honied wine. *Appius Aufeius* being come out of the Baine, after he had drunk a draught of honied wine, as he was supping off a rere egge died. *P. Quintius Scapula* as he was at supper in *Aquillius Gallus* his house. *Decimus Sauscius* the Scribe, as he sate at dinner in his owne house. *Cornelius Gallus*, one who had bin Lord Pretor, and *T. Aetherius* a Roman Knight, died both in the very act of *Venus*, whiles they lay vpon women. The like befell in our daies to two gentlemen of Rome, who died both as they were dealing contrary to nature with one and the same counterfeite lester named *Mithycus*, a youth in those daies of surpassing beauty. But of all others, *M. Ofilius Hilarius*, an actor and plaier in comedies, as it is reported by antient writers, died most secure of death, & with the greatest circumstances about it: for after he had much delighted the people, & made them sport to their contentment on his birth day, he kept a feast at home in his house; and when supper was set forth vpon the table, hee called for a messe of hot broth in a pottinger to drinke off; and withall casting his eye vpon the maske or visor he put on that day, fitted it for his visage, and tooke off the chaplet or garland from his bare head, and set it thereupon: in this habit, disguised as he sate, hee was starke dead and key cold before any man perceiued it: vntill he that leaned next vnto him at the boord put him in minde of his portage that it cooled, and making no answer, they found in what case he was.

These examples all be of happy deaths: but contrariwise there be an infinite number that are as miserable & vnfortunat. *L. Domitius*, a man descended of a most noble house and parentage, being vanquished by *Cesar* before *Marseils*, and taken prisoner at *Corfinium* by the same *Cesar*; for very irksomnesse of his tedious life, poisoned himselfe: but after he had drunke the poison, repented of that which he had done, and did all that euer hee could to liue still, but in vaine. We finde vpon record in the publike registers, that when *Felix* one of the carnation or flesh-coloured liuery that ranne with chariots in the great cirque or shew-place was had forth dead to be burnt, one of his fauorits and consorts flung himselfe into his funerall fire for company. A friuolous and small matter it is to speak of; but they of the other part that sided with the aduerser faction of other liueries, because this act should not turne to the honor and credit of their concurrent the actiue Chariotier about named, gaue it out and said, that this his friend and wel-willer did not do it for any loue he bare him, but that his head was intoxicate with the strong fauor of the incense and odors that were in the fire, and so being beside himselfe, wist not what he did. Not long before this chanced, *M. Lepidus*, a gentleman of Rome descended of a most noble family, who (as is aboue said) died for thought and grieve of heart that hee had diuorced his wife, was by the violent force of the flame cast forth of the funerall fire; & because of the extreme heat thereof, no man could come neere to lay his corps again in the place where it was & should be: they were faine to make another fire hard by of dry vine cuttings, and such like sticks, and so he was burnt bare and naked as he was.

CHAP. LIIII.

¶ Of Buriall or Sepulture.

To burne the bodies of the dead hath bin no antient custome among the Romans: the manner was in old time to inter them. But after they were giuen once to vnderstand, that the corpes of men slain in the wars afar off, and buried in those parts, were taken forth of the earth again, ordained it was to burne them. And yet many families kept them still to the old guise and ceremonie of committing their dead to the earth: as namely the house of the *Cornelii*, whereof there was not one by report burned before *L. Sylla* the Dictator, and he willed it expressly, and provided for it before hand, for feare himselfe should be so serued as *C. Marius* was, whose corps he caused to be digged vp after it was buried. Now in Latine he is said to be

A be *Sepultus*, that is bestowed or buried any way, it makes no matter how: but *humatus* properly, who is interred only, or committed to the earth.

CHAP. LV.

¶ Of the Ghosts, or spirits of men departed.

After men are buried, great diuersitie there is in opinion, what is become of their souls & ghosts, wandering some this way, and others that. But this is generally held, that in what estate they were before men were born, in the same they remain when they are dead. For neither body nor soule hath any more sence after our dying day, than they had before the day of our natiuitie. But such is the folly & vanitie of men, that it extendeth stil euen to the future time; yea, and in the very time of death flattereth it selfe with fond imaginations, and dreaming of I know not what life after this: for some attribute immortality to the soule: others deuise a certain transfiguration therof; & there be again who suppose, that the ghosts sequestred from the body, haue sence, whereupon they do them honour and worship, making a god of him that is not so much as a man. As if the maner of mens breathing differed from that in other liuing creatures, or as if there were not to be found many other things in the World, that liue much longer than men, and yet no man iudgeth in them the like immortality. But shew me what is the substance and body as it were of the soule by it selfe? what kind of matter is it apart from the body? where lieth her cogitation that she hath? how is her seeing, how is her hearing performed? what toucheth she? nay, what doth she at all? How is she employed? or if there be in her none of all this, what goodnesse can there be without the same? But I would know where shee seeth and hath her abiding place after her departure from the body? and what an infinit multitude of souls like shadows would there be, in so many ages, as well past as to come? how surely these be but fantastical, toolish, and childish toies, deuised by men that would faine liue alwaies, and neuer make an end. The like foolery there is in preferuing the bodies of dead men: & the vanity of *Democritus* is no lesse, who promised a resurrection thereof, and yet himselfe could neuer rise again. And what a folly is this of all follies to thinke (in a mischief) that death should be the way to a second life? what repose and rest should euer men haue that are borne of a woman, if their souls should remain in heauen aboue with sence, whiles their shadows tarried beneath among the infernall wights? Certes, these sweet inducements and pleasing persuasions, this foolish credulitie and light beliefe, marreth the benefit of the best gift of Nature, to wit, Death, it doubleth besides the paine of a man that is to die, if he happen to thinke and consider what shall betide him the time to come. For if it be sweet and pleasant to liue, what pleasure and contentment can one haue, that hath once liued, and now doth not. But how much more ease and greater securitie were it for each man to beleue himselfe in this point, to gather reasons, and to ground his resolution and assurance vpon the experience that he had before hee was borne.

CHAP. LVI.

¶ The first inuentors of diuers things.

Before we depart from this discourse of mens nature, me thinks it were meet and convenient to shew their sundry inuentions, and what each man hath deuised in this world. In the first place, prince *Bacchus* brought vp buying and selling: he it was also that deuised the diadem that royall ensigne and ornament, and the manner of triumph. Dame *Ceres* was the first that shewed the way of sowing corne, whereas before-time men liued of mast. She taught also how to grind corne, to knead dough, and make bread thereof, in the land of Attica, Italy, and Sicily; for which benefit to mankind, reputed she was a goddesse. She it was that beganne to make lawes, how soeuer others haue thought, that *Rhadamantus* was the first law giuer. As for Letters, I am of opinion, that they were in Assyria from the beginning time out of mind; but some thinke, and namely *Gellius*, that they were deuised by *Mercurie* in Egypt: but others say they came first from Syria. True it is that *Cadmus* brought with him into Greece from Phoenice to the number of sixteen, vnto which, *Palamedes* in the time of the Trojan war added foure more in these characters following, *ϕ*, *χ*, *ξ*, *ο*. And after him *Simonides Melicus* came with other foure;

four, to wit, *z. h. t. a.* the force of all which letters we acknowledge and see evidently expressed in our Latine Alphabet. *Aristotle* is rather of mind, that there were 18 letters in the Greeke Alphabet from the beginning, namely, *α. β. γ. δ. ε. ζ. η. θ. ι. κ. λ. μ. ν. ο. π. ρ. σ. τ. θ.* and that the other two *ϕ.* and *χ.* were set to by *Epicharmus*, and not by *Palamedes*. *Anticlidus* writeth, That one in Egypt named *Menon*, was the inventor of letters, fifteene yeares before the time of *Phoroneus*, the most antient king of Greece; and he goeth about to proue the same by antient records and monuments out of histories. Contrariwise, *Epigenes*, an author as renowned, and of as good credit as any other, sheweth, That among the Babylonians there were found Ephemerides containing the obseruation of the stars, for 720 yeares, written in bricks and tiles: and they that speake of least, to wit, *Berosus* and *Critodemus*, report the like for 480 yeares. Whereby it appeareth evidently, that letters were alwaies in vse, time out of mind. The first that brought the Alphabet into Latium or Italy, were the Pelasgians. *Euryalus* and *Hyperbus*, two brethren at Athens, caused the first bricke and tile-kils, yea, and houses thereof to be made: whereas before their time men dwelt in holes and caues within the ground. *Gellius* is of opinion, that *Dexius* the sonne of *Calus*, deuised the first houses that were made of earth and cley: taking his patterne from Swallows and Martins nests. *Cecrops* founded the first towne that euer was, and called it after his owne name Cecropia: which at this day is the castle or citadell in Athens. Some will haue that Argos was built before it, by king *Phoroneus*. And others againe, that Sydicne was before them both. And the Egyptians affirme, That long before that, their city Diospolis was founded. *Cinyra*, the sonne of *Agriopa* deuised tiling and slating of houses first, as also found out the brasie mines, both within the Ile Cyprus. He inuented also pinsers, hammers, yron croiues, and the Anvil or Stithe. *Danaus* sunk the first pits for wells in Greece, which then was called Argos Dipfion; & sailed out of Egypt thither, for that purpose. *Cadmus* at Thebes (or, as *Theophrastus* saith) in Phoenice, found out stone quarries first. *Thraso* was the first builder of towne walls: of towers & fortresses, the Cyclops, as *Aristotle* thinketh: but the Tyrrinthians according to *Theophrastus*. Weauing was the inuention of the Egyptians: and dying wool, of the Lydians in Sardis. *Closter* the son of *Arachne* taught the first making of the spindle for woollen yeare: and *Arachne* her selfe was the first spinner of flax thred, the weauer of linnen, and of nets. *Niceas* the Megarean deuised the fullers craft. *Boethius* shewed the art of sowing, as wel for tailors as Corviners and shoemakers. The Egyptians would haue the skill of physicke to haue bin first among them: but others affirme, That *Arabus* the son of *Babylon* & *Apollo*, was the author thereof. The first Herbarist and Apothecarie, renowned for the knowledge of simples, & composition of medicines, was *Chiron*, son of *Saturne* & *Phyllira*. *Aristotle* thinketh, that *Lydus* the Scythian taught the feat of casting and melting brasie, with the tempering also of the same: howbeit, *Theophrastus* saith it was *Delas* the Phrygian. As for the forges & furnaces of brasie, some think the Chalypes deuised, others attribute that to the Cyclopes. The discovery of the yron and steel mines, as also the working in them, was the inuention (as *Hesiodus* saith) of those in Crete, who were called Daetyli Idæi. Likewise of siluer, *Erichthonius* the Athenian beareth the name, or (after some) *Acacus*. The gold mines, together with the melting and trying thereof, *Cadmus* the Phoenician first found out neere the mountain Pangæus: but there be that giue the praise hereof to *Thoas* & *Acacis* in Panchaia: or els to *Sol* the son of *Oceanus*, to whom *Gellius* attributeth the inuention of Physick, and making hony. *Midacritus* was the first man that brought lead out of the Island Cassiteris. And the Cyclopes inuented first the yron-smiths forge. *Corabus* the Athenian deuised the potters craft, shewing how to cast earthen vessels in moulds, & bake them in furnaces. And therein, *Anacharsis* the Scythian, or after some, *Hyperbius* the Corinthian, inuented the cast of turning the roundel or globe. Carpenters art was the inuention of *Dedalus*, as also the tools thereto belonging, to wit, the saw, the chip-axe, and hatchet, the plumb line, the auger and wimble, the strong glew, as also fish-glew, and stone. Saudre. As for the rule & square, the leuell, the turners instrument, and the key, *Theodorus Samius* deuised them. *Phidon* the Argiue, or *Palamedes* as *Gellius* rather thinketh, found out measures and weights. *Pyrodes* the son of *Cilix*, deuised the way to strike fire first out of the flint, and *Prometheus*, the means to preferue & keep it in a stalke of *Ferula*, or Fennell gyant. The Phrygians inuented first the wagon & chariot with foure wheeles. As for trafficke and merchandise, the Carthaginians had the first honour thereof. *Eumolpus* the Athenian was of name for planting, pruning, and cutting vines: also for setting and grafting trees. *Staphylus* the sonne of *Silenus* taught men how to delay wine with

A with water. *Aristeus* the Athenian inuented the making of oyle oliue, as also the presse & mill thereto belonging. The same man taught the cast of drawing hony out of the combs. *Buzyges* the Athenian, or as others would haue it, *Triptolemus*, yoked oxen first for tillage of the ground, and deuised the plough. The Egyptians were the first of al men that were gouerned by the monarchy, and the Athenians, by a popular state. After the reigne of *Theseus*, the first king or tyrant was *Phalaris*, at Agrigentum in Sicily. The Lacedæmonians brought in bondage and slavery, first. The first judgement that passed for life and death, was in the court Ariopagus at Athens. The first battell that euer was fought, was between the Africanes and Egyptians, & the same performed by bastons, clubs, & coulstaues, which they call Phalangæ. Shields, bucklers, and targets were deuised by *Pratus* and *Anisus*, when they warred one against the other: or els by *Calchus* the son of *Athamas*. *Midias* of Messene made the first cuirace. And the Lacedæmonians, the mourian, the sword, and the speare. The Carians deuised the grieues, the crests, and pennaches vpon helmets. *Scythes* the son of *Iupiter*, deuised bow & arrowes: although some say that *Perfus* the son of *Perfus* inuented arrows. The Ætolians inuented the lance and the pike: the dart with a loup, *Atolus* the son of *Mars*, deuised. As for the light iauelins, and the Partuisanes, *Tyrrhenus* brought them first into vse: & *Penthesilea* the Amazon-queene, the gleiue, bill, battell-axe, and halbard. *Piscus* found out the bore-speare and chasing staffe. Among engines of artillery, the Cretes inuented the Scorpion or crosse-bow: the Syrians, the Catapult: the Phoenicians the balist or brake, and the sling. *Pyseus* the Tyrrhenian brought vp the vse of the brasen trumpet: and *Arctonon Clozomenius* of the pauois, mantlets, targuet-roofs, for the assault of cities. The engine to batter walls (called sometime the horse, and now is named the ram) was the deuise of *Epeus* at Troy. *Bellerophon* shewed first how to ride on horseback. *Pelethronius* inuented saddle, bridle, and other furniture for the horse. The Thessalians called Centaures, inhabiting neere to the mountain Pelius, were the first that fought on horseback. The Phrygians deuised first to driue and draw a chariot with two horses; *Erichthonius*, with foure. *Palamedes* inuented (during the Trojan war) the manner of setting an army in battell array: also the giuing of signall, the priue watch-word, the Corps de guard, the watch and ward. In the time of the said war, *Sinon* deuised the sentinels and watch-towers, as also the espiall. *Lycanor* was the first maker of truce. *Theseus* of leagues and alliances. *Car*, of whom Caria tooke the name, obserued first the flight and cry of birds, and thereby gaue presages and fore-tokens. *Orpheus* went farther in this skill, and tooke marks from other beasts. *Dolphus* pried into beasts inwards, and thereby foretold things to come. *Amphiarus* was the first that had knowledge in Pyromancie, & gathered signs by speculation of fire: like as *Tyresias* the Thebane, by the feeding and gesture of birds. *Amphichyon* gaue the interpretation of strange and prodigious sights, as also of dreames. *Atlas* the son of *Libya* (or as some say, the Egyptians; & as others, the Assyrians) inuented Astrology: & in that science *Anaximander* deuised the Sphere. As for the knowledge & destination of the winds *Aeolus* the son of *Hellen*, he professed it first. *Amphion* brought musicke first into the world. The flute and the single pipe or recorder were the inuentions of *Pan*, the son of *Mercurie*. The crooked cornet, *Midias* in Phrygia deuised. And in the same country, *Marsyas* inuented the double fluit. But *Amphion* taught first to sing and play to the Lydian measures: *Thamyras* the Thracian to the Dorian: and *Marsyas* of Phrygia to the Phrygian. *Amphion* likewise (or, as some say, *Orpheus*, and after others *Linus*) plaied first vpon the Citterne or the Lute. *Terpander* put seuen strings more vnto it. *Simonides* added thereto an eight: and *Timotheus* the ninth. *Thamyras* was the first that plaied vpon the stringed instrument, Lute Cittern, or harpe, without song: & *Amphion* sung withal, or according to some, *Linus*. *Terpander* was the first that set songs for the foresaid stringed instrument. And *Dardanius* the Træezenian began first vocall musicke to the pipe. The Curets taught to daunce in armour; and *Pyrrhus* the Morisk, in order of battell: and both these were taken vp first in Crete. The heroick or hexametre verse we acknowledge to haue come first from the Oracle of *Pythius Apollo*. But about the original of Poemes & Poetry, there is a great question among authors. And it is probably gathered by histories, that there were Poets before the time of this Trojan war. *Pherecides* of Syros, in the daies of king *Cyrus*, inuented first the writing in prose. *Cadmus* the Milesian wrote Chronicles, and compiled the first history; *Lycan* hath the report of setting out the first publicke games, and prouing of masteries & feats of strength of actiuiity, in Arcadia. To *Acastus* in Iolcum we are beholden for the first solemnities and games at funerals: and after him to *Theseus*, in the streights of Isthmus. *Hercules* instituted

instituted the exercise of wrestlers and champions at Olympia: and *Pythius* was the first plaier at tennis. *Gyges* the Lydian gaue the first prooue of painting and limning, in *Egypt*: but in Greece, *Busiris* a cousin of *Dadalus* was the first painter, as *Aristotle* supposeth; but after *Theophrastus*, it was *Polygnotus* the Athenian. *Danaus* was the first that sailed with a ship, and so he passed the seas from *Egypt* to Greece; for before that time they vsed but troughs or flat planks, deuised by *K. Erythra* to crosse from one Island to another in the red sea. But we meet with some writers who affirme, that the Troians and Mysians were the first sailers, and deuised nauigation before them in *Hellepont*, when they set out a voiage against the Thracians. And euen at this day in the British ocean, there be made certaine wicker boats of twigs couered with lether and stitched round about: in Nilus, of paper, cane-reed and rushes. *Philostephanus* witnesseth, that *Iason* first vsed the long ship or gally: but *Egeas* saith, that it was *Paralus*: *Ctesias* attributes it to *Samyra*; *Saphanas* to *Semyramis*: and *Archimachus*, to *Aegon*. *Damastes* testifieth, that the *Erythraians* made the Bireme or gally with two banks of oares. *Thucydides* writeth that *Aminocles* the Corinthian built the first Trireme with three rows of oars to a side. *Aristotle* saith, that the Carthaginians were the first that set to sea the Quadrireme with 4 ranks of oares to a side: and *Nesichton* the Salaminian, set afloat the first Quinquereme with 5 course of oares on either side. *Zenagoras* of Syracusa brought vp those of six; and so from it to those of ten, *Mnesigeon* was the inuenter. It is said, that *Alexander* the Great built gallies for 12 bankes to a side: and *Philostephanus* reporteth, that *Ptolema* surnamed *Soter*, rose to fifteen: *Demetrius* the son of *Antigonus*, to thirty; *Ptolome Philadelphus*, to forty: and *Ptolome Philopator* surnamed *Tryphon*, to fifty. As for ships of burthen and merchandise, as hoyes, &c. *Hippus Tyrius* inuented them. The Cyrenians made fregates; the Phoenicians, the bark; the Rhodians, the Pinace and Brigantine: and last of all the Cyprians made the hulke and great carrack. The Phoenicians were the first that in sailing, obserued the course of the stars. The Copeans deuised the oare: the Plateans inuented the broad and flat end thereof: *Icarus* the sailes: *Dadalus* the mast and the crosse saile-yard. The vessels for transporting of horses, were the inuention of the Samians, or else of *Pericles* the Athenien. The Thasij had the honour for framing the long ships couered with hatch: for before-time they fought only from out of the hin-decke in the poupe, and the fore-castle in the proe. Then came *Pisens* the Tyrrhene, and armed the stem and beake-head of the shippe with sharpe tines and pikes of brasse: *Eupalamus* deuised the anchor: *Anacharsis* made it first with two teeth or floukes: the grappling hookes and the yron hands were the deuise of *Pericles* the Athenien; and finally, *Typhis* inuented the help of the helme, for the Pilot to steere & rule the ship. The first that set out an Armada to the sea for fight was *Minos*. The first that killed beasts was *Hyperbius* the son of *Mars*: and *Prometheus* ventured to slay an ox or a Bœufe.

CHAP. LVII.

¶ Wherein appeared first the generall agreement of all Nations.

The secret consent of all countries was shewed first in this, That they should vniuersally in all places vse the Ionian letters.

CHAP. LVIII.

¶ Of Antique Letters.

The old characters of Greeke letters, were the same in manner that the Latine be in these daies; and this appeareth sufficiently by an antique table of brasse which came from the temple at Delphos, the which at this day is in the great library of the Palatium dedicated to *Minerva*, by the liberality of the Emperors, with this or such like inscription vpon it, *Ναυσιφάνης τῆς πόλεως Ἀθηναίων, ἡμετέρας, Ναυσικράτης* (the son) of *Tisamenus* an Athenien, caused this table to be made and set vp to the noble virgin *Minerva*.

CHAP. LIX.

¶ When Barbers were first scene at Rome.

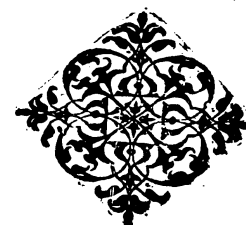
The next thing that all people of the world agreed in, was to entertain Barbers, but it was late first ere they were in any request at Rome. The first that entered Italy came out of Sicillie, and it was in the 454 yeare after the foundation of Rome. Brought in they were by

A by *P. Titinius Mena*, as *Varro* doth report; for before-time they neuer cut their haire. The first that was shauen euery day was *Scipio Africanus*; and after him commeth *Augustus* the Emperour, who euermore vsed the razor.

CHAP. LX.

¶ Of Horologies or Dials, when they were first deuised.

The third vniuersal accord of all nations, was in the obseruation how the houres went; and this was a point grounded vpon good reason: but at what time, and by whom this was deuised in Greece, we haue declared in the second booke of this work; & long it was before this order came vp at Rome, as well as the vse of the Barber. In the 12 tables of Romane lawes, there is no mention at all made but of East and West; after certain yeres the noon-stead point in the South quarter also was obserued, and the Consuls bedle or crier pronounced noon, when standing at the hall or chamber of the councill, he beheld the Sun in that wise betwene the pulpit called *Rostra*, and the *Grecostasis* which was a place where forein embassadours gaue their attendance: but when that the same sun inclined downward from the column named *Mœnia*, to the common gaole or prison, then he gaue warning of the last quarter of the day, and so pronounced. But this obseruation would serue but vpon cleere daies, when the sun shined: and yet there was no other means to know how the day went, vntill the first Punicke war. *Fabius Vellatilis* writeth, that *L. Papyrius Cursor*, 12 yeres before the war with *Pyrrhus*, was the first, that for to do the Romans a pleasure, set vp a sun-dyall to know what it was a clocke, vpon the temple of *Quirinus* at the dedication thereof, when his father had vowed it before him. Howbeit mine author sheweth not either the reason of the making of that diall, or the workman; ne yet from whence it was brought, nor in what writer he found it so written. *M. Varro* reporteth, that the first diall was set vp in the common market place, vpon a columne neere the foresaid *Rostra*, in the time of the first Punicke war, by *M. Valerius Messala* the Consull, presently after the taking of Catana in Sicily; from whence it was brought; thirty yeares after the report that goeth of the foresaid quadrant and diall of *Papyrius*; namely, in the yeare after the foundation of the city 477. And albeit the strokes and lines of this Horologe or diall agreed not fit with the houres, yet were the people ruled and went by it for an hundred yeares saue one, euen vntill *Q. Martius Philippus* (who together with *L. Papius* was Censor) set another by it, framed & made more exquisitly according to Art. And this piece of work among other good acts done by the Censor during his office, was highly accepted of the people as a singular gift of his. Yet for all this, if it were a close and cloudy day wherein the Sun shone not out, men knew not what it was a clocke certainly; and thus it continued fve yeres more. Then at last, *Scipio Nasica* being Censor with *Lenas*, made the deuise first to diuide the houres both of day and night equally, by water, distilling and dropping out one vessell into another. And this manner of Horologe or water-clocke, he dedicated in the end within house, and that was in the 595 yere from the building of Rome. Thus you see how long it was, that the people of Rome could not certainly tell how the day passed. Thus much concerning the Nature of man: let vs returne now to discourse of other liuing creatures; and first of land-beasts.



THE EIGHTH BOOKE OF
THE HISTORIE OF NATVRE,
WRITTEN BY C. PLINIVS
SECVNDVS.

CHAP. I.

¶ *Of landbeasts. The praise of Elephants: their wit and understanding.*



Asse we now to treat of other liuing creatures, and first of land-beasts: among which, the Elephant is the greatest, and commeth neereft in wit and capacitie, to men; for they vnderstand the language of that country wherein they are bred, they do whatsoeuer they are commanded, they remember what duties they be taught, and withall take a pleasure and delight both in loue and also in glory, nay more than all this, they embrace goodnesse, honestie, prudence, and equitie (rare qualities I may tel you to be found in men) and withall haue in religious reuerence (with a kinde of deuotion) not only the stars and planets, but the sun and moon they also worship. And in very truth, writers there be who report thus much of them, That when the new moon beginneth to appeare fresh and bright, they come downe by whole heards to a certaine riuer named Amelus, in the desarts and forests of Mauritania, where after that they are washed and solemnly purified by sprinkling and dashing themselves all ouer with the water, & haue saluted and adored after their manner that planet, they returne again into the woods & chafes, carrying before them their yong calues that be wearied and tired. Moreover, they are thought to haue a sense and vnderstanding of religion & conscience in others; for when they are to passe the seas into another country, they wil not embarke before they be induced thereto by an oath of their gouernors and rulers, That they shall returne again: and seene there haue bin diuers of them, being enfeebl'd by sicknesse (for as big and huge as they be, subject they are to grievous maladies) to lie vpon their backs, casting and flinging herbes vp toward heauen, as if they had procured and set the earth to pray for them. Now for their docility and aptnesse to learne any thing, the king they adore, they kneele before him, and offer vnto him garlands and chaplers of floures and green herbes. To conclude, the lesser sort of them, which they call Bastards, serue the Indians in good stead to eare and plough their ground.

CHAP. II.

¶ *When Elephants were put to draw first.*

The first time that euer they were knowne to draw at Rome, was in the triumph of Pompey the Great, after he had subdued Africke, for then were two of them put in geeres to his triumphant chariot. But long before that, it is said that Father Bacchus hauing conquered India, did the like when he triumphed for his conquest. Howbeit, in that triumph of Pompey, Procilius affirmeth, That coupled, as they were, two in one yoke, they could not possibly go in at the gates of Rome. In the late solemnity of tournois & sword-fight at the sharp, which Germanicus Caesar exhibited to gratifie the people, the elephants were seen to shew pastime with leaping & keeping a stir, as if they danced, after a rude and disorderly manner. A common thing it was

A was among them to sling weapons & darts in the aire so strongly, that the winds had no power against them; to flourish also before hand; yea, and to encounter and meet together in fight like sword-fencers; and to make good sport in a kinde of Moriske dance: and afterwards to go on ropes and cords: to carry (foure together) one of them laid at ease in a litter, resembling the manner of women newly brought a bed: last of all, some of them were so nimble and well practised, that they would enter into an hall or dining place where the tables were set full of guests, and passe among them so gently and daintily, weighing as it were their feet in their going, so as they would not hurt or touch any of the company as they were drinking.

CHAP. III.

¶ *The docilitie of Elephants.*

This is knowne for certaine, that vpon a time there was an Elephant among the rest, not so good of capacity, to take out his lessons, and learn that which was taught him: and being beaten and beaten again for that blockish and dull head of his, was found studying and conning those feats in the night, which he had bin learning in the day time. But one of the greatest wonders of them was this, that they could mount vp and clime against a rope, but more wonderfull, that they should slide downe again with their heads downward. Mutianus, a man who had in his time bin thrice Consul, reporteth thus much of one of them, that he had learned to make the Greeke characters, and was wont to write in that language thus much, *Thine haue I written, and made an offering of the Celicke spoiles.* Likewise hee saith, that himselfe saw at Puteoli, a certain ship discharged of Elephants embarked therein; and when they should be set ashore, and forced to go forth of the vessel, to which purpose there was a bridge made for them to passe ouer, they were affrighted at the length thereof, bearing out so far from the land into the water: and therefore to deceiue themselves, that the way might not seeme so long, went backward with their tails to the banke, and their heads toward the sea. They are ware, & know full well that their only riches (for loue of which, men lay wait for them) lieth in their armes and weapons that Nature hath giuen them: king Iuba calleth them their horns: but Herodotus, who wrote long before him, and the custome of speech, hath rearmed them much better, teeth. And therefore when they are shed and fallen off, either for age, or by some casualtie, the Elephants themselves hide them within the ground. And this in truth is the only yuory: for all the rest, yea, and these teeth also so far as lay couered within the flesh, is of no price, and taken for no better than bone. And yet of late daies, for great scarcitie & want of the right teeth, men haue bin glad to cut and saw their bones into plates, and make yvorie therof. For hardly can we now come by teeth of any bignes, vnlesse we haue them out of India. For all the rest that might be gotten in this part of the world between vs and them, hath bin imployed in superfluities only, and serued for wanton roies. You may know yong Elephants by the whiteness of these teeth: and a specjall care and regard haue these beasts of them about all. They looke to one of them alwaies, that the point be sharp, and therefore they forbear to occupie it, least it should bee blunt against they come to fight: the other they vse ordinarily, either to get vp roots out of the earth, or to cast down any banks or mures that stand in their way. When they chance to be enuironed and compassed round about with hunters, they set formost in the rank to be seen, those of the heard that haue the least teeth: to the end, that their price might not be thought worthy the hazard and venture in chafe for them. But afterwards, when they see the hunters eager, and themselves ouermatched and weary, they breake them with running against the hard trees, and leaving them behind, escape by this ranfome as it were, out of their hands.

CHAP. IIII.

¶ *The clemencie of Elephants: their foresight and knowledge of their owne dangers: also the fell fiercenesse of the Tygre.*

A Wonder it is in many of these creatures, that they should thus know wherefore they are hunted, and withall take heed & beware of all their dangers. It is said, that if an elephant chance to meet with a man wandering simply out of his way in the wilderness, hee will mildly and gently set him in the right way again. But if he perceiue a mans fresh footing, before he espie the man, he will quake and tremble for feare of being forelaid & surpris'd: he wil stay

stay from farther following the sent, look about him euery way, snuffe and puffle for very anger. Neither will he tread vpon the tract of a mans foot, but dig it out of the earth, and giue it the next Elephant vnto him, and he againe to him that followeth, and so from one to another passeth this intelligence and message as it were, to the vtmost rank behind. Then the whole heard makes a stand, and cast round about to returne backward, and withall put themselves in battell array: so long continueth that strong virulent smel of mens feet, and runneth through them all, notwithstanding for the most part they be not bare but shod. Semblably, the Tigresse also, how fierce and cruell she be to other wilde beasts, & careth not a whit for a very Elephant; if shee happen to haue a sight of a mans footing, presently, by report, carieth away her young whelpes, and is gon. But how commeth she to this knowledge of a man? where saw she him euer before, whom thus she feareth? for surely such wild woods & forests are not much trauelled & frequented by men. Set case, that they may wel wonder at the strange sight and nouelty of their tracts, which are so seldome seen, how know they that they are to be feared? Nay, what should be the reason, that they dread to see a man indeed, being as they are, far bigger, much stronger, and swifter by many degrees than a man? Certes, herein is to be seen the wonderfull worke of Nature, and her mightie power; that the greatest, the most fell and sauage beasts that be, hauing neuer seen that which they ought to feare, should incontinently haue the sence and conceit, why the same is to be feared.

CHAP. V.

¶ The vnderstanding and memorie of Elephants.

THe Elephants march alwaies in troups. The eldest of them leadeth the vaward, like a captain: and the next to him in age, commeth behind with the conduct of the arrereguard. When they are to passe ouer any riuer, they put for most the least of al their company, for feare, that if the bigger should enter first, they would, as they trod in the channell, make the water to swell and rise, and so cause the foud to be more deepe. *Antipater* writeth, that *K. Antiochus* had two Elephants, which he vsed in his wars aboue all the rest, and famous they were for their surnames, which they knew well enough, and wist when any man called them thereby: and verily, *Cato* reciting in his Annals the names of the principall capitaine Elephants, hath left in writing, That the Elephant which fought most lustily in the point of the Punick war, had to name Surus, by the same token, that the one of his teeth was gone. When *Antiochus* on a time would haue founded the foud of a certaine riuer, by putting the Elephants before, *Ajax* refused to take the water, who otherwise at all times was wont to lead the way. Whereupon the king pronounced with a loud voice, That look which Elephant passed to the other side, he should be the captain and chiefe. Then *Patroclus* gaue the venture: & for his labor had a rich harness and caparison giuen him; & was all trapped in siluer (a thing wherein they take most delight) and made besides the foueraigne of all the rest. But the other that was disgraced thus, and had lost his place, would neuer eat any meat after, but died for very shame of such a reprochfull ignominy. For among other qualities, maruellous bashfull they are: for if one of them be ouermatched & vanquished in fight, he wil neuer after abide the voice & braying of the conqueror, but in token of submission, giueth him a turfe of earth, with veruaine or grasse vpon it. Vpon a kind of shamefaced modesty, they neuer are seen to ingender together, but perform that act in some couert & secret corner. They go to rut, the male at 5 yeres of age, the femal not before she is 10 yeres old. And this they do euery third yere: and they continue therein fve daies in the yere (as they say) and not aboue: for vpon the sixt day they all to wash themselves ouer in the running riuer: & before they be thus purified, return not to the heard. After they haue taken one to another once, they neuer change: neither fall they out and fight about their femalls, as other creatures do most deadly and mortally. And this is not for want of loue and hot affection that way: for reported it is of one Elephant, that he cast a fancy and was enamoured vpon a wench in *Aegypt* that sold nosogaies & garlands of floures. And lest any man should thinke that hee had no reason thereto, it was no ordinary maiden, but so amiable, as that *Aristophanes* the excellent Grammarian, was wonderfully in loue with her. Another there was, so kind and full of loue, that he fancied a youth in the army of *Protopaus*, that scarce had neuer an haire vpon his face, and so entirely he loued him, that what day soeuer he saw him not, he would forebare his meat.

A meat, and eat nothing. *K. Iuba* likewise reporteth also of an Elephant that made court to another woman, who made and sold sweet ointments and perfumes. All these testified their loue and kindnes, by these tokens: joy they would at the sight of them, and looke pleasantly vpon them: make toward them they would (after their rude and homely manner) by all means of flatterie: and especially in this, that they would saue whatsoeuer people cast to them for to eat, and lay the same full kindly in their laps and bosomes. But no maruel it is that they should loue who are so good of memorie. For the same *Iuba* saith, That an Elephant tooke knowledge and acquaintance of one man in his old age, and after many a yere, who in his youth had bin his ruler and governor. He affirmeth also, that they haue by a secret diuine instinct, a certain sence of justice and righteous dealing. For when *K. Bacchus* meant to be reuenged of 30 Elephants, that he had caused to be bound vnto stakes, and set other 30 to run vpon them, appointing also certain men among to pricke and prouoke them thereto, yet for all that, could not one of them be brought for to execute this butcherie, nor be ministers of anothers crueltie.

CHAP. VI.

¶ When Elephants were first seen in Italy.

THe first time that Elephants were seen in Italy, was during the war of *K. Pyrrhus*, & they called them by the name of *Lucae boues*, i. Lucane oxen, because they had the first sight of them in the Lucans countrie, and it was in the 472 yere after the cities foundation. But in Rome it was seuen yeres after ere they were seen, and then they were shewed in a triumph. But in the yere 502, a number of them were seen at Rome by occasion of the victorie of *L. Metellus Pontifex* ouer the Carthaginians: which Elephants were taken in Sicilie. For 14 of them were conueied ouer vpon planks and flat bottomes, which were laied vpon ranks of great tuns and pipes set thicke one by another. *Verrius* saith, that they were caused to fight in the great cirque or shew place, and were killed there with shot of darts and iauelins for want of better counsel, and because they knew not well what to do with them: for neither were they willing to haue them kept and nourished, ne yet to be bestowed vpon any kings. *L. Piso* saith they were brought out only into the shew place or cirque aforesaid, and for to make them more contemptible were chased round about it by certaine fellows hired thereto, hauing for that purpose certain stauces and perches, not pointed with iron, but headed with bals like foiles. But what became of them afterward, those Authours make no mention: who were of opinion that they were not killed.

CHAP. VII.

¶ Their fights and combats.

Much renowned is the fight of one Roman with an Elephant, at what time as *Annibal* forced those captiues whom he had taken of our men, to skirmish one against another to the vtterance. For the only Roman that remained vnslaine at that vnaturall conflict, he would needs match with an Elephant, and see the combat himseife, assuring him vpon his word, that if he could kil the beast, he should be dismissed and sent home with life & liberty. So this prisoner entred into single fight with the Elephant, & to the great hearts griefe of the Carthaginians slew him out-right. *Annibal* then sent him away indeed according to promise and couenant; but considering better the consequence of this matter; and namely, that if this combat were once by him bruted abroad, the beasts would be lesse regarded, and their seruice in the wars not esteemed; made after him certaine light horsemen to ouertake him vpon the way to cut his throat, so making him sure for telling tales. Their long snout or trunk which the Latins call *Proboscis*, may be easily cut off, as it appeared by experience in the wars against *K. Pyrrhus*. *Fenestella* writeth, That the first sight of them in Rome, was exhibited in the grand Cirque, during the time that *Claudius Pulcher* was *Aedile Curule*, when *M. Antonius* and *A. Postumius* were Consuls: in the 650 yere after the citie of Rome was built. In like manner, 20 yeres after, when the *Luculli* were *Aediles Curule*, there was represented a combat between bulls and Elephants. Also in the second Consulship of *C. Pompeius* at the dedication of the temple to *Venus Victorese*, 20 of them, or as some write, 17 fought in the great Cirque. In which solemnitie the

the Gætulians were set to launce darts and jauelins against them. But among all the rest, one Elephant did wonders: for when his legs and feet were shot and sticke full of darts, he crept vpon his knees, and neuer staied til he was gotten among the companies of the said Gætulians, where he caught from them their targets and bucklers perforce, flung them aloft into the aire, which as they fell, turned round, as if they had bin trundled by art, & not hurled & thrown with violence by the beasts in their furious anger: and this made a goodly sight, and did great pleasure to the beholders. And as strange a thing as that was seen in another of them, whose fortune was to be killed out of hand with one shot: for the dart was so driuen, that it entered vnder the eie, and pierced as far as to the vitall parts of the head, euen the ventricles of the brain. Whereupon all the rest at once assaied to break forth and get away, not without a great hurly & trouble among the people, notwithstanding they were without the lists, and those set round about with yron grates and bars. [And for this cause *Cæsar* the Dictatour, when afterwards hee was to exhibit the like shew before the people, cast a ditch round about the place, letting in the water and so made a more thereof: which prince *Nero* afterwards stopped vp, for to make more room for the knights and men of armes.] But those Elephants of *Pompey* being past all hope of escaping and going cleere away, after a most pittifull manner and rufull plight that cannot bee expressed, seemed to make mone vnto the multitude, crauing mercie and pittie, with grievous plaints and lamentations, bewailing their hard state and wofull case: in such sort, that the peoples hearts earned again at this piteous sight, and with tears in their eies, for very compassion, rose vp all at once from beholding this pageant, without regard of the person of *Pompey* that great Generall and Commander, without respect of his magnificence and stately shew, of his munificence and liberality, where he thought to haue woon great applause and honor at their hands; but in lieu thereof fell to cursing of him, and wishing all those plagues and misfortunes to light vpon his head, which soon after infused accordingly. Moreover, *Cæsar* the Dictatour in his third Consulship exhibited another fight of them, and brought forth 20 to maintain skirmish against 500 footmen: and a second time he set out 20 more, with woodden turrets vpon their backs, containing 60 defendants apiece: and he opposed against them 500 footmen, and as many horse. After all this, *Claudius* and *Nero* the Emperors brought them forth one by one into single fight, with approued, expert, and accomplished fencers, at the end of al the other solemnities when they had done their prizes. This beast, by report of all writers, is so gentle to all others that are but weak, and not so strong as himselfe, that if he passe through a flock or heard of smaller cattell, it will with the nose or trunk which serueth in stead of his hand, remoue and turn aside whatsoeuer beast commeth in his way, for feare he should go ouer them, and so crush and tread vnder his foot any of them, ere it were aware. And neuer do they any hurt, vnlesse they be prouoked thereto. Alwaies walke they by troups together, and worst of all other can they away with wandring alone, but loue company exceeding well. If it fortune that they be inuiroined with horsmen, look how many of their fellows be feeble, weary, or wounded, those they take into the mids of their Squadron: and as if there were marshalled and ordered by a Serjeant of a band, or heard the direction of some Generall, so skilfully and as it were with guidance of reason, do they maintain fight by turns, and succeed one after another in their course. The wild sort of them, after they be taken, are soonest brought to be tame and gentle, with the iuice or decoction of husked barley.

CHAP. VIII.

¶ The manner of taking Elephants:

The Indians are wont to take Elephants in this manner: the gouernor driueth one of them that are tame, into the chafe and forrests, and when he can meet with one of them alone, or single him from the heard, he all to beateth the wilde beast till he hath made him wearie, and then he mounterh vpon him & ruleth him as wel as the former. In Africk they catch them in great ditches which they make for that purpose: into which, if one of them chance to wander astray from his fellows, all the rest immediatly come to succour him; they heap together a deale of boughs, they rol down blocks & stones, and whatsoeuer may serue to raise a banke, and with all that euer they can do, labor to plucke him out. Before-time, when they meant to make them tractable, their maner was, by a troupe of horsmen to driue or train them by little & little

a long

- A a long way in a certain lawn or vally, made by mans hand for the nones, ere they were aware, and when they were inclosed within ditches or bankes, there they would keep them from meat so long, vntil for very hunger they would be glad to come to hand for food: & by this they might know they were gentle and tame enough to be taken, if they would meekly take a branch of a bow presented and offered vnto them. But now adaies, since they seek after them for their teeth sake, they make no more ado but shoot at their legges, which otherwise naturally are tender enough and the softest part of their whole body. The Troglodites, a people bounding vpon Æthiopia, who liue only vpon the venison of Elephants flesh, vse to clime trees that be neer their walk, and there take a stand: from thence (letting all the heard to passe quietly vnder the trees) they leap down vpon the buttocks of the hinmost: then he that doth this feat, with his left hand laieth fast hold vpon his taile, and sets his feet and legs fast in the flanke of the left side, and so hanging and bending backward with his body, he cutteth the ham-strings of one of his legges with a good keen bil or hatchet that he hath of purpose in his right hand: which done, the Elephant beginneth to slack his pace, by reason that one of his legs is wounded: the man then maketh shift to get away and alighteth on foot, and for a farwell he hougheth the sinews likewise of the other ham, and all this doth he in a trice with wonderful agility and nimblenes. Others haue a safer way than this, but it is more subtil and deceitfull: they set or stick in the ground a great way off, mighty great bows ready bent; to hold these fast, they chuse certain tal lusty, and strong fellows, and as many others as sufficient as they, to draw with all their might and maine C the said bowes against the other, and so they let flie against the poore Elephants as they passe by, jauelins and bore-spears, as if they shot shafts, and stick them therewith, and so follow them by their blood. Of these beasts, the femals are much more fearfull than the male kind.

CHAP. IX.

¶ The manner of taming Elephants:

- A S furious and raging mad as they be sometime, they are tamed with hunger and stripes; but men had need to haue the help of other Elephants that are tame already, to restraine the vnruely beast with strong chains: of all times, when they go to rut they are most out of order and starke wood; down go the Indian stables and beast stals then, which they ouer-turne with their teeth; and therefore they keepe them from entring into that fit, and separate the femals apart from the males, making their parks and enclosures asunder, as they doe by other beasts. The tamed sort of them serue in the wars, and carry little castles or turrets with armed souldiers, to enter the squadrons and battalions of the enemies: and for the most part, all the seruice in the wars of the East, is performed by them, and they especially determine the quarrell: these be they that breake the ranks, beare down armed men that are in the way, and stampe them vnder foot. These terrible beasts (as outrageous otherwise as they seem) are frightened with the least grunting that is of a swine: be they wounded at any time or put into a fright, backward alwaies they go, and do as much mischief to their own side that way, as to their enemies. E The African Elephants are afraid of the Indian, and dare not look vpon them; for in truth the Indian Elephants be far bigger.

CHAP. X.

¶ How they breed and bring forth their young: and of their nature otherwise.

- The common sort of men thinke, that they go with young ten yeres: but *Aristotle* saith that they go but two yeres, and that they breed but once and no more in their life, and bring not aboue one at a time: also that they liue commonly by course of nature 200 yeres, and some of them 300. Their youthful time and strength of age beginneth when they be 60 yeres old: they loue riuers aboue all things, and lightly ye shall haue them euermore wandring about waters; and yet by reason otherwise of their big and vnwealdie bodies, swim they cannot. Of all things they can worst away with cold, and that is it they are most subiect vnto, and feele greatest inconuenience by: troubled they be also with the collick, and ventosities, as also with the flux of the belly: other maladies they feele nor. I find it written in histories, that if

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they

they drinke oile, the arrows and darts which stick in their bodies wil come forth and fall off : G but the more that they sweat, the sooner wil they take hold and abide in stil the faster. The eating of earth breedes the consumption in them, vnlesse they feed and chew often therof: they deuoure stones also. As for the trunks and bodies of trees, it is the best meat they haue, & therein take they most delight. If the date trees be too high that they cannot reach the fruit, they will ouerturn them with their forehead, and when they lie along, eat the dates. They chew and eat their meat with their mouth: but they breath, drink, and smell, with their trunk, which not improperly is called their hand. Of all other liuing creatures, they cannot abide a mouse or a rat, and if they perceiue that their prouander lying in the manger, tast and sent neuer so little of them, they refuse it and wil not touch it. They are mightily tormented with paine, if they chance in their drinking to swallow down an horleeche (which worm, I obserue, they begin now to call a bloud-sucker:) for so soon as the horleeche hath settled fast in his wind-pipe, he putteth him to intolerable pains. Their hide or skin of their back is most tough & hard, but in the belly, soft & tender: couered their skin is neither with haire nor bristle, no not so much as in their taile, which might serue them in good stead to driue away the busie & troublesome flie (for as vast & huge a beast as he is, the flie hanteth & stingeth him) but full their skin is of crosse wrinkles lattisewise; & besides that, the smell thereof is able to draw and allure such vermin to it: & therefore when they are laid stretched along, and perceiue the flies by whole swarms settled on their skin, suddenly they draw those cranies and creuises together close, and so crush them all to death. This serues them in stead of taile, main, and long haire. Their teeth beare a very high price, and they yeeld the matter of greatest request, and most commendable, for to make the statues and images of the gods: but such is the superfluity and excesse of men, that they haue deuised another thing in them to commend, for they find forsooth a special dainty tast in the hard callous substance of that which they call their hand: for no other reason (I beleeue) but because they haue a conceit that they eat yvorie, when they chew this gristle of their trunk. In temples are to be seen Elephants teeth of the greatest size: howbeit in the marches of Africke where it confineth vpon Æthiopia, they make of yuory the very principals and corner posts of their houses: also with the Elephants tooth they make mounds & pales both to inclose their grounds, and also to keep in the beasts within park, if it be true that *Polybius* reporteth, from the testimony of king *Gulussa*.

CHAP. XI.

¶ *Where the Elephants are bred: how the Dragons and they disagree.*

Elephants breed in that part of Africke which lieth beyond the desarts and wildernesse of the Syrtis: also in Mauritania: they are found also amongst the Æthyopians and Troglodites, as hath beene said: but India bringeth forth the biggest: as also the dragons that are continually at variance with them, & euermore fighting, and those of such greatnesse, that they can easily clasp and wind round about the Elephants, and withall tye them fast with a knot. In this conflict they die, both the one and the other: the Elephant he falls downe dead as conquered, and with his heauy weight crusheth and squaseth the dragon that is wound and wreathed about him.

CHAP. XII.

¶ *The wittinesse and policie in these creatures.*

Wonderfull is the wit and subtilty that dumbe creatures haue, and how they shift for themselves and annoy their enemies, which is the only difficulty that they haue to arise & grow to so great an heighth and excesseive bignes. The dragon therefore espying the Elephant when he goeth to reliefe, assaileth him from an high tree and launceth himselfe vpon him; but the Elephant knowing well enough he is not able to withstand his windings & knittings about him, seeketh to come close to some trees or hard rocks, and so for to crush and squise the dragon between him and them: the dragons were hereof, entangle and snarle his feet & legs first with their taile: the Elephants on the other side, vndo those knots with their trunk as with a hand: but to preuent that againe, the Dragons put in their heads into their snout, and

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A so stop their wind, and withall fret and gnaw the tenderest parts they find there. Now in case these two mortall enemies chance to re-incounter on the way, they bristle & bridle one against another, and addresse themselves to fight; but the chiefe thing the dragons make at is the eie, whereby it comes to passe, that many times the Elephants are found blinde, pined for hunger, and worne away, and after much languishing, for very anguish and sorrow die of their venome. What reason should a man alledge of this so mortall warre betweene them, if it be not a very sport of Nature, and pleasure that she takes, in matching these two so great enemies together, and so euen and equal in each respect? But some report this mutuall war between them after another sort, and that the occasion thereof ariseth from a naturall cause: for (say they) the Elephants blood is exceeding cold, and therefore the dragons be wonderful desirous thereof to refresh and coole themselves therewith during the parching hot season of the yeare. And to this purpose they ly vnder the water, waiting their time to take the Elephants at a vantage when they are drinking; where they catch fast hold first of their trunk, and they haue not so soone clasped and intangled it with their taile, but they set their venomous teeth in the Elephants eare (the onely part of all their body which they cannot reach vnto with their trunk) and so bite it hard: now these dragons are so big withal, that they are able to receiue all the elephants blood: thus are they sucked dry vntill they fall downe dead: and the dragons also, drunke with their blood, are squeseed vnder them, and so dy together.

CHAP. XIII.

¶ *Of Dragons.*

C IN Æthiopia there be as great dragons bred as in India, namely 20 cubits long: but I maruell much at this one thing, that king *Inba* should think they are crested. They are bred most in a countrey of Æthiopia where the *Asachai* inhabit. It is reported, that vpon their coast they are inwrapped foure or fift of them one within another, like to a hurdle or lattise-work, and thus passe the seas to find out better pasturage in Arabia, cutting the waues, and bearing their heads aloft, which serue them in stead of sailes.

CHAP. XIV.

¶ *Of monstrous great Serpents, and namely of those called Boæ.*

D *Megasthenes* writeth, that there be serpents among the Indians growne to that bignesse, that they are able to swallow stags or bulls all whole. *Metrodorus* saith, that about the riuier Rhindacus in Pontus, there be serpents that catch and deuoure the fowles of the aire, be they neuer so swift winged, and soare they neuer so high. Well knowne it is, that *Attilius Regulus*, Generall vnder the Romans during the wars against the Carthaginians, assailed a Serpent neere the riuier Bagrada, which caried in length 120 foot; and before hee could conquer him was driuen to discharge vpon him arrows, quarrels, stones, bullets, and such like shot, out of brakes, slings, and other engins of artillery, as if he had giuen the assault to some strong warlike towne: the prooffe wherof was to be seen by the marks remaining in his skin and chawes; which vntill the war of Numantia remained in a temple or conspicuous place of Rome. And this is the more credible, for that we see in Italy other serpents named Boæ, so big and huge, that in the daies of the Emperor *Claudius* there was one of them killed in the Vaticane, within the belly wherof there was found an infant all whole. This serpent liueth at the first of kins milk, and there of takes the name Boæ. As for other beasts which ordinarily of late are brought from all parts into Italy, and oftentimes haue there been seen, needlesse it is for me to describe their formes in particular curiously.

CHAP. XV.

¶ *Of Scythian beasts, and those which are bred in the North parts.*

F Verry few sauge beasts are ingendred in Scythia for want of trees & pasturage. Few likewise in Germany bordering vpon it. Howbeit that countrey brings forth certaine kinds of goodly great wild boeufs: to wit, the Bisontes, mained with a collar like Lions: and the Vri,

Vri, a mighty strong beast and a swift, which the ignorant people call Buffles, whereas indeed the Buffle is bred in Africke, and somewhat resembles a calfe rather, or stag. The Northerne regions bring forth wilde horses, which there are found in great troupes: like as in Asia and in Africke there are to be seen wild Asses. Moreouer, a certain beast called the Alce, very like to a horse, but that his eares are longer, and his necke also with two markes distinguishing them a-funder. Moreouer, in the Island of Scandinavia there is a beast called Machlis, not much vnlike the Alce aboue-named: common he is there, & much talk we haue heard of him, howbeit in these parts he was neuer seen. He resembles, I say, the Alce, but that he hath neither ioynt in the hough, nor pasternes in his hind legs; and therefore he neuer lieth downe, but sleepeeth leaning to a tree. Wherefore the hunters that lie in wait for these beasts, cut down the trees while they are asleepe, and so take them: otherwise they should neuer be taken, they are so swift of foot, that it is wonderfull. Their vpper lip is exceeding great, and therefore as they graze and feed they go retrograde, lest if they went passant forward, they should fold that lip double vnder their muzzle. There is (they say) a wild beast in Pæonia, called Bonafus, with a maine like an horse, otherwise resembling a bull: many his hornes bend so inward with their tips toward his head, that they serue him in no stead at all for fight, either to offend, or defend himself: and therefore all the helpe hee hath is in his good footmanship, and otherwhiles in his flight by dunging, which he will squirt out from behind him three acres in length. This his ordure is so strong and hot, that it burneth them that pursue him, like fire, if haply they touch it. A strange thing it is, and wonderfull, that the Leopards, Panthers, Lions, and such like beasts, as they go, draw in the points of their claws within their body, as it were into sheaths, because they should neither breake nor wax blunt, but be alwaies keene and sharpe: also, that when they runne they should turne the hooked nailes of their pawes back, and neuer stretch them forth at length but when they meane to assaile or strike any thing.

CHAP. XVI.

¶ Of Lions.

THE Lions are then in their kind most strong and couragious, when the haire of their main or collar is so long that it couereth both necke and shoulders. And this comes to them at a certain age, namely to those that are ingendred by Lions: for such as haue Pards to their sires neuer haue this ornament, no more than the Lionesse. These Lionesses are very lecherous, and this is the cause that the Lions are so fell and cruell. This, Africke knowes best, and sees most; and especially in a great drought, when forwant of water a great number of wild beasts resort by troupes to those few riuers that be there, and meet together: and hereupon it is, that so many strange shaped beasts of a mixt and mungrell kind are there bred, whiles the males either perforce or for pleasure leap and couer the females of all sorts. From hence it is also that the Greeks haue this common prouerbe, *That Africke euermore brings forth some new and strange thing or other.* The Lion knoweth by sent and smell of the Pard, when the Lionesse his mate hath played false, and suffered her selfe to be couered by him; and presently with all his might and maine runneth vpon her for to chastise and punish her. And therefore when the Lionesse hath done a fault that way, she either goeth to a riuer and washeth away the strong and ranke sauor of the Pard, or else keepeth aloofe and followeth the Lion afar off, that he may not catch the said smell. I see it is commonly held, that the Lionesse brings forth yong but once in her life, for that her whelps in her kinling teare her belly with their nailes, and make themselves roome that way. *Aristotle* writeth otherwise, a man whom I cannot name but with great honour and reuerence, and whom in the historie and report of these matters I meane for the most part to follow. And in very truth King *Alexander* the Great, of an ardent desire that he had to know the natures of all liuing creatures, gaue this charge to *Aristotle*, a man singularly accomplished with all kinds of science and learning, to search into this matter, and to set down the same in writing: and to this effect commanded certaine thousands of men, one or other, throughout all the tract as well of Asia as Greece, to giue their attendance and obey him: to wit, all Hunters, Falconers, Fowlers, and Fishers that liued by those professions: Item, all Foresters, Park-keepers, and Variners: all such as had the keeping of heards and flockes of cattell: of bee-hiues, fish-pooles, stewes, and ponds: as also those that kept vp fowle tame or wild,

A in mew: those that fed poultry in bartoñ or coup: to the end that he should be ignorant of nothing in this behalfe, but be aduertised by them, according to his Commission, of all things in the world. By his conference with them he collected so much, as thereof hee compiled those excellent bookes *de Animalibus*, i. of Liuing creatures, to the number almost of 50. Which being couched by me in a narrow roome and bricfe summary, with addition also of some things which he neuer knew, I beseech the Readers to take in good worth: and for the discoerie and knowledge of all Natures works, which that most noble and famous King that euer was desired so much to know, to make a short start abroad with me, and in a bricfe discourse by mine own pains and diligence digested, to see all. To return now vnto our former matter: That great philosopher *Aristotle* therefore reporteth, That the Lionesse at her first litter bringeth forth five whelps, and euery yeare after fewer by one: and when the commeth to bring but one alone, she giueth ouer and is barren. Her whelps at the first are without shape like small gobbets of flesh no bigger than weefels. When they are six moneths old they can hardly go, and for the two first they stir not at all. Lions there be also in Europe (only between the riuers *Achelous* and *Nessus*) and these verily be far stronger than those of Africke or Syria. Moreouer, there are two kinds of Lions: the one short, wel trusted, and compact, with more crisp and curled mains, but these are timorous and cowards to them that haue long and plain haire; for those passe not for any wounds whatsoeuer. The Lions lift vp a leg when they pisse, as dogs do: and moreouer, they haue a strong and stinking breath, their very body also smelleth rank. Seldom they drink, and eate but each other day; and if at any time they feed til they be full, they wil abstain from meat three daies after. In their feeding, whatsoeuer they can swallow without chewing, downe it goes whole: and if they finde their gorge and stomacke too full, and not able indeed to receiue according to their greedy appetite, they thrust their pawes down their throats, and with their crooked clees fetch out some of it again, to the end they should not be heauy and slow vpon their fulnesse, if haply they be put to find their feet and fly. Mine Author *Aristotle* saith moreouer, That they liue very long: and hee proueth it by this argument, That many of them are found toothlesse for very age. *Polybius*, who accompanied *[Scipio] Amylianus* in his voiage of Africke, reporteth of them, That when they be growne aged they will prey vpon a man: the reason is, because their strength will not hold out to pursue in chase any other wilde beasts: then they come about the cities and good towns of Africke, lying in wait for their prey, if any folk come abroad: and for that cause, he saith, that while hee was with *Scipio*, hee saw some of them crucified and hanged vp, to the end that vpon the sight of them other Lions should take example, and be skarred from doing the like mischiefe. The Lion alone of all wilde beasts, is gentle to those that humble themselves vnto him, and will not touch any such vpon their submission, but spareth what creature soeuer lieth prostrate before him. As fell and furious as he is otherwhiles, yet he dischargeth his rage vpon men, before he sets vpon women, and neuer preyeth on babes vnlesse it be for extreme hunger. They are verily perswaded in Lybia, that they haue a certain vnderstanding when any man doth pray or intreat them for any thing. I haue heard it reported for a truth, by a captiue woman of Getulia (which being fled was brought home again to her master) that she had pacified the violent fury of many Lions within the woods and forests, by faire language and gentle speech; and namely, that for to escape their rage, shee hath been so hardy as to say, she was a filly woman, a banished fugitiue, a sickly, feeble, & weak creature, an humble suiter and lowly suppliant to him the noblest of all other liuing creatures, the Soueraigne and commander of all the rest, and that she was too base and vnworthy for his glorious Maiestie to prey vpon her. Many and diuers opinions are currant, according to the sundry occurrences that haue hapned, or the inuentions that mens wits haue deuised as touching this matter; namely, that sauage beasts are dulced and appeased by good words and faire speech: as also that fell serpents may be trained and fetched out of their holes by charmes; yea and by certaine coniurations and menaces restrained and kept vnder for a punishment: but whether it be true or no, I see it is not yet by any man set downe or determined. To come againe to our Lions, the signe of their intent and disposition is their taile; like as in horses, their eares: for these two marks and tokens certainly hath Nature giuen to the most couragious beasts of all others, to know their affections by: for when the Lion stirs not his taile, he is in a good mood, gentle, mild, pleasantly disposed, and as if he were willing to be plaied withall: but in that fit he is seldome seen, for lightly he is alwaies angry. At the first when he entrencheth into his choler,

he beateth the ground with his taile: when he groweth into greater heats, he flappeth and jerketh his flanks and sides withall, as it were to quicken himselfe, and stir vp his angry humour. His maine strength lieth in his brest: hee maketh not a wound (whether it be by lash of taile, scratch of claw, or print of tooth) but the blood that followeth is black. When his belly is full all his anger is past, and he doth no more harme. His generositie and magnanimitie he shewes most in his dangers: which courage of his appeareth not only herein, that he seems to despise all shot of darts against him, defending himselfe a long time onely with the terrible aspect of his countenance, protesting as it were that he is unwilling to deale, vnlesse he be forced thereto in his owne defence, *i. se defendendo*, and at length maketh head again, not as compelled or driuen thereto for any perill that hee seeth, but angered at their folly that assaile or set vpon him: but herein also is seen rather his noble heart and courage, That be there neuer so many hounds and hunters following after him, so long as he is in the open plains where he may be scene, hee maketh semblance as though hee contemned both dog and man, dismarching and retiring with honour, and otherwhiles seeming in his retreat to turne again and make head: but hauing gained the thickets and woods, and gotten into the Forrests out of sight, then he skuds away, then he runneth amain for life, as knowing full well, that the trees and bushes hide him, that his shamefull dislodging and flight is not then espied. When hee chafeth and followeth after other beasts he goeth alwaies saltant or rampant; which he neuer vseth to do when he is chased in fight, but is only passant. If he chance to be wounded, he hath a maruellous eye to mark the party that did it, and be the hunters neuer so many in number, vpon him he runneth only. As for him that hath let fly a dart at him, and yet missed his marke and done no hurt to him, if he chance to catch him, hee all to touzeth, shaketh, tosseth, and turneth him lying along at his feet, but doth him no harme besides. When the Lionesse fighteth for her yong whelps, by report, she fettereth her eies wistly and entirely vpon the ground, because shee would not be affrighted at the sight of the chasing flaues of the hunters. Lions are nothing at all crafty and fraudulent, neither be they suspicious: they neuer look askew, but alwaies cast their eye directly forward, and they loue not that any man should in that sort looke side-long vpon them. It is constantly beleueed, that when they ly a dying they bite the earth, & in their very death shed teares. This creature, so noble as hee is, and withall so cruell and fell, trembleth and quaketh to heare the noise of cart-wheeles, or to see them turne about; nay hee cannot abide of all things Chariots when they be void and empty: frighted hee is with the cockes combe, and his crowing much more, but most of all with the sight of fire. The Lion is neuer sicke but of the peeuishnesse of his stomacke, loathing all meat: and then the way to cure him is to ty vnto him certaine shee Apes, which with their wanton mocking and making moues at him, may moue his patience, and driue him for the very indignitie of their malapert faucinesse, into a fit of madnesse; and then so soone as he hath tasted their blood he is perfectly wel again: and this is the only help.

Scævola the son of *Publius* was the first at Rome that in his Curule *Ædileship* exhibited a fight and combat of many Lions together, to delight the people: but *L. Sylla*, who was afterward Dictator, was the first of all others that in his Pretorship represented a shew of 100 lions with maines and collars of haire: and after him, *Pompey* the Great shewed 600 of them fighting in the grand Cirque, whereof 315 were male Lions with mane. And *Cæsar* Dictator brought 400 into the shew-place. The taking of them in old time was a very hard piece of worke, and that was commonly in pit-falls: but in the Emperor *Claudius* his daies it chanced, that a shepheard or heardsmen who came out of *Getulia* taught the manner of catching them: a thing otherwise that would haue beene thought incredible, and altogether vnbeseeeming the name and honour of so goodly a beast. This *Getulian*, I say, fortun'd to encounter a Lion, and when he was violently assailed by him, made no more ado but threw his mandilion or cassocke full vpon his eyes. This feat or cast of his was soone after practised in the open shew-place, in such sort that a man would hardly haue beleueed but hee that saw it, that so furious a beast should so easily be quailed, and daunted so soone as euer hee felt his head couered, were the things neuer so light, making no resistance, but suffering one to do what hee would with him, euen to binde him fast, as if in very truth all his vigour and spirit rested in his eies. Lesse therefore is it to be maruelled at, that *Zyfmachus* strangled a Lion, when as by the commandement of *Alexander* the Great he was shut vp alone together with him. The first man that euer yoked them at Rome, and made them to draw in a chariot, was *M. Antonius*. And verily it was in the

- A the time of ciuill warre, after the battell fought in the plaines of *Pharsalia*; a shrewd and vnhappy preface of the future euent, and namely for men of an high spirit & braue mind in those daies, to whom this prodigious sight did prognosticate the yoke of subiection: for what should I say how *Anthony* rode in that wise with the Courtesan *Cytheris* a common Affect in Interludes vpon the stage? To see such a sight was a monstrous spectacle, that passed all the calamities of that time. It is reported that *Hanno* (one of the noblest Carthaginians that euer were) was the first man that durst handle a Lion with his bare hand, and shew him gentle and tame, to follow him all the city ouer in a slippe like a dog. But this deuice and trick of his turned to his great damage and vtter vndoing: for the Carthaginians hereupon laid this ground, that *Hanno*, a man of such a gift, so witty and inuentive of all deuises, would be able to persuaide the people to whatsoeuer his minde stood; and that it was a dangerous and ticklish point, to put the liberty of so great a state as Carthage was, into the hands and managing of him who could handle and tame the furious violence of so sauage a beast, and thereupon condemned and banished him. Moreouer we find in histories many examples also of their clemencie and gentleness, seen vpon diuers casuall occasions. *Mentor* the Syracusan fortun'd in Syria to meet with a Lion, who after an humble maner in token of obedience and submission, seemed to rumble and wallow before him: hee astonied for feare started backe and began to fly; but the wild beast followed him still, and was ready at euery turne to present himselfe before him, licking the very tracks of his foot-steps as he went, in flattering manner, as if he would make loue vnto him. *Mentor* at length was ware that the Lion had a wound in his foot, and that it swelled therewith: whereupon he gently plucked out the spill of wood that had gotten into it, and so eased the beast of his paine. This accident is for a memoriall represented in a picture at *Syracusa*. Semblably, *Elpis* a *Samian* being arriued and landed in *Africk*, chanced to espy neer the shore a Lion gaping wide, and seeming afar off to whet his teeth at him in menacing wise: he fled apace to take a tree, calling vpon god *Bacchus* to help him (for then commonly wee fall to our prayers when we see little or no hope of other helpe:) but the Lion stopt him not in his flight, albeit he could haue crossed the way well enough, but laying himselfe downe at the tree root, with that open mouth of his wherewith he had skared the man, made signes to moue pitty and compassion. Now so it was, that the beast hauing lately fed greedily, had gotten a sharp bone within his teeth, that put him to exceeding paine: besides that, hee was almost famished: and he looking pittifully vp to the man, shewed how he was punished himselfe among those verie weapons wherewith he was wont to anoy others, and after a sort with dumb and mute prayers besought his help. *Elpis* auised him well a pretty while; and besides that hee was not very forward to venture vpon the wilde beast, he staied the longer and made the lesse hast, while he considered rather this strange and miraculous accident, than otherwise greatly feared. At last he comes downe from the tree and plucks out the bone, while the Lion held his mouth handsomely to him, and exposed himselfe to his helpfull hand as fitly as he possibly could. In requitall of which good turne, it is said, that so long as this ship of his lay there at anchor, the Lion furnished him and his company with good store of venison ready killed to his hand. And vpon this occasion *Elpis* after his return dedicated a temple to *Bacchus*: which vpon this reason the Greeks called *ἱλίουσιος ἀνστήρ*, *i. of gaping Bacchus*; or *Ζωστήριος ἀνστήρ*, *i. the chappell of Bacchus the Sauour*. Can we maruell any more from henceforth, that wild beasts should marke and know the footing of a man, seeing that in their extremities and necessities they haue recourse to him alone for hope of succour? Why went not they to other creatures? or who taught them that the hand of man was able to cure them? vnlesse this be the reason, that griefe, anguish, and extreme perill forceth euen sauage beasts to seeke all means of help and reliefe.

CHAP. XVII.

Of Panthers.

- F *Demetrius* the philosopher, so wel seen into the speculation of Natures works, & the causes thereof, makes mention of as memorable a case as the former, touching a Panther: for as he saith there was a Panther desirous to meet with a man, & therefore lay in the mids of an high-way vntill some passenger should come by, and suddenly was espied by the father of

of *Philinus* the Philosopher, who trauailed that way. The man (for feare) began to retire and go backe againe, but the wild beast kept a tumbling and vauing all about him, doubtlesse and by all apparance after a flattering sort, as if it would haue had somewhat, and such a tossing and tormenting of it selfe she made, so piteously, that it might soone be seene in what grieve and pain the Panther was. The poore beast had but lately kindled, and her young whelps were false into a ditch, as farre off well, the first point that the man shewed of pittie and commiseration was, not to be affraid, and the next was, to haue regard and care of her: follow he did the Panther, as she seemed to train and draw him by his garment (which with her claws shee tooke hold of daintily) vntill they were come to the pit or ditch aboue-said. So soon then as he knew the cause of her grieve and sorrow, and withall what might be the reward of his courtesie, euen as much as his life came to, he drew forth her little ones that were fallen into the said pit: which done, she and her whelps together leaping and shewing gambols for ioy, accompanied him, and through the wildernesse directed him vntill he was gotten forth. So as it appeared in her, that shee was thankfull vnto him, and requited his kindnesse, albeit there passed no couenant nor promise between them of any such recompence: a rare example to be found euen among men. This story and such like giue great colour of truth to that which *Democritus* reporteth, namely, that *Thobas* in Arcadia saued his life by means of a dragon. This *Thobas* being but a very childe, had loued this dragon when he was but yong, very well, and nourished him: but at last, being somewhat fearfull of his nature, and not well knowing his qualities, and fearing withall the bignes that now he was growne vnto, had carried him into the mountains and delarts: wherein it fortuned that he was afterward set vpon and inuironed by theeues: whereupon he cried out, and the dragon knowing his voice, came forth and rescued him. As for babes and infants cast forth to perish, and sustained by the milke of wilde beasts, like as *Romulus* and *Remus* our first founders, who were suckled by a she wolfe; such things in mine opinion are in all reason to be attributed more to fortune and fatall destinies, than to the nature of those beasts. The Panthers and Tygers are in a maner the only beasts (for the varietie of spotted skins and fures which they yeeld) in great request, and commendable: for other beasts haue each one a proper colour of their owne, according to their kind: Lions there be all blacke, but they are found in Syria only. The ground of the Panthers skin is white, beset all ouer with little black spots like eies. It is said, that all foure-footed beasts are wonderfully delighted and enticed by the smell of Panthers; but their hideous looke and crabbed countenance, which they bewray by shewing their heads, skareth them as much againe: wherefore their maner is to hide their heads, and hauing trained other beasts within their reach by their sweet fauour, they fly vpon them and worrie them. Some report, that they haue one marke on their shoulder resembling the Moone, growing and decreasing as she doth, sometime shewing a full compasse, and otherwhiles hollowed and pointed with tips like hornes. In all this kind and race of wild beasts now adaies they call the male * *Varix* and *Pardi*, and great abundance there is of them in Africke and Syria. Some there be againe that make no other difference betweene the Luzernes and Leopards, and these Panthers, but only this, that the Panthers are white: and as yet I know no other marks to descry them by. There passed an old Act and Ordinance of the Senate, forbidding expressely that any Panthers of Africke should be brought into Italy. Against this edict, *Cn. Aufidius* a Tribune of the commons put vp another bill vnto the people; and granted it was, That for the solemnitie of the games *Circenses* they might be brought ouer. *Scaurus* was the first man who in his Edileship exhibited a shew vnto the people of 150 Luzernes together. After him *Pompey* the Great brought forth 410. The Emperor *Augustus* 420: who also in the yere that *Q. Tubero* and *Fabius Maximus* were Consuls together (vpon the 4 day before the Nones of May, at the dedication of the Theatre of *Marcellus*) was the first of all others that shewed a tame Tyger within a cage: but the Emperor *Claudius* foure at once.

CHAP. XVIII.

¶ Of the Tyger and his nature: of Camels, *Chamelopardales*, and when they were first seen at Rome.

TYgers are bred in Hircania and India: this beast is most dreadfull for incomparable swiftnesse, and most of all seen it is in the taking of her yong: for her litter (whereof there is a great

A great number) by the hunters is stolne and caried away at once, vpon a most swift horse for the purpose; lying in wait to espy when the dam is abroad: and shifteth this booty from one fresh horse to another, riding away vpon the spur as hard as they can. But when the Tygresse comes and finds her den & nest empty (for the male Tygre hath no care nor regard at all of the yong) she runs on end after her yong ones, following those that caried them away, by the sent of their horse footing. They perceiuing the Tygresse to approach, by the noise she maketh, let fall or cast from them one of her whelps: vp she taketh it in her mouth, and away she runneth toward her den, swifter for the burthen that she carrieth. And presently she setteth out again, followeth the quest after her fawnes, and ouertaketh the Hunter that had them away. Thus runneth she to and fro, vntill she see that they be imbarqued and gone; and then for very anger that she hath not sped of her purpose, shee rageth vpon the shore and the sands for the losse of her fawnes.

As for Camels, they are nourished in the Levant or East parts among other heards of great cattell: two kindes there be of them, the *Bactrians* and the *Arabick*: differing herein, that the *Bactrians* haue two bunches vpon their backs; the other but one apiece there, but they haue another in their brest, whereupon they rest and ly. Both sorts want the vpper row of teeth in their mouthes, like as bulls and kine. In those parts from whence they come they serue all to carry packs like labouring horses, and are put to seruice also in the wars, and are backed of horfmen: their swiftnesse is comparable to that of horses; they grow to a iust measure, and exceed not a certaine ordinary strength. The Camell in his trauelling will not goe a iot farther than his ordinary iourney; nether will hee carry more than his accustomed and vsuall load. Naturally they doe hate horses. They can abide to be foure daies together without drinke: and when they drinke or meet with water, they fill their skin full enough to serue both for the time past and to come: but before they drinke they must trample with their feet to raise mud and sand, and so trouble the water, otherwise they take no pleasure in drinking. They liue commonly fifty yeares, and some of them an hundred. These creatures also otherwhile fall to be mad, so much as it is. Moreouer, they haue a deuice to splay euen the very females, to make them fit for the warres; for if they be not couered they become the stronger and more courageous.

Two other kinds of beasts there be that resemble in some sort the Camels: the one is called of the *Aethiopians*, the *Nabis*, necked like an horse, for leg and hoofe not vnlike the boeue, headed directly like a Camell, beset with white spots vpon a red ground, whereupon it taketh the name of *Camelopardalus*: and the first time that it was seen at Rome, was in the games *Circenses*, set out by *Cesar* Dictator. Since which time he comes now and then to Rome, to be looked vpon more for sight, than for any wild nature that hee hath: whereupon some call her the sauage Sheepe.

CHAP. XIX.

¶ Of the *Chaus* and *Cephus*.

THE Hinde-wolfe, which some call *Chaus*, and the *Gaules* were wont to name *Rhaphius*, resembling in some sort a Wolfe with Leopards spots, were shewed first in the solemnitie of the games and plaies exhibited by *Cn. Pompeius* the Gréar. He also brought out of *Aethyopia* other beasts named *Cephi*, i. *Semivulpes*, whose forefeet were like to mens hands, and the hinde feet and legs like those of a man. He was neuer seene afterward at Rome.

CHAP. XX.

¶ Of the *Rhinoceros*.

IN the same solemnities of *Pompey*, as many times else was shewed a *Rhinoceros*, with one horne and no more, and the same in his snout or muzzle. This is a second enemy by nature the Elephant: hee sleth that horne of his against hard stones, making it sharpe against he should fight; and in his conflict with the Elephant he layes principally at his belly, knowing it to be more tender than the rest. He is full as long as he, his legs are much shorter, and of the box colour.

T

CHAP.

CHAP. XXI.

¶ *Lynces or Onces, and Marmozets or Apes, called Sphinges : of Crocutes, Monkeys, English bæufes, Leocrocutes, Eale : Æthiopian bulls, the Mantichore and Lycornes : of the serpents called Caroblepes, and the Basiliske.*

ONces are common, so are Marmozets, with a browne dusky haire, hauing dugs in their brest. Æthiopia breedeth them, like as many other monstrous beasts, to wit, horses with wings, and armed with hornes, which they call Pegasi. Also the Crocutes [a kind of mastiue dogs] ingendred betwixt a dog and a Wolfe: these are able to crash with their teeth all they can come by: and a thing is no sooner downe their swallow, and got into their stomacke, but presently they digest it. Moreouer, the Cercopithecii, *i.* Monkeys with black heads, otherwise haired like Asses, differing from other Apes in their cry. The Indians haue certain bæufs with one horne, and others with 3. Also the Leocrocute, a most swift beast, as big almost as an Ass, legged like an Hart, with a necke, taile, and brest of a Lion, headed like these grayes or Badgers, with a clouen foot in twaine: the slit of his mouth reacheth to his eares, in stead of teeth an entire whole bone. They report that this beast feigneth a mans voice. They haue also among them another beast named Eale, for bignes equall to the riuer-horse, tailed like an Elephant, either black or reddish tawny of colour: his mandibles or chawes resemble those of the Bore, he hath hornes about a cubit long, which he can stir or moue as he list: for being in fight he can set them both or one of them as he will himselfe, altering them euery way, one while streight forward to offend, otherwhiles bending byas, as he hath reason to nort or push toward, or auoid anemie. But the most fell and cruell of all others of that country be the wild bulls of the Forrest, greater than our common field bulls, most swift, of colour brended, their eies gray or blewish, their haire growing contrary, their mouth wide and reaching to their eares: their hornes likewise hard by, moueable; their hide as hard as a flint, checking the dent of any weapon whatsoeuer, and cannot be pierced: all other wilde beasts they chase and hunt, themselves cannot be taken but in pit-falls: in this their wildnesse and rage they dy, & neuer become tame. *Ctesias* writeth, that in Æthiopia likewise there is a beast, which he calls Mantichora, hauing three ranks of teeth, which when they meet together, are let in one within another like the teeth of combs, with the face and eares of a man, with red eies, of colour sanguine, bodied like a Lion, and hauing a taile armed with a sting like a Scorpion: his voice resembles the noise of a flute and trumpet sounded together: very swift he is, and mans flesh of all other he chiefly desireth. In India there be found bæufs whole hoofed, with single hornes; also a wilde beast named Axis [as some thinke a muske cat] with a skin like a fawne or hind-calf, howbeit marked with more and whiter spots. This beast is consecrated to *Bacchus*, and vnder his protection. The Orsians of India hunt Apes, and take a number of them white all ouer. But the most fell and furious beast of all other is the Licorne or Monoceros: his body resembles a horse, his head a stag, his feet an Elephant, his taile a bore; he loweth after an hideous manner, one black horne he hath in the mids of his forehead, bearing out two cubits in length: by report, this wilde beast cannot possibly be caught aliue. Among the Hesperian Æthiopians there is a fountain named Nigris, the head (as many haue thought) of the riuer Nilus, and good reason there is for it, alledged by vs before: neere which spring keepeth a wilde beast called Caroblepes, little of body otherwise, heavy also and slow in al his limnes besides, but his head only is so great that his body is hardly able to beare it, he alwaies carrieth it downe to the earth, for if hee did not so, hee were able to kill all mankind; for there is not one that looketh vpon his eies, but he dies presently. The like propertie hath the serpent called a Basiliske: bred it is in the prouince Cyrenaica, and is not aboute twelue fingers bredth long: a white spot like a starre it carrieth on the head, and sets it out like a coronet or diadem: if he but hisse once, no other serpents dare come neere: hee creepeth not winding and crawling byas as other serpents doe, with one part of the body driuing, the other forward, but goeth vpriight and aloft from the ground with one halfe part of his body: he killeth all trees and shrubs not onely that he toucheth, but also that hee breatheth vpon: as for graffe and herbes, those he findeth and burneth vp, yea, and breaketh stones in sunder: so venomous and deadly he is. It is receiued for a truth, that one of them on a time

A time was killed with a launce by an horsman from his horse-back, but the poison was so strong, that went from his body along the staffe, as it killed both horse and man: and yet a silly weazle hath a deadly power to kill this monstrous serpent, as pernicious as it is [for many kings haue been desirous to see the experience thereof, and the manner how he is killed.] See how Nature hath delighted to match euery thing in the world with a concurrent. The manner is, to cast these weazles into the hole an deranies were they lye, (and easie they be to know by the stinking sent of the place about them): they are not so soone within, but they overcome them with their strong smell, but they die themselves withall; and so Nature for her pleasure hath the combat dispatched.

CHAP. XXII.

¶ *Of Wolues.*

IT is commonly thought likewise in Italy, that the eye sight of wolues is hurtful; in so much, as if they see a man before hee espy him, they cause him to lose his voice for the time. They that be bred in Affrick and Ægypt, are but little, and withal nothing liuely, but without spirit. In the colder clime, they be more cruell and eger. That men may be transformed into wolues, and restored againe to their former shape, we must confidently beleue to be a lowd lie, or else giue credit to all those tales which we haue for so many ages found to be meere fables. But how this opinion grew first, & is come to be so firmly ferled, that when we would giue men the most opprobrious words of defiance that we can, we terme them **Versipelles*, I thinke it not much amiss in a word to shew. *Euanthes* (a writer among the Greekes, of good account and authority) reporteth, that he found among the records of the Arcadians, That in Arcadia there was a certaine house and race of the *Antei*, out of which one euermore must needs be transformed into a wolfe: and when they of that family haue cast lots who it shall be, they vse to accompany the party vpon whom the lot is false, to a certaine meere or poole in that country: when he is thither come, they turne him naked out of all his clothes, which they hang vpon an oke thereby: then he swimmeth ouer the said lake to the other side, and being entered into the wilderness, is presently transfigured and turned into a wolfe, and so keepeth company with his like of that kind for nine yeeres space: during which time, (if he forbear all the while to eat mans flesh) he returneth againe to the same poole or pond, and being swomme ouer it, receiueh his former shape againe of a man, saue only that he shall look nine yeeres elder than before. *Fabius* addeth one thing more and saith, That he finderh againe the same apparell that was hung vp in the oake aforesaid. A wonder it is to see, to what passe these Greekes are come in their credulity: there is not so shamelesse a lye, but it findeth one or other of them to uphold and maintaine it. And therefore *Agriopas*, who wrote the *Olympionica*, telleth a tale of one *Damantus Parrhasius*, That he vpon a time at a certain solemne sacrifice (which the Arcadians celebrated in the honour of *Iupiter Lycæus*) tasted of the inwards of a child that was killed for a sacrifice, according to the manner of the Arcadians (which euen was to shed mans blood in their diuine seruice) and so was turned into a wolfe: and the same man ten yeeres after, became a man againe, was present at the exercise of publick games, wrestled, did his deuoir, and went away with victory home againe from Olympia. Ouer and besides, it is commonly thought and verily beleueed, that in the taile of this beast, there is a little string or haire that is effectuall to procure loue, and that when he is taken at any time, he casteth it away from him, for that it is of no force and vertue vlesse it be taken from him whiles he liues. He goeth to rut in the whole yere not aboute twelue dayes. When he is very hungry and can get no other prey, he feedeth vpon the earth. In the case of presages and fore-tokens of things to come, this is obserued That if men see a wolfe abroad, cut his way and turne to their right hand, it is good; but if his mouth be full when he doth so, there is not a better signe or more lucky in the world againe.

F There be of this kind that are called Hart-wolues, such as we said that *Pompey* shewed in the grand Cirque, brought out of Fraunce. This beast (they say) be he neuer so hungry when hee is eating, if he chauce to look backe, forgetteth his meat, sinketh away, and seeketh for some other prey.

CHAP. XXIII.

¶ Of Serpents.

AS touching serpents we see it ordinary, that for the most part they are of the colour of the earth, wherein they lie hid: and an infinite number of sorts there be of them. The serpent Ceraſtes hath many times foure small hornes, standing out double; with mouing whereof the amuseth the birds, and traineth them vnto her for to catch them, hiding all the rest of her body.

Amphisbæna hath two heads as it were, namely one at the taile; as if she were not hurtfull enough to cast her poyson at one mouth only. Some are scaled, others spotted and painted, but generally the venom of them all is deadly. There be of them that from the boughes of trees shoot and launce themselves: in such manner, as that we are not onely to take heed of serpents as they go and glide vpon the ground, but also to looke vnto them that fly as a dart or arrow sent out of an engin. The Aspides swell about the necke when they purpose to sting: and no remedie is there for them that are stung and bitten by them, vnlesse the wounded parts be cut off presently. This pestilent creature, as venomous as he is, hath one point yet of vnderstanding or affection rather; you shall not see them wandring abroad but two and two together, male and female, as if they were yoked together: and unneeth or not at all can they liue alone without their mate; so that if one of them be killed, it is incredible how the other seeks to be reuenged: it pursueth the murderer, and knoweth him again among a number of people, be they neuer so many: him it courseth, and layeth for his life, notwithstanding what difficulties soeuer, he breaketh through all, be it neuer so far thither, and nothing may impeach this reuenging humor, vnlesse some riuer be between to keep it backe, or that the party make speed to escape away in great haste. And I assure you, I am not able to say, whether Nature hath bin more free and prodigall in sending among vs such noisome things, or giuing vs remedies againe for them. For to begin withall, she hath afforded to this creature but a darke sight, and dim eyes, and those not placed in the forefront of the head, to see forward and directly, but set in the very temples. And hereof it is, that these serpents are raised oftner by their hearing than sight.

CHAP. XXIV.

¶ Of the Rat of India called Ichneumon.

BEsides the foresaid infirmities, there is mortall war between them and the Ichneumones or Rats of India. A beast this is well knowne to the Aspis, in this regard especially, that it is bred likewise in the same Egypt. The manner of this Ichneumon is, to wallow oft times within the mud, and then to dry it selfe against the Sun: and when he hath thus armed himself as it were with many coats hardened in this manner, he goeth forth to combat with the Aspis. In fight he sets vp his taile, and whips about turning his taile to the enemy, and therein lacereth and receiueth all the strokes of the Aspis, and taketh no harme thereby: and so long he maintaineth a defensue battell, vntill he espy a time, turning his head a to-side, that hee may catch the Aspis by the throat, and throttle it. And not content thus to haue vanquished this enemy, he addresseth himselfe to the conflict with another, as hurtfull euery way & dangerous as the former.

CHAP. XXV.

¶ Of the Crocodile, Scinke, and Riuer-Horse.

THe riuer Nilus nourisheth the Crocodile; a venomous creature, foure footed, as dangerous on water as land. This beast alone, of all other that keepe the land, hath no vse of a tongue; he only moueth the vpper jaw or mandible, wherewith he biteh hard; and otherwise terrible he is, by reason of the course and ranke of his teeth, which close one within another, as if two combes grew together. Ordinarily he is aboute eightene cubits in length. The female layeth eggs as big as geese do, and sitteth euery vpon them out of the water: for a certaine naturall foreknowledge she hath, how far the riuer Nilus will that yeare rise when he is at the highest,

A highest and without it will see be sure to sit. There is not another creature againe in the world, that of a smaller beginning, groweth to a bigger quantity. His feet be armed with claws for offence, and his skin so hard, that it will abide any injury whatsoeuer, and not be pierced. All the day time the Crocodile keepeth vpon the land, but he passeth the night in the water: and in good regard of the season he doth the one and the other. When he hath filled his belly with fishes, he lieth to sleep vpon the sands in the shore: and for that he is a great and greedie deuourer, somewhat of the meat sticketh euermore between his teeth. In regard whereof cometh the wren a little bird called there Trochilos, and the king of birds in Italy: and shee for her victuals sake, hoppeth first about his mouth, falleth to pecking or picking it with her little neb or bill, and so forward to the teeth, which he cleaseth; and all to make him gap. Then getteth shee within his mouth, which he openeth the wider, by reason that he taketh so great delight in this her scraping and scouring of his teeth and claws. Now when he is lulled as it were fast asleep with this pleasure and contentment of his: the rat of India, or Ichneumon abovesaid spieth his vantage, and seeing him lye thus broad gaping, whippeth into his mouth, and shooteth himselfe downe his throat as quicke as an arrow, and then gnaweth his bowels, eateth an hole through his belly, and so killeth him.

Within the riuer Nilus there breeds another Serpent called Scincos, like in forme and proportion somewhat to the Crocodile, but not all so big as the Ichneumon: the flesh whereof seruethe for a singular Antidote or countre-poison; as also for to prouoke the heart of lust in men.

C But to returne againe to the Crocodile: the mischief that he doth is so great, that Nature is not content to haue giuen him one mortal enemy & no more; & therefore the dolphins also enter the riuer Nilus in despite of the Crocodiles, that take themselves for kings there, as if this riuer were their peculiar kingdome: but seeing they be otherwise inferior to the Crocodiles in strength, who alwaies driue them away from preiding or feeding there, they deuise to ouermatch him in sle craft and subtilty, and so kill him. And in truth they haue certain fins or wings as it were vpon their backe, as trenchant & keene as kniues, properly made as it were, for this purpose. For surely all creatures are herein naturally very skilfull and cunning, to know not only their owne good, and what is for them, but also what may hurt and annoy their enemies. Ware they be what offensive weapons they haue, and of what force they are: they are not ignorant of fit occasions and opportunities to take their vantage, ne yet of the weak parts of their occurrents, by which they may assaile and conquer them the sooner. Thus the Dolphins knowing full well, that the skin of the Crocodiles belly is thin and soft, make as though they were afraid of them as he comes, and so diue vnder the water, vntill he be gotten vnder his belly, & then punch and cut it with the foresaid sharp-pointed finnes. Moreouer, there is a kind of people that cary a deadly hatred to the Crocodile, and they be called Tentyrites, of a certaine Isle euen within Nilus, which they inhabite. The men are but small of stature, but in this quarrell against the Crocodiles, they haue hearts of Lions, and it is wondrous to see how resolute and courageous they are in this behalfe. Indeed, this Crocodile is a terrible beast to them that flie from him: but contrary, let men pursue him or make head againe, he runnes away most cowardly. Now, these Islanders be the only men that dare encountre him affront.ouer and besides, they will take the riuer, and swim after them, nay they wil mount vpon their backs, and set them like horsmen: and as they turne their heads, with their mouth wide open to bite or deuour them they will thrust a club or great cudgell into it crosse ouerthwart, and so holding hard with both hands each end thereof, the one with the right, and the other with the left, and ruling them perforce (as it were) with a bit and bridle, bring them to land like prisoners: when they haue them there, they will so fright them only with their words and speech, that they compel them to cast vp and vomit those bodies againe to be entered, which they had swallowed but newly before. And therefore it is, that this is the only Isle which the Crocodiles wil not swim to: for the very smell and sent of these Tentyrites is able to driue them away, like as the Pelli with their fauour put Serpents to flight. By report, this beast seeth but badly in the water: but be they once without, they are most quick sighted. All the 4 winter months they liue in a cage, and eat nothing at all. Some are of opinion, that this creature alone groweth all his life: and surely a great time he liueth.

The same riuer Nilus bringeth forth another beast called Hippopotamus, a Riuer-horse. Taller he is from the ground than the Crocodile: he hath a clouen foot like a bœufe: the back,

maine and haire of an horse, and he hath his neyng also. His muzzle or snout turneth vp: his taile twineth like the Bores, and his teeth likewise are crooked and bending downward as the Bores tusks, but not so hurtfull: the skin or hide of his backe vnpenetrable [whereof are made targuets and head-pieces of doubty proof that no weapon wil pierce] vnlesse it be foked in water or some liquor. He eateth downe the standing corne in the field: and folke say that he setteth downe beforehand where he will pasture and feed day by day: and when hee fets forward to any field for his reliefe hee goeth alwaies backward, and his tractes are seene leading from thence, to the end that against his return he should not be forelaide nor followed by his footing

CHAP. XXVI.

¶ *Who first shewed the riuer-Horse and Crocodiles at Rome. Also the medicinable means found out by the said dumbe creatures.*

Marcus Scaurus was the first man, who in his plaies and games that he set out in his Edileship, made a shew of one water-Horse and foure Crocodiles, swimming in a poole or mote made for the time during those solemnities.

The riuer-Horse hath taught physitions one deuice in that part of their profession called Surgerie: for he finding himself ouer-grosse & fat by reason of his high feeding so continually, gets forth of the water to the shore, hauing spied afore where the reeds and rushes haue bin newly cut: and where he seeth the sharpest cane and best pointed, hee fets his body hard vnto it, to pricke a certaine veine in one of his legs, and thus by letting himselfe bloud maketh euacuation: whereby his body, otherwife inclining to diseases and maladies, is well eased of the superfluous humor: and hauing thus done, hee stopperth the orifice againe with mud, and so stancheth the bloud, and healeth the wound.

CHAP. XXVII.

¶ *What physcall Herbes certaine creatures haue shewed vs, to wit, the harts and stags, the Lizards, Swallowes, Tortois, the Weasell, the Storke, the Bore, the Snake, Dragon, Panther, Elephant, Beares, Stocke-Doues, house Doues, Cranes, and Rauens.*

The like deuice to this, namely of clifters, we learned first of a Fowle in the same Egypt, called Ibis [or the blacke Storke.] This bird hauing a crooked and hooked bill, vseth it in stead of a syringe or pipe to squirt water into that part, whereby it is most kinde and wholsome to auoid the doung and excrements of meat, and so purgeth and clenseth her body. Neither hath dumbe creatures directed vs to these feats onely practised by the hand, which might serue for our vse, to the preservation of our health, and cure of diseases: for the hart first shewed vs the vertue of the herbe Dictamnus or Dittanie, to draw arrowes forth of the bodie. Perceiuing themselves shot with a shaft, they haue recourse presently to that herbe, and with eating thereof it is driuen out again. Moreover, being stung with the Phalangium, a kinde of spider, or some such venomous vermin, they cure themselves with eating Crai-fishes, or fresh water crabs.

There is a certain herbe called Calaminth, most soueraigne and singular against the biting of serpents: wherewith the Lizards, whensoever they haue fought with them, cure their wounds by applying it thereto.

Celendine [the greater] a most wholsome herbe for the eie sight, Swallowes taught vs how to vse: for with it they helpe their yong ones when their eies be sore and put them to grieve.

The land Tortoise by eating of a kinde of Sauorie or Marjerome, called *Cumila bubula*, armes himselfe against poyson when he should fight with serpents.

The Weasell vseth Rue as a preseruatue when hee purposeth to hunt for Rats, in case hee should fight with any of them.

The Storke feeling himselfe amisse, goeth to the herbe Organ for remedy. And the Bore when he is sicke is his owne physition, by eating iuy and crab fishes, such especially as the sea casteth vp to shore.

The Snake by restinesse and lying still all Winter, hath a certain membrane or filme growing

A ing ouer her whole body; but hauing recourse to Fennel, with the iuice thereof she casteth that old coat that cloggeth her, and appeareth fresh, slick, and yong again. Now the manner of this her vncaising, is this; she beginneth first at the head, and turneth the skin ouer it, and thus she is a whole day and a night a folding it backward, before the inside of that membrane can be turned outward, and so she is clean rid of it. Moreover, when by lying still & keeping close all the Winter time, her sight is become dim and dark, she rubbeth and scoureth her self with the said herbe Fennell, and therewith annointeth and comforteth her eies. But if the scales that are ouergrowne her skin be hard and stiffe, not willing to part and be removed, she maketh no more adoe, but scratcheth them with sharp juniper pricks.

The Dragon finding a certain lothing of meat, and ouerturning of her stomach in the spring time, cureth and helps the same with the iuice of the wild Lettuce.

B The barbarous people when they hunt the Panthers, rub the gobbets of flesh, which they lay as a bait for them, with Aconitum (a kind of poison-ful herbe.) The beasts haue no sooner touched the flesh, but presently their throat swelleth, and they are ready to be stifled and choked: whereupon some haue called this venomous herbe Pardalianches, i. Libard baine, or choke Libard. But the wilde beast hath a remedy against this, namely, the ordure and excrements of a man: yea, and at other times also, when he is not thus poisoned, so eager he is thereof, that when the shepherds for the nonce haue hanged them vp aloft in some vessell about their reach, although they leap vp at them, he is ready to faint with mounting on high, & straining to get the same, and in the end killeth himselfe therewith, & lieth dead on the ground. And yet otherwife he is too vnward for to be killed, and so long it is ere he will die, that when he is panned, and his very guts come forth of his belly, he wil liue still, and fight.

C The Elephant if he chance to let the [Lizard] Chameleon go downe his throat amongst other herbes or leaues (which this Lizard alwaies is like vnto in colour) he goeth straightwaies to the wild Oliue, the only remedy he hath of this poison.

Beares, when they haue eaten Mandrage apples, licke vp pismires to cure themselves withall.

The Stag and Hind feeling themselves poisoned with some venomous weed among grasse where they pasture, go by and by to the Artichoke, and therewith cure themselves.

D The Stock-doues, the Iais, Merles, Blackbirds, Oufels, recover their appetite to meat, which once in a yeare they lose, with eating Bay-leaues that purge their stomach. Partridges, House-doues, Turtledoues, and all Pullein, as Hens, Cocks, and Capons, do the like with Parietarie of the wall. Ducks, Geese, and other water fouls purge with the herb Endiue or Cichory. Cranes and such like help themselves that way with the Marish reed.

The Rauens when he hath killed the Chameleon, and yet perceiuing that he is hurt and poisoned by him, flieth for remedy to the Laurell, and with it represseth and extinguisheth the venom that he is infected withall.

CHAP. XXVIII.

¶ *The Prognostication of weather, taken by the obseruation of dumbe creatures.*

E Moreover, the same vniuersall Nature hath giuen a thousand properties besides vnto beasts: and namely, hath endued very many of them with the knowledge and obseruation of the aire aboue, giuing vs good meanes by them diuers waies, to fore-see what weather we shall haue, what winds, what raine, what tempest will follow: which to decipher in particular, it is not possible, no more than to discourse throughly of their other qualities they haue respectiue to the society with every man. For they aduertise & warn vs before-hand of dangers to come, not only by their fibres and bowels (about the skill and presage wherof, the most part of the world is amased) but also by other manner of tokens and significations. When an house is readie to tumble downe, the mice goe out of it before: and first of all, the spiders with their webs fall down. As for the flight of birds & their fore-tokening, called Augurie, there is an Art of it, and the knowledge thereof is reduced into a method, in so much as at Rome there was a colledge of Augurus instituted: by which it may appeare in what account & regard that sacerdotal dignitie and profession was. In Thracia, which is a cold and frozen countrie, the Fox also will not passe ouer any riuer or poole that is frozen, before he trie the thickenesse of the yce by

by his eare, and otherwise it is a beast most quicke of hearing. And obserued it is, that men neuer venture thereupon, but when he goes to reliefe, or returneth from thence, and then he layes his eare close to the yce, and guessteth thereby how thicke the water is frozen.

CHAP. XXIX.

¶ *What cities and nations haue been utterly destroyed by little beasts.*

Nothing is more certain and notorious than this, that much hurt and dammage hath been known to come from small contemptible creatures, which otherwise are of no reckoning and account. *M. Varro* writes, That there was a towne in Spaine vndermined by Connies: and another likewise in Theffalie, by the Moldwarpes. In France the inhabitants of one citie were driuen out and forced to leaue it, by Frogs. Also in Affricke the people were compelled by Locusts to void their habitations: and out of Gyarus an Island, one of the Cyclades, the Islanders were forced by Rats and Mice to flee away. Moreouer, in Italie the citie Amycle was destroyed by serpents. In Æthiopia, on this side the Cynamolgi, there is a great country lieth wast and desart, by reason that it was dispeopled sometime by Scorpions, and a kinde of Pismires called Solpugæ. And if it be true that *Theophrastus* reporteth, the Teriens were chased by certaine wormes called Scolopendres. But now let vs returne to other kinds of wild beasts.

CHAP. XXX.

¶ *Of the Hyæna, Crocuta, Mantichora, Bieuers, and Oisters.*

As touching Hyænes, it is commonly beleued, that they haue two natures, and that euery second yeere they change their sexe, being this yeere males, and the next yeere females. Howbeit, *Aristotle* denieth it. Their necke and the mane therewith, together with the backe, are one entire bone without any ioint at all, so as they cannot bend their necke without turning the whole body about. Many strange mattes are reported of this beast, and aboue all other, that he will counterfeit mans speech, and comming to the shepheards cottages, will call one of them forth, whose name he hath learned, and when he hath him without, al to worrie and teare him in peeces. Also it is said that he will vomit like a man, thereby to train dogs to come vnto him, and then will deuoure them. Also, this beast alone of all others, will search for mens bodies within their graues and sepulchres, and take them forth. The female is feldome taken. He changeth his eies into 1000 diuers colours. Moreouer, if a dog come within his shadow, he presently loseth his barking and is quite dumbe. Again by a kind of magicall charme or enchantment, if he goe round about any other liuing creature but three times, it shall not haue the power to stir a foot and remooue out of the place. The Lionesses of Æthiopia, if they be couered with any of this kinde, bring forth another beast called Leocrocuta, which likewise knowes how to counterfeit the voice both of man, and of other beasts. He sees continually with both eies: he hath one entire bone in stead of teeth in either iaw (and no gombs at all) wherewith he cuts as with a knife. Now these bones, because they should not wax dul and blunt with continuall grating one against the other, they are enclosed each of them with a case or sheath.

Inba reports that the Mantichora also in Æthiopia resembles mens language. Great store of Hyænes be found in Affricke: which also yeelds a multitude of wild Asses. And one of the males is able to rule and leade a whole flocke of the female asses. This beast is so ialous, that they looke narrowly to the females great with young: for so soone as they haue foled, they bite off the cods of the little ones that be males, and so gueld them. But contrariwise, the shee asses when they be big, seeke corners, and keepe out of their way, that they might bring forth their young secretly without the knowledge of the Stallions: for desirous they are to haue many males: so lecherous they be, and glad euermore to be couered.

The Bieuers in Pontus gueld themselves, when they see how neer they are driuen, and be in danger of the hunters: as knowing full well, that chased they be for their genetoires: and these their stones, Physitians call Castoreum. And otherwise, this is a dangerous and terrible beast with his teeth. For verily, he will bite down the trees growing by the riuers sides, as if they were cut with an axe. Looke where he catcheth hold of a man once, he neuer leaues nor less loose vntill he haue knapped the bone in sunder, and heard it cracke againe. Tailed hee is like a fish, otherwise

A otherwise he resembleth the Otter. Both these beasts liue in the water altogether, and cary an haire foster than any plume or downe of feathers.

CHAP. XXXI.

¶ *Of Frogs, Sea-calues, and star-Lizards called Stelliones.*

The venomous frogs and rodes called Rubetæ, which liue both on land, and also in the water, yeeld many good things medicinable. It is said, that their manner is to let goe & cast from them all that is good within them, reseruing only to themselves all the poison: and when they haue bin at their food, take the same vp againe. The sea calfe likewise liueth both in the sea, and vpon the land: and hath the same nature and qualitie that the beiuier is, for hee casteth vp his gall, which is good for many medicines: & so he dorth the runnet in his maw, which is a singular remedy for the falling sicknes: for wel he is ware, that men seek after him for these two things. *Theophrastus* writeth, That the Lizards called Stelliones, cast their old coat, like as Snakes do, but when they haue so done, they eat it vp againe, and so preuent men of the helpe thereby for the said falling euill. He reporteth besides, that their stings and bitings in Greece be venomous and deadly: but in Sicily harmlesse.

CHAP. XXXII.

¶ *Of red and fallow Deere.*

The Bucke or Stag, albeit that he be the most gentle and mild beast in the world, yet is he as enuious as the rest, & loth to part with that which is good for others. Howbeit, if he chance to be ouerlaid with hounds, then gently of himselfe hee hath recourse to a man. Likewise, the Hinds when they are to calue, chuse rather some place neere to the pathes and waies that are beaten with many steps, than secret corners, for feare of other wilde beasts. They begin to goe to rut after the rising of the star Arcturus, which is much about the 5 of September: they goe 8 months: and otherwhiles bring 2 calues at once. Finding themselves that they are spied, they part companie with the Stags. But they againe seeing themselves forsaken, fall into a kinde of rage for heate of lust, and dig pits in the ground where they lie hidden. Then begin their muzzles to looke blacke, and so continue, vntill such time as some raine wash away that colour. The Hinds before they calue, purge themselves with the herbe Sefelis or Siler-mountain, whereby they haue lesse paine in their bearing, and more speedy and easie deliuerance. After they are lightened of their burden, they know where two herbes be, which they haue presently recourse vnto, Wake-Robin, and the foresaid Siler-mountain. When they haue eaten well thereof, they return presently to their yong. And (for what secret reason in Nature, God knowes) their first milke must haue a taste & talang of those two herbs. Their little ones they practise and exercise to vse their legs from the very beginning so soon as they be come into the world: teaching them euen then how they should run away and flie. To high and steepe cragged rockes they bring them and there shew them how to leape, and withall acquaint them with their dens and places of harborough. And now by this time, the stags being past the heat of the rut, feed apace. But so soone as they be growne very fat, they seeke lurking places, and there abide, confessing as it were how heauie and vniweldeie they be for fatnesse, and how vncommodious it is vnto them. At other times they vse in their flight to make staies, and take their breath, and as they stand still, to looke behinde them. But when they espie once the hounds and hunters to be neer vnto them then they fall to running afresh. And this they doe for a paine that they haue in their guts, which are so weak & tender, that with a small blow or stripe giuen vnto them they will burst within their bellies. When they perceiue the hunt is vp, & heare the hounds erie, they presently run but euer downe the winde, to the end that the sent of their feet should passe away with them. They take much pleasure & delight in the sound of shepheards pipes, and their song withall. When they set vp their eares, they are most quicke of hearing: when they let them hang downe, they be as deafe. Moreouer, they are very simple and foolish creatures: amused, yea, and amased they will be at every thing, and keepe a wondering at it, in so much, as if an horse, a cow, or an haifer approach neere vnto them, they will stand gazing at it, and neuer regard the hunters neere by: or if they happen to spie him, they will looke at his

his very bow, and sheine of arrows, as at strange and wondrous things. They passe the seas, swimming by flocks and whole herds in a long row, each one resting his head vpon the buttockes of his fellow next before him: and this they do in course, so as the foremost retireth behinde to the hindmost, by turnes one after another: and this is ordinarily obserued by those saylers that passe from Cilicia to Cypres. And yet in their swimming they descry no land by the eye, but only by their smelling haue an aime thereat. The males of this kind are horned, and they (aboue all other liuing creatures) cast them euery yeare once, at a certaine time of the Spring: and to that purpose a little before the very day of their mewing, they seek the most secret corners and most out of the way, in the whole Forrest. When they are pollards, they keep close hidden, as if they were difarmed: and all this they do, as if they enuid that men should haue good of any thing that they had. And in very truth, the right horn (they say) can neuer be found, as if it had some rare and singular vertue in Physicke. A strange and maruellous thing, considering that in the parks they change them euery yere, inso much as it is thought verily, that they hide them within the earth. But burne whether of them yewill, the left as well as the right, this is certain, That the smell and perfume thereof driueth serpents away, and discouereth them that are subiect to the fits of the falling diseafe. A man may also know their age by their heads, for euery yeare they haue one knag or branch more in their horns than before, vntill they come to six: after which time, they come new euer alike; so as their age cannot be discerned any more by the head, but the marke is taken by their mouth and teeth; for as they grow in age, they haue few or no teeth at all, ne yet grow the branches out at the root, whereas all the while they were younger, they vsed to haue them breake forth and standing out at the very forehead. After they be gueldd once, neither cast they their hornes which they had before, neither grow there any if they had none when they were libbed. At the first when they breake out againe, like they be to the glandules or kernels of dry skin, that new put forth: then grow they with tender stalks, in to certain round and long knobs of the reed mace, couered all ouer with a certaine soft plume downe like veluet. So long as they be destitute of their hornes, and perceiue their heads naked, they go forth to reliefe by night; and as they grow bigger and bigger, they harden them in the hot sun, eftsoons making prooffe of them against trees, and when they perceiue once that they be tough and strong enough, then they go abroad boldly. And certainly some of them haue been taken with green Iuie sticking fast and growing in their hornes, remaining there since the time that they ran them (when they were but tender) against some trees, for triall whether they were good or no, and so chanced to race the Iuie from the wood of the tree. You shall haue them sometime white of colour, and such an one was the hind that *Q. Sertorius* had about, which he perswaded the people of Spaine to be his Sooth-sayer, & to tel him of things to come. This kind of Deere maintaine fight with serpents, and are their mortall enemies: they will follow them to their very holes, and there (by the strength of drawing and snuffing vp their wind at the nostrils) force them out whether they wil or no: and therefore there is not so good a thing again to chase away serpents, as is the smoke and smel of an Harts horn burnt. But against their sting or biting, there is a singular remedy, with the runnet in the maw of a fawne or Hind-calf killed in the dams belly. It is generally held and confessed, that the Stag or hind liues long: for an hundred yeres after *Alexander* the great, some were taken with golden collars about their necks, ouergrowne now with haire and growne within the skin: which collars, the said king had done vpon them. This creature of all diseases is not subiect to the feuer, but he is good to cure it. I haue known great ladies and dames of state, vse euery morning to eat the venison of red Deere, and thereby to haue liued a great age and neuer had the ague: but it is thought this is a certain remedy and neuer faileth, in case the stag be stricken starke dead at once with one wound and no more.

CHAP. XXXIII.

¶ Of the shag-haired and bearded Stagge like to a Goat:
as also of the Chamaeleon.

OF the same kind is the Goat hart, and differing only in the beard and long shag about the shoulders, which they call *Tragelaphis*: and this breedeth no where but about the riuer *Phasis*. Africke in a manner is the onely countrey that breedeth no stags and hinds: but contrari-

A contrariwise, it bringeth *Chamaeleons*, although India hath them ordinarily in greater number. In shape and quantitie it is made like a *Lisard*, but that it standeth higher and streighter than the *Lisards* do, vpon his legs. The sides, flank, and belly, meet together, as in fishes: it hath likewise sharp prickles, bearing out vpon the back as they haue: snouted it is, for the biggesse not vnlike to a swine, with a very long taile thin and pointed at the end, winding round and entangled like to vipers: hooked clawes it hath, and goeth slow, as doth the *Tortoise*: his body and skin is rough and scaly, as the *crocodiles*: his eyes standing hollow within his head, & those be exceeding great, one neere vnto the other, with a very small portion betweene, of the same colour that the rest of the body is: he is alwaies open eyed, and neuer closeth them: he looketh about him not by mouing the ball of his eye, but by turning the whole body thereof: he gapes euermore aloft into the aire, and is the onely creature aliue that feedeth neither of meat nor drinke, but hath his nourishment of aire onely: about wilde fig-trees he is fell and dangerous, otherwise harmlesse. But his colour naturally is very strange and wonderful, for euer and anon he changeth it, as well in his eye, as taile and whole body besides: and looke what colour he toucheth next, the same alwaies he resembleth, vnlesse it be red and white. When he is dead, hee looketh pale and wan: very little flesh he hath in head and chawes, and about the ioint where his taile is grafted to his rump; but in all the body besides, none at all. All his bloud is in his heart, and about his eyes: among other his bowels, he is without a spleen. Hidden hee lieth all winter long, as *Lisards* do.

CHAP. XXXIII.

¶ Of the Buffe, or *Tarandus*: the *Lycaon*, and the *Thos*.

C IN Scythia there is a beast called *Tarandus*, which changeth likewise colour as the *Chamaeleon*: and no other creature bearing haire doth the same, vnlesse it be the *Lycaon* of India: which (by report) hath a maned necke. As for the *Thoes* (which are a kinde of wolues somewhat longer than the other common wolues, and shorter legged, quicke and swift in leaping, liuing altogether of the venison that they hunt & take, without doing any harme at all to men) they may be said, not so much to change their hew, as their habit and apparell: for all winter time they be shag-haired, but in summer bare and naked. The *Tarandus* is as big as an ox, with an head not vnlike to a stags, but that it is greater, namely carrying branched hornes: cloven hoofed, and his haire as deep as is the *Bear*. The hide of his backe is so tough and hard, that thereof they make brest-plates. He taketh the colour of all trees, shrubs, plants, floures, and places wherein he lieth when he retireth for feare, and therefore seldome is he caught. But when he list to looke like himselfe and be in his owne colour, he resembleth an *Asse*. To conclude, strange it is that the bare body of a beast should alter into so many colours: but much more strange it is and wonderfull, that the haire also should so change.

CHAP. XXXV.

¶ Of the *Pork-pen*.

E THE *Porkpens* come out of India and Africke: a kind of *Vrchin* or hedge-hog they be: armed with prickles they be both; but the *Porkpen* hath the longer sharp pointed quilles, and those, when he stretcheth his skin, he fendeth and shooteth from him: when the hounds presseth hard vpon him, he flieth from their mouthes, and then takes vantage to launce at them somewhat farther off. In the Winter he lieth hidden, as the nature is of many beasts to doe, and the *Bears* about the rest.

CHAP. XXXVI.

¶ Of the *Bears*, and how they breed and bring forth their young.

F THEY ingender in the beginning of winter, not after the common manner of other four-footed beasts, but lying both along, clasping and embracing one another: then they goe apart into their dennes and caues, where the she beare thirtie daies after is discharged of her burden, and bringeth forth commonly fve whelps at a time. At the first, they seem to be a lump

Jump of white flesh without all form, little bigger than rattons, without eies, & wanting haire: only there is some shew and apparance of claws that put forth. This rude lump, with licking they fashion by little & little into some shape; & nothing is more rare to be seen in the world, than a she beare bringing forth her yong: and this is one cause that the male beares are not to be seen in 40 daies, nor the female for 4 moneths. If they haue no holes and dens for the purpose, they build themselves cabbins of wood, gathering together a deale of boughes & bushes, which they couch and lay artificially together, to beare off any shower, so as no raine is able to enter; and those they strew vpon the floore with as soft leaues as they can meet withall. For the first 14 daies (after they haue taken vp their lodging in this manner) they sleep so soundly, that they cannot possibly be wakened, if a man should lay on and wound them. In this drowsinesse of theirs, they grow wondrous fat. This their grease and fat thus gotten, is it that is so medicineable, and good for those that shed their haire. These 14 days once past, they sit vpon their rump or buttocks, and fall to sucking of their fore-feet, and this is all their food wherof they liue for the time. Their yong whelpes, when they are starke and stiffe for cold, they huggle in their bosom and keep close to their warm breast, much like to birds that sit vpon their eggs. A strange and wonderful thing it is to be told, and yet *Theophrastus* belecueth it, That if a man take bears flesh during those daies, and seeth or bake the same, if it be set vp and kept safe it will grow neuertheless. All this time they dung not, neither doth there appeare any token or excrement of meat that they haue eaten: and very little water or aquositie it found within their belly. As for blood, some few small drops lie about the heart only, and none at all in the whole body besides. Now when spring is come, forth they go out of their den, but by that time the males are exceeding ouergrown with fat: and the reason therof cannot be readily rendred: for as we said before, they had no more but that fortnights sleep to fat them withall. Being now gotten abroad, the first thing that they do, is to deuoure a certain herbe named *Aron*, *i. Wake-robin*, and that they do to open their guts, which otherwise were clunged and grown together: and for to prepare their mouths and teeth again to eat, they whet and set the edge of them with the yong shoots and tendrons of the briers and brambles. Subiect they are many times to dimnesse of sight: for which cause especially they seek after hony combs, that the bees might settle vpon them, and with their stings make them bleed about the head, and by that means discharge them of that heauinesse which troubleth their eies. The Lions are not so strong in the head, but beares bee as weak and tender there: and therefore when they be chafed hard by hunters, & put to a plunge, ready to cast themselves headlong from a rocke, they couer and arme their heads with their fore-feet and pawes, as it were with hands, and so jump downe: yea and many times, when they are baited in the open shew-place, we haue known them laid streaking for dead with one cuffe or box of the eare giuen them with a mans fist. In Spain it is held for certain, that in their brain there is a venomous qualitie; and if it be taken in drinke, driueth men into a kind of madnesse, so as they will rage as if they were bears: in token whereof, whensoever any of them be killed with baiting, they make surework and burn their heads all whole. When they list, they will go on their two hinder feet vp right; they creep down from trees backward: when they fight with bulls, their manner is to hang with all their foure feet, about their head and hornes, and fowith the very weight of their bodies wearie them. There is not a liuing creature more craftie and foolish withall, when it doth a shrewd turne. We finde it recorded in the *Annales of the Romans*, that when *M. Piso* and *M. Messalawere* Consuls, *Domitius Anobarbus* an *Edile Curule*, vpon the 14 day before the Calends of October, exhibited 100 Numidian beares to be baited & chafed in the great Cirque, and as many *Ethiopian* hunters. And I maruell much, that the *Chronicle* nameth Numidian, since it is certain, that no beares come out of Africke.

CHAP. XXXVII.

¶ Of the Rats of Pontus, and the Alps: also of Vrchins and Hedge-hogs.

THE Rats of Pontus, which be onely white, come not abroad all winter: they haue a most fine and exquisite taste in their feeding; but I wonder how the authours that haue written this, should come to the knowledge of so much. Those of the Alps likewise, *i. Marmotanes*, which are as bigge as Brocks or Badgers, keepe in, during winter: but they are provided of

A of victuals before hand which they gather together and carry into their holes. And some say, when the male or female is loden with grasse and herbs, as much as it can comprehend within all the foure legges, it lieth vpon the backe with the said prouision vpon their bellies, and then commeth the other, and taketh hold by the taile with the mouth, and draweth the fellow into the earth: thus doe they one by the other in turnes: and hereupon it is, that all that time their backs are bare and the haire worne off. Such like *Marmotanes* there be in *Egypt*; and in the same manner they sit ordinarily vpon their buttocks, and vpon their two hinder feet they goe, vning their fore-feet in stead of hands.

Hedgehogs also make their prouision before-hand of meat for winter, in this wise. They wal-low and roll themselves vpon apples and such fruit lying vnder foot, and so catch them vp with their prickles, & one more besides they take in their mouth, & so carry them into hollow trees. By stopping one or other of their holes, men know when the wind turneth, and is changed from North to South. When they perceiue one hunting of them, they draw their mouth and feet close together with all their belly part, where the skin hath a thin downe and no prickles at all to do harme, and so roll themselves as round as a foot-ball, that neither dog nor man can come by any thing but their sharpe-pointed prickles. So soon as they see themselves past all hope to escape, they let their water go & pisse vpon themselves. Now this vrine of theirs hath a poisonous qualitie to rot their skin and prickles, for which they know well enough that they be chafed and taken. And therefore it is a secret and speciall policie, not to hunt them before they haue let their vrine go; and then their skin is very good, for which chiefly they are hunted: otherwise it is nought euer after, and so rotten, that it will not hang together, but fall in pieces: al the prickles shed off, as being putrified, yea although they should escape away from the dogs and liue still: and this is the cause that they neuer bepisse and drench themselves with this pestilent excrement, but in extremitie & vtter despaire: for they cannot abide themselves their owne vrine, of so venomous a qualitie it is, & so hurtfull to their own body; and do what they can to spare themselves, attending the vtmost time of extremitie, inso much as they are ready to be taken before they do it. When the Vrchin is caught aliue, the deuise to make him open again in length, is to besprinkle him with hot water; and then by hanging at one of their hinder feet without meat they die with famine: otherwise it is not possible to kill them and saue their case or skin. There be writers who bash not to say, That this kinde of beast (where not those prickles) is good for nothing, and may well be missed of men: and that the soft fleece of wooll that sheepe bear, but for these prickles were superfluous & to no purpose bestowed vpon mankind: for which the rough skin of these Vrchins, are brushies & rubbers made to brush & make cleane our garments. And in very truth, many haue gotten great gain & profit by this commodity & merchandise, and namely, with their crafty deuise of monopolies, that all might passe through their hands only: notwithstanding there hath not bin any one disorder more repressed and reformation sought by sundry edicts and acts of the Senate in that behalfe: euery prince hath been continually troubled hereabout with grieuous complaints out of all prouinces.

CHAP. XXXVIII.

¶ Of the Leontophons, the Onces, Badgers, and Squirrels.

Two other kinds there be of beasts, whose vrine worketh strange and wonderfull effects. The one is called *Leontophonos*, and he breeds in no country but where there be lions: a little creature it is, but so venomous, that the lion (king of beasts, before whom all others tremble) for all his might and puissance, dieth presently if he taste neuer so little thereof. And therefore they that chase the lion, get all the *Leontophones* that they can come by, burne their bodies, and with the powder of them bestrew & season as it were the pieces of other flesh that they lay for a bait in the Forrest, and thus with the very ashes (I say) of his enemy, kill him: and deadly and pernicious is it to the lion. No maruile therefore if the lion abhor & hate him, for so soon as he espieth him, he crushes him with his pawes, and so killeth him without setting tooth to his body. The *Leontophone* for his part againe, is as ready to bedrench him with his vrine, knowing right well that his pisse is a very poison to the Lion.

In those countries were the Onces breed, their urine (after it is made) congealeth into a certain ycie substance, & waxes drie, & so it comes to be a certain pretious stone like a carbuncle, glit-

Or rather instead of teeth that sharme men vic.

glittering and shining as red as fire, and called it is *Lyncurium*. And vpon this occasion many haue writtē, that Amber is ingendred after the same maner. The Onces knowing thus much, for very spight and enuie, couer their vrine with mold or earth, and this maketh it so much the sooner to harden and congeale.

The Grayes, Polcats, or Brocks, haue a cast by themselves, when they be affraid of hunters: for they will draw in their breath so hard, that their skin being stretched and puffed vp withall, they will auoid the biting of the hounds tooth, and checke the wounding of the hunter; so as neither the one nor the other can take hold of them.

The Squirrels also foresee a tempest comming, and where the wind will blow: for looke in what corner the wind is like to stand, on that side they stop vp the mouth of their holes, and make an ouerture on the other side against it. Moreouer, a goodly broad bush taile they haue, wherewith they couer their whole body. Thus you see how some creatures prouide victuals against winter, others battle and feed with sleepe onely.

CHAP. XXXIX.

¶ Of the Viper, Land-winkles or Snailles, and Lizards.

Of all other serpents, it is said, that the Viper alone lies hidden in the ground during winter, whereas the rest keepe within crannies and clefts of trees, or else in the hollow chinkes of stones: and otherwise they are able to endure hunger a whole yeere, so they be kept from extreame cold: All the while during their retreat and lying close within, they sleepe as if they were dead and deprived of their power to poyson.

In like manner do Perwinkles and Snailles; but not onely in the winter season, but in Summer againe they lie still, cleauing so hard to rocks & stones, that although by force they be plucked off and turned with their bellies vpward, yet they will not out of their shell. In the Baleare Islands there be a kinde of them called *Cauaticæ*, which neuer creepe out of their holes within the ground, neither liue they of any grasse or greene herbe, but hang together like clusters of grapes. Another sort there is of them, but not so common, hiding themselves within the couer of their shell, sticking euer fast vnto them: these lie alwaies vnder the ground, and were in times past digged vp onely about the Alpes, along the maritime coasts: but now of late they be discovered in Veliternum also, where men begin to get them out of the earth. But the best of them all and most commendable, are those in the Island *Astypelæa*.

As touching Lizards (deadly enemies to the Snailles or Winkles above-named) men say they liue not aboue six moneths. In Arabia, the Lizards be a cubit in length: and in the mountain Nifa of India, they be foure and twenty foot long; some tawnie, some light red, and others blew of colour.

CHAP. XL.

¶ Of Dogges.

Among those domesticall creatures that conuersed with vs, there be many things worth the knowledge: and namely, as touching dogges (the most faithfull and trustie companions of all others to a man) and also horses. And in very truth, I haue heard it credibly reported, of a dogge, that in defence of his master, fought hard against theues robbing by the high way side: & albeit he were forewounded euen to death, yet would he not abandon the dead body of his master, but draue away both wild foule and sauage beast, from seizing of his carcasse. Also of another in Epirus, who in a great assembly of people knowing the man that had murdered his M^r. flew vpon him with open mouth, barking and snapping at him so furiously, that he was ready to take him by the throat, vntill he at length confessed the fact that should cause the dog thus to rage and some against him. There was a king of the Garamants exiled, and recovered his royall state againe by the meanes of 200 dogges that fought for him against all those that made resistance, and brought him home maugre his enemies, The Colophonians and Castabaleans, maintained certain squadrons of mastiue dogs, for their war seruice: and those were put in the vaward to make the head and front of the battell, and were neuer knowne to draw back and refuse fight. These were their trustiest auxiliaries and aid-soldiers, and neuer so needye

as

as to call for pay. In a battell when the Cimbrians were defeated and put all to the sword, their dogges defended the baggage, yea, and their houses (such as they were) carried ordinarily vpon charriots. *Iason* the Lycian had a dogge, who after his master was slaine, would neuer eat meate, but pined himselfe to death. *Duris* maketh mention of another dogge, which he named *Hircanus*, that so soone as the funerall fire of king *Lyfimachus* his master was set a burning, leapt into the flame. And so did another at the funerals of king *Hiero*. Moreouer, *Phylistus* reporteth as strange a story of king *Pyrrhus* his dogge: as also of another belonging to the tyrant *Gelo*. The Chronicles report of a dog that *Nicomedes* king of Numidia kept, which flew vpon the queene *Consingis* his wife, & al to mangled and worried her, for toying and dallying ouerwantonly with the king her husband. And to goe no farther for examples, euen with vs here at Rome, *Voleatius* a noble gentleman (who taught *Cecilius* the ciuile law) as he returned home one euening late, riding vpon an hackney from a village neere the citie, was assailed by a theefe on the high way, but he had a dog with him that saued him out of his hands, *Celcius* likewise, a Senator of Rome, lying sicke at Plaifance, chanced to be assailed by his enemies, well appointed and armed; but they were not able to hurt and wound him, by reason of a dog that he had about him, vntill such time as they had killed the said dog. But this passeth al, which happened in our time, and standeth vpon record in the publicke registers, namely, in the yeere that *Appius Iunius* and *P. Silus* were Consuls, at what time as *T. Sabinius* and his seruants were executed for an outrage committed vpon the person of *Nero*, sonne of *Germanicus*: one of them that died had a dog which could not be kept from the prison dore, and when his master was throwne down the staires (called *Scala Gemonia*) would not depart from his dead corps, but kept a most pittieous howling and lamentation about it, in the sight of a great multitude of Romanes that stood round about to see the execution and the manner of it: and when one of the companie threw the dogge a peece of meat, he straightwaies carried to the mouth of his master lying dead. Moreouer, when the carcasse was thrown into the riuer *Tiberis*, the same dog swam after, & made all the means he could to beare it vp afoote that it should not sink: and to the sight of this spectacle and fidelitie of the poore dogge to his master, a number of people ran forth by heapes out of the citie to the water side. They be the onely beasts of all others that know their masters; and let a stranger vnknown be come neuer so suddenly, they are ware of his comming, and will giue warning. They alone know their owne names, and all those of the house by their speech. Be the way neuer so long, and the place from whence they came neuer so farre, they remember it, and can go thither againe. And surely, setting man aside, I know not what creature hath a better memorie. As furious and raging as they be otherwhiles, yet appeased they will be and quieted, by a man sitting down vpon the ground. Certes, the longer we liue, the more things we obserue & marke still in these dogges. As for hunting there is not a beast so subtle, so quick, & so fine of sent, as is the hound: he hunteth and followeth the best by the foot, training the hunter that leads him by the collar and leash, to the very place where the beast lieth. Hauing once gotten an eie of his game, how silent & secret are they notwithstanding? and yet how significant is their discouerie of the beast vnto the hunter? first with wagging their taile, and afterwards with their nose and snout, snuffing as they doe. And therefore it is no maruell, if when hounds or beagles be ouer old, wearie, and blind, men carry them in their armes to hunt, for to wind the beast, and by the verie sent of the nose to shew and declare where the beast is at harbour. The Indians take great pleasure to haue their salt bitches to be lined with tygres: and for this purpose, when they goe proud, they couple and tie them together, and so leaue them in the woods for the male tygres: howbeit they reere neither the first nor second litter of them, supposing that the dogs thus bred, will be too fierce and eger, but the third they nourish and bring vp. Semblably, thus doe the Gauls by their dogges that are ingendred of wolues: and in euery chace and Forrest there be whole flockes of them thus ingendred, that haue for their guide, leader, and captain, one dogge or other: him they accompanie when they hunt; him they obey and are directed by: for surely, they keepe an order among themselves, of gouernment and mastership. This is knowne for certaine, that the dogges which be neere vnto Nilus, lap of the riuer, running still and neuer stay while they are drinking, because they will giue no vantage at all to be a prey vnto the greedie Crocodiles. In the voiage that *Alexander* the Great made into India, the king of Albania gaue him a dogge of an huge and extraordinarie bignesse. And *Alexander* taking great delight and contentment to see so goodly and so faire a dogge, let loofe vnto him first Beares, afterwards

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wild

wild Bores; and last of all, fallow Deere. But this dog making no reckoning of all this game, lay still couchant, and neuer stirred nor made at them. This great Commander *Alexander*, a man of mighty spirit and high mind, offended at the laziness and cowardise of so great a bodie, commanded that he should be killed, and so he was. Newes hereof went presently to the king of Albanie. Whereupon he sent vnto him a second dog, with this message, That he should not make triall of this too against such little beasts, but either set a Lion or an Elephant at him: saying moreover, that hee had in all but those two of his kinde: and if hee were killed likewise, hee were like to haue no more of that race and breed. *Alexander* made no stay, but presently put out a Lion, and immediately he saw his backe broken and all to rent and torne by the dog. Afterwards he commanded to bring forth an Elephant, and in no sight tooke he greater pleasure, than in this. For the dog at the first with his long rough shagged haire, that ouerspread his whole bodie, came with full mouth thundering (as it were) and barking terribly against the Elephant. Soon after he leaped and flieth vpon him, rising and mounting against the great beast, now of one side, then of another: maintaining combat right artificially, one while assailing, another while auoiding his enemy: and so nimble he bestirreth him from side to side, that with continuall turning about to and fro, the Elephant grew giddie in the head, in so much as he came tumbling downe, and made the ground to shake vnder him with his fall. Bitches breed and beare young euery yeere lightly once: and the due time for them to be with whelpes is when they are full a yeere old. They goe with young threescore daies. Their puppies come blinde into the world: and the more milke they sucke, the later it is ere they receiue their sight: but as it is neuer above twenty daies ere they see, so they open not their eyes vnder seven daies old. Some say, that if a bitch bring but one at a litter, it will see by nine daies: if twaine, it will be ten daies first: and the more puppies she hath, the more daies it will be in that proportion ere they see. Moreover, that the bitch-whelpes that commeth of the first litter, see strange bugs and goblins. The best of the whole litter is that whelpes that is last ere it begin to see: or else that which the bitch carries first into her kennell. The biting of mad dogs are most dangerous to a man, as we haue said before, especially during the dog-daies, while the dog star Syrius is so hot: for they that are so bitten, lightly are affraid of water, which is a deadly signe. To preuent therefore that dogs fall not mad, it is good for thirtie or fortie daies space, to mingle hens or pullins dung especially with their meat: againe, if they be growing into that rage, or tainted already, to giue them Ellebor with their meat.

CHAP. XLI.

¶ Against the biting of a mad Dog.

The sure and soueraigne remedy for them that are bitten with a mad dog, was reuealed lately by way of Oracle: to wit, the root of a wild rose, called the sweet brier or Eglantine. *Columella* writeth, That when a whelpes is iust fortie daies old, if his taile be bitten off at the nethermost joint, and the sinew or string that commeth after, be likewise taken away, neither the taile will grow any more, nor the dog fall euer to be mad. I haue my selfe obserued, that among the prodigies it is reported, how a dog sometime spake, as also that a serpent barked, that yeere when *Tarquinius* the proud was deposed and driuen out of Rome.

CHAP. XLII.

¶ Of Horses, and their nature.

The same *Alexander* the Great, of whom ere-while we spake, had a very strange and rare horse, whom men called Bucephalus, either for his crabbed and grim looke, or else of the marke or brand of a bulls head, which was imprinted vpon his shoulder. It is reported, that *Alexander* being but a child, seeing this faire horse, was in loue with him, and bought out of the breed and race of *Philonicus* the Pharfalian, and for him paid sixteene talents. He would suffer no man to sit him, nor come vpon his backe, but *Alexander*; and namely, when he had the kings saddle on, and was also trapped with roiall furniture: for otherwise he would admit any whomsoever. The same horse was of a passing good and memorable seruice in the warres: and namely, being wounded vpon a time at the assault of Thebes, he would not suffer *Alexander* to alight

A alight from his back, and mount vpon another, Many other strange and wonderfull things hee did: in regard whereof, when he was dead, the king solemnized his funerals most sumptuously, erected a tombe for him, and about it built a city that bare his name, Bucephalia. *Cesar* Dictator likewise had another horse that would suffer no man to ride him but his maister: & the same horse had his forefeet resembling those of a man: and in that manner he stands pourtraied before the temple of *Venus*, Mother. Moreover, *Augustus Caesar*, late Emperour of famous memory, made a sumptuous tombe for an horse that he had, whereof *Germanicus Caesar* compiled a poeme. At *Agrigentum* there be seen Pyramids ouer many places where horses were entombed. *Iuba* reporteth, That queene *Semiramis* loued a great horse that she had, so far forth, that she was content he should doe his kind with her. The Scythians verily take a great pride and glorie much in the goodnes of their horses and Caualerie. A king of theirs happened in combat and single fight vpon a challenge to be slain by his enemy, and when he came to despoile him of his armes and roiall habit, the kings horse came vpon him with such furie, flinging and laying about him with his heeles, and biting withall, that he made an end of the conquerour champion. There was another great horse hoodwinked because he should couer a mare: but perceiuing after that he was vnhooded that he serued as a stallion to his own dam that, soled him, ran vp to a steep rock with a downfall, and there for grieffe cast himselfe down and died. We find also in record, That in the territorie of Reate there was a mare killed & all to rent an horsekeeper vpon the same occasion. For surely these beasts know their parentage, & those that are next to them in blood. And therefore we see that the colts will in the flocke more willingly keep company and fort with their sisters of the former yere, than with the mare their mother. Horses are so docile, and apt to learne, what we find in histories, how in the army of *Sibaritanes*, the whole troupe of horsemen had their horses vnder them, and vsed to leap and daunce to certaine musike that they were wonted and accustomed vnto. They haue a fore-knowledge when battell is toward, they will mourne for the losse of their maisters: yea, and other whiles shed teares and weep pitifully for loue of them. When king *Nicomedes* was slaine, the horse for his owne saddle, would neuer eat meat after, but for very anguish died with famine. *Philarchus* reporteth, That king *Antiochus* hauing in battaile slaine one *Centaretus*, a brave horsman of the Gallogreeks or Galatians, became maister of his horse, and mounted vpon him in triumphant wise: But the horse of him that lay dead in the place, and vpon whom *Antiochus* was mounted, for very anger and indignation at this indignitie, passed neither for bit nor bridle, so as he could not be ruled; and so ran furiously among the craggies and rocks, where both horse and man came downe headlong, and perished both together. *Philistus* writeth, That *Dyonisius* was forced to leaue his horse sticking fast in a quae-mire, and got away: but the horse after he had recovered himselfe, and was gotten forth, followed the tracks of his master, with a swarm or cast of bees serling in his mane: and this was the first presage of good fortune that induced *Denis* to vsurp the kingdome of Sicilie. Of what perceiuaunce and vnderstanding they be, it cannot be exprest: & that know those light horsmen full well that vse to launce darts and iauelines from horseback, by the hard seruice that they put their horses to; which they doe with great dexteritie & resolution in straining, winding, and turning their bodies nimble euery way. Nay, ye shall haue of them to gather vp darts and iauelines from the ground, and reach them againe to the horsman. And commonly we see it to be an ordinary matter with them in the great race or shew place, when they are set in their geirs to draw the chariots, how they ioy when they are encouraged and praised; giuing no doubt a great prooffe, and confessing that they are desirous of glorie. At the secular solemnities, exhibited by *Claudius Caesar*, in the Circensian games, the horses with the white liuery (notwithstanding their driuer and gouernour, was cast and flung to the ground even within the bars) wan the best prize & went away with the honour of that day. For of themselves they brake and bare down whatsoeuer might impeach them of running the race thoroughout: they did all that euer was to be done against their concurrents and aduersaries of the contrarie side, as well as if a most expert chariot-man had been ouer their backes to direct and instruct them. At the sight whereof, men were ashamed to see their skill & art to be ouermatched & surmounted by horses. And to conclude, when they had performed their race, as much as by law of the game was required, they stood still at the very goale, and would no farther. A greater wonder and presage was this in old time, that in the Circensian games exhibited by the people, the horses after they had flung and cast their gouernour, ran directly vp to the Capitol, as well as if he

had stood still in his place, and conducted them; and there fetcht three turnes round about the temple of *Iupiter*. But the greatest of all was this which I shall now tell, That the horses of *Ratumenus*, who had won the price in the horse-running at *Veij*, threw their M^r. down; and came from thence, euen out of *Tuscane*, as far as to the foresaid Capitoll, carrying thither the *Palme* branch and chaplet of *Victory* won by *Ratumenus* their M^r. of whom the gate *Ratumena* took afterwards the name at *Rome*. The *Sarmatians* minding to take a great iournie, prepare their horses two daies before, and giue them no meat at all, only a little drinke they allow them, and thus they will ride them gallop 150 miles an end, and neuer draw bridle. Horses liue many of them 50 yeres, but the mares not so long. In fūe yeres they come to their full growth, whereas stone horses grow one yere longer. The making of good horses indeed, and their beautie, such as a man will chuse for the best, hath bin most elegantly and absolutely described by the Poet *Virgill*. And somewhat also haue I written of that argument, in my booke which I lately put forth, as touching *Tournois* and shooting from horsebacke: and in those points required, and there set downe, I see all writers in manner to agree. But for horses that must be trained to run the race, some considerations are to be had and obserued, different from horses of other vse and seruice. For whereas to other affaires and imployments they may be brought when they are two yeres old colts, and not vpwārd; to the *Lits* they must not be brought to enter into any maistris there, before they be full fūe yeres of age. The female in this kind go eleuen months compleat with young, and in the twelfth they foale: commonly the stallion and the mare are put together, when both of of them are full two yeres old: and that about the Spring *Equinocti- all*, that is to say, in mid-March: but if they be kept asunder vntill they are full 3 yeres of age, they breed stronger colts. The Stallion is able to get colts vntill he be three and thirtie yers old, for commonly when they haue serued in the race, and run full twenty yeres, they are discharged from thence, & let go abroad for to serue mares. And men say that they will hold to 40 yeres with a little helpe put to the forepart of his body, that he may be lifted vp handfomly to couer the mare. Few beasts besides are lesse able to ingender and leape the female often, nor sooner haue enough of them. For which cause they be allowed some space between euery time that they do their kind. And in one yere the most that the Stallion is able to do that way, is to couer 15 mares, and that is somewhat with the oftenest. If ye would coole the courage, & quench the lust of a mare, share and clipper mane. And yet are mares sufficient to beare euery yere, vntill they came to fortie. It is reported that an horse hath liued 75 yeres. Mares only of all other females, are deliuered of their foles, standing on their feet: but loue them more than any other doe their young. These foles verily, by report, haue growing on their forehead, when they be newly come into the world, a little blacke thing of the bignesse of a fig, called *Hippomanes*, & it is thought to haue an effectuall vertue to procure and win loue. The dam hath not so soon foled, but she bites it off, and eats it her selfe: and if it chance that any bodie prevents her of it, and catcheth it from her, she will neuer let the foal sucke her. The verie smell and sent thereof, if it be stollen away, will driue them into a fit of rage and madnesse. If peradventure a young foal lose the damme, the other mares of the common heard that are milch nurses, giue their teates to this poore orphan, and reare it vp in common. They say that for 3 daies after they be newly foled, the yong colts canot lay their mouth to the ground, and touch it. Moreover, the hotter stomacked that a horse is, the deeper he thrusteth his nose into the water as he drinks. The *Scythians* chuse rather to vse their mares in war-seruice than their stone-horses: the reason is this, that their staling is no hinderance to their pace in running their carriere, as it doth the horse, who must needs then stand still. In *Portugall*, along the river *Tagus*, & about *Lisbon*, certaine it is, that when the west-wind blowes, the mares set vp their tails, and turne them full against it, and so conceiue that genitall aire in steed of naturall seed: in such sort, as they become great withall, and quicken in their time, & bring forth foles as swift as the wind, but they liue not aboue three yeres. Out of the same *Spain*, from the parts called *Gallicia* and *Asturia*, certaine ambling iennets or nags are bred, which wee call *Thieldones*: and others of lesse stature & proportion euery way, named *Asturcones*. These horses haue a pleasant pace by themselves differing from others. For albeit they be put to their full pace, a man shall see them set one foot before another so deftly and roundly in order by turnes, that it would do one good to see it: and hereupon horse-breakers (masters) haue an art by cords to bring a horse to the like amble. A horse is subiect to the same diseases in maner that a man is: & besides, to the running of

A of the bladder: like as all other beasts that labour either in draught or carriage:

CHAP. XLIII.

¶ Of Asse.

Varro writes, That *2. Axius* a Roman Senator bought an Asse which bought him 400000 Sesterces, a price in my conceit aboue the worth of any beast whatsoever: & yet (doubtlesse) he was able to do wondrous good seruice in carrying burdens, plowing of ground, and principally in getting of mules. The chapmen that vse to buy these Asse haue a speciall regard to the place from whence they come, and where they be bred: for in *Achaia* or *Greece* those of *Arcadia* be in greatest request: and in *Italy* those of *Reate*. This creature of all things can worst away with cold; which is the cause that none of them are bred in *Pontus*. Neither do they ingender as other such like beasts, in the Spring *Equinocti- all*, about mid-March, but in mid-Iune, about the time of the Sun-stead, when daies be at the longest. He Asse, the more you spare them in their worke, the worse they are for it. The females are at the least 30 months or two yeres and halfe old before they bring any yong; but 3 yeres is the ordinarie and due time indeed. They go as long as mares, and iust so many moneths, and after the same maner do they foale. But after they be couered, they must be forced to run presently, with beating & laying on them, or else they will let go their seed again, so slippery is their wombe, and so vnapt to keep that which once it hath conceiued. They are seldome seene to bring forth two at once. The she Asse when she is about to foale seeketh some secret blinde corner to hide her selfe, that she might not be seen of any man. She breeds all her life time, which commonly is vntill shee be 30 yeres old. They loue their yong foles exceeding well, but as ill or rather worse can they abide any water. To their little ones they will go through fire, but if there be the least brooke or rill between, they are so afraid of it, that they dare not once dip their feet therein. And verily drinke they will not, but of their accustomed fountaines within the pastures where they vse to go: but they will be sure to chuse their way, and go dry-foot to their drinke, and not wet their hoofs: neither will they go ouer any bridges, where the planks are not so close drawn together and ioyned, but that they may see the water through vnder their feet, or the railes of each side so open that the riuier is seene. A strange nature they haue by themselves. Thirsty they are: but be they neuer so dry, if you change their watering place (as in traouelling vpon the way) they must be forced to drinke with cudgels, or else vnloaden of their burdens. Wherefoeuer they be stabled, they loue to lie at large and haue roome enough. For in their sleep they dream, & haue a thousand phantasies appearing to them; insomuch as they sling about them with their heeles euery way: now if they were not at libertie, and had not void space enough, but should beat against some hard thing in their way, they would soone be lame and halt withall. They be very gainfull and profitable to their masters, yeelding more commoditie than the reuenues of good farme. It is well knowne, that in *Celtiberia* a she Asse ordinarily with very breeding may be worth vnto them 400000 Sesterces. For the soling and bringing forth of the mules, the chief thing to be regarded in the she Asse, is the haire about the eares and eie lids. For howsoeuer the whole body besides be of one and the same colour, yet shall the mules foled haue as many colours as were there, all ouer the skin. *Mecenas* was the first, that at feasts made a daintie dish of yong Asse foles, and preferred their flesh in his time before the venison of wild Asse. But he being dead, they were not thought so good meat, nor accepted at all. If an Asse be seene to die, looke soon after that the whole race and kind of them will follow to the very last.

CHAP. XLIV.

¶ Of Mules.

Between the he Asse and a Mare is a Mule ingendred, and foled in the 12 moneths: a beast of exceeding strength to beare out all labor and trauell. For breeding of such Mules, Mares are chosen that are not vnder foure yeres old, nor aboue ten. Men say, that they will driue away one another in both kinds, and not accompany together, vnlesse they tasted the milk and suckd the damme when they were yong, of that kinde which they would couer. And for this purpose

purpose they vse to steale away either the yong Assc soles, and set them in the dark to the teats of the Mare, or els the yong colts to suck of the she Assc. For there is a kind of Mule also that comes of a stone horse and a female Assc: but of all others they be vntoward and vnruely, and so slow withall, that it is vnpossible to bring them to any good seruice: and much more (as all things else) if they be far in age when they ingender. If when a she Assc hath taken the horse and be sped, there come an Assc and couer her againe, she will cast her fruit vntime, and lose all: but it is not so if an horse couer her after an Assc. It is noted & found by experience, that seuen daies after an Assc hath soled, is the best time to put the male vnto her, and then soonest will she be sped: as also, that the he Asses being wearie with trauel, wil better couer the femals than otherwise being resty. That Assc is held for barren, which is not couered, nor conceiueth, before she haue cast her sucking or soles teeth, whereby the age is known: as also she that standeth not to the first couering, but loseth it. In old time they vsed to call those Hinuli which were begotten betweene a horse and an Assc: and contrariwise Mules, such as were ingendred of an Assc and a Mare. Moreouer this is obserued, that if two beasts of diuers kindes ingender, they bring forth one of a third sort, and resembling none of the parents: also, that such begotten in this maner, what kind of creatures soeuer they be, are themselves barren and fruitles, vnable either to beare or beget yong. And this is the cause that the mules neuer breed. We finde verily in our Chronicles, that oft times Mules brought forth yong soles, but it was alwaies taken for a monstrous and prodigious signe. And yet *Theophrastus* saith, that in Cappadocia ordinarily they do beare and bring forth soles: but they are a kind by themselves. Mules are broken of their flinging and wincing, if they vse often to drinke wine. It is found written in many Greeke authors, that if an he Mule couer a Mare, there is ingendred that which the Latins call Hinnus, that is to say, a little Mule. Between Mares and wild Asses made tame, there is ingendred a kind of Mules very swift in running, and exceeding hard hoofed, lanke and slender of bodie, but fierce and courageous, and vnneeth or hardly to be broken. But the Mule that comes of a wild Assc and a female tame Assc, passeth all the rest. As for wild asses, the very best & floure of them be in Phrygia and Lycaonia. In Africke the flesh of their soles is held for excellent good meat, and such they cal Lalisones. It appeares in the Chronicles of Athens, That a mule liued 80 yeares. And reported thus much there is of it, That when they built the temple within the citadel thereof, this old Mule being for age able to do nothing els, would yet accompanie other Mules that laboured and caried stones thither, and if any were ready to fall vnder their lode, would seeme to relieue and hold them vp, and as it were encourage them to his power: inasomuch as the people tooke for great delight and pleasure therein, that they made a decree and took order, that no corn-masters that bought and sold graine should beat this mule from their ranging fires, when they elensd or winnowed their corne, but that he might eat vnder them.

CHAP. XLV.

Of Buls, Kine, and Oxen.

The Bœufs of India are as high by report as Camels, and foure foot broad they are betwixt the horns. In our part of the world those that come out of Epirus are most commended, and beare the greatest price aboue all others, and namely those which they say are of the race & breed of king *Pyrrhus*, who that way was very curious. For this prince because he would haue a principall good breed, would not suffer the Buls to come vnto the kine and season them before they were both foure yeares old. Mighty big they were therefore, and so they continue of that kind vnto this day. Howbeit, now when they be but heifers of one yeare, or two yeares at the most (which is more tolerable) they are let go to the fellow and breed. Buls may wel ingender and serue kine when they be 4 yeares old; and one of them is able all the yeare long to goe with ten kine and serue their turne. They say moreouer, that a Bull after he hath leapt a Cow, and done his kind, if he go his way toward the right hand, he hath gotten an oxe calfe, but contrariwise a cow calfe if he take the left hand. Kine commonly take at their first seasoning, but if it chance that they misse and stand not to it, the 20 day after they seeke the fellow, and goe a bulling againe. In the tenth moneth they calue, and what soeuer falleth before that terme, neuer proueth nor commeth to good. Some write, That they calue iust vpon the last day of the tenth moneth complete. Seldome bring they forth two calves at a time. Their seasoning time commonly

A commonly continueth 30 daies, namely from the rising of the Dolphin starre, vnto the day before the Nones of Ianuarie: howbeit some there be that go to fellow in Autumne. Certes in those countries where the people liue altogether of milke, they order the matter so, that their kine calue at all times, so as they are not without their food of fresh milke all the yeare long. Bulls willingly leape not about two kine at most in one day. Bœufes alone of all liuing Creatures can graze going backward, and verily among the Gamarants they neuer feed otherwise. Kine liue not about 15 yeares at the vtmost: bulls and oxen come to 20: they be at their full strength when they are 5 yeares old. It is said that they will grow fat if they be bathed with l or water, or if a man slit their hide, and with a reed or pipe blow wind betweene the flesh and the skin, euen into their intrals. Kine, Buls, and Oxen are not to be despised as vnkindely, although they look but illfauredly, and be not so faire to the eie; for in the Alpes the least of bodie are the best milch kine: and the best laboring oxen are they which are yoked by the head, and not the neck. In Syria they haue no dewlaps at all hanging vnder the necke, but bunches standing vp on their backs in stead thereof. They of Caria also, a country of Asia, are illfaured to sight, hauing betweene their neckes and shoulders a tumor or swelling hanging ouer; besides, their horns are loose, and as it were out of joint; and yet by report they are passing good of deed, and labor most stoutly. Furthermore, it is generally held for certain, that the black or white in this kind are simply the worst for work, and condemned. Buls haue lesser and thinner horns than either Kine or Oxen. The best time to bring the Oxe or Bull to the yoke, and make him draw, is at 3 yeares of age; after, it is too late; and before, with the soonest. A yong Stere is soonest trained and taught to draw, if he be coupled in one yoke with another that hath bin wrought already, and beaten to his work: for this beast is our companion, and labors together with vs, in earing and plowing the ground: and so highly regarded was the Oxe in old time of our forefathers, that we find it registred vpon record, That a certain Roman was judicially endited, accused, and condemned by the people of Rome, for that (to satisfie the minde of a wanton minion) he had killed an Oxe, yea although he was his one; and for this fact was banished, as if he had slain his Grangier, or Bailif of his husbandry. Buls are known to be of a good kind & courageous, by their fierce and grim countenance, for they alwaies looke crabbed and frowning; their eares are ouergrown with stiffe haire, and their hornes so standing, as if they were euer disposed and ready to fight: but all his threatening and menaces appeare in his fore-feet; with them he giues warning, and as he is more and more angry, he bestirs himselfe now with the one foot, then with another, in course and by turnes, stamping and pawing with them against the ground, raising and flinging the dust about him aloft into the aire: and of all other beasts, hee alone after this maner inchafeth himselfe, and giues an edge vnto his anger. I my self haue seen them fight one with another for the maste: I haue seen them, being turned and swong round about in their sal, caught vp with the hornes of others, and yet rise againe & recouer themselves: I haue seene them lying along to be raised aloft from the ground; and when they haue run all amain with full pace, galloping in their chariots, yet staid and stood still when they should, as if the charioters had caused them to rest. The Theffalians were they who deuised with prauncing horse to ride gallop close to the Buls head to take them by the horne, wryth their neckes down, and so kill them. The first that exhibited this pleasant shew to the people at Rome was *Cesar* Dictator. The Bull yeeldeth the principal and most sumptuous sacrifice of all other vnto the gods, and therewith are they best pleased. This beast alone, of all that are long tailed, when it first comes into the world, hath not the taile of the full measure and perfect length as others, but it growes still, till it reach down to the very heels, and touch the ground. And hereupon it is, that in chusing calves for sacrifice, those are allowed for good and sufficient, whose taile reacheth to the joint of the haugh or gambrell: for if it be shorter, they will not be receiued & accepted of the gods. This also is noted by experience, that calves so little, that they be brought on mens shoulders to the altars to be killed, lightly are not sufficient to appease the gods. Neither are they pacified & well pleased with a beast that is lame or maimed, nor with that which is not appropriat vnto them, but to some other gods; ne yet with it that reules from the altar, and is loth to come to it. In the prodigies that we reade of ancient times, we find very oft, that Kine and Oxen haue spoken: vpon report of which strange token, the Senat was euer wont to assemble in some open place abroad, and not to sit either in hall or chamber.

CHAP. XLVI.

¶ Of the Bœufe or Oxe named *Apis*.

IN Egypt also they had an Oxe which the people of that country adored and worshipped as a god, vnder the name of *Apis*. This beaſt was marked in this manner; with a white ſpot on his right ſide, like to the horns or tips of the new moon croiſſant; a knot or bunch vnder the tongue, which they called *Cantharus*: by their religion it was not lawfull to ſuffer him to liue about a certain number of yeres, at the end of which term they drown him in a certain Wel or fountain of their prieſts, and ſo ſhorten his life: and then with great ſorrow fall to ſeek another to ſubſtitute in his place; vntill they find him they mourne and waile, and in token of grief and ſorrow, they ſhaue their heads. But long they neuer are before they meet with another, & when they haue him, he is by the prieſts brought to Memphis, where he hath 2 Temples, which they call *Thalami*, i. bed-chambers; out of which all the people of Egypt, as from an Oracle, are informed truly of things to come. For if this Oxe enter into the one of them it is a good luckie ſigne; but if he go into the other, then it portendeth great miſhap and infortunitie. And theſe be generall preſages to the whole nation. As for priuat perſons, he foretelleth them of things to come by the maner of taking meat at their hands, who come to know what fortune they ſhal haue. He turned away his head from the hand of *Germanicus Caſar*, and would eat no meat when he offered it him; but he died for it, and that not long after. He is kept ſecreſt and cloſe for the moſt part: but if at any time he get forth and come abroad to be ſeen of the multitude of people, he goeth with a gard of tip ſtaues to make way for him, and then a company of prety boies go chanting before him canticles and ſongs in his honour and praiſe: for it ſeemeth that he taketh heed to what they ſing, and is well pleaſed and contented thus to be worſhipped. Now theſe Chorifiers beforeſaid preſently fall into a kinde of furious rage, and withall are inſpired with the gift of prophesie, and ſo foretell what will enſue. Once a yere there is preſented vnto him a Cow, which hath marks likewiſe as he hath, but differing from his: and alwaies on what day this cow is found, the ſame day, by report, it dies. At Memphis there is a place within Nilus, which the inhabitants name *Phiola*, becauſe it is made in faſhion of a pot or boll; & therein duly euery yere the Egyptians drowne two cups, one of ſiluer, another of gold, during ſeuē daies, dedicated to ſolemnize the natiuitie of their god *Apis*. And this is one thing to be wondered at, that in that ſeuē-night ſpace there is not one that taketh hurt by Crocodiles: but let the eighth day come once, within ſix houres they returne to their former miſchieuous cruelty

CHAP. XLVII.

¶ The nature of Sheepe, and their breeding.

Sheepe likewiſe are in great requeſt, both in regard they ſerue as ſacrifices to pacifie the gods; and alſo by reaſon their fleece yeelds ſo profitable an uſe: for euen as men are beholden to the boeufe for their principall food and nourishment which they labour for, ſo they muſt acknowledge, that they haue their cloathing and couerture for their bodies from the poore ſheep. The ram and ewe both are fit for generation from two yeres of age vpwārd, vntill they come to nine, and ſome alſo vntill they be ten yeaes old. The lambes they yeaen firſt are but little ones. They go all generally to rut about the ſetting of *Arcturus*, viz. vpon the third day before the Ides of May; and their heat laſteth vnto the full of the *Ægle* ſtarre, namely the tenth day before the Calends of Auguſt. They be with yong 150 daies: if any take the Ram after that time, the fruit they beare comes to no good, but proues weake. And ſuch lambes as fall after that ſeaſon they called in old time *Cordos*, i. later lambes. Many men do preferre theſe winter lambes before thoſe that come in ſpring: the reaſon is, becauſe it is much better they ſhould be ſtrong before the heat of ſummer and the long daies, than againſt the cold of winter and the ſhortest daies: and they think that this creature only taketh good by being yeaened in the miſt of winter. It is kinde and naturall for Rams to make no account of young Hogrels, but to loath them: for they had rather follow after old ewes. Himſelfe alſo is better when he is old, and more luſty to leape the Ewes. To make him more milde and gentle they uſe to bore

A bore his horne about the root neere vnto his eares. If his right cullion or ſtone be tied vp, hee getteth ewe lambes; but if the left be taken vp, hee getteth ramme lambes. If ewes be alone by themſelues without the ſlocke when it thundreth, they caſt their lambes. The only remedie is to gather them together, that by company and fellowſhip they may haue help. They ſay, that if the North winds blow when they take the ram, they will bring forth males; but if the South winds be vp, females. Moreouer, great regard there is had in this kind, to the mouthes of the rams: for look what colour the veines be vnder their tongue, of the ſame will the fleece be of the lambes, that is to ſay, of ſundry colours, in caſe the veines were diuers coloured. Alſo the change of water and drinckes maketh them to alter their hew. In ſumme, two principall kinds there be of ſheep, that is to ſay, the one reared within houſe, and the other abroad in the field: the firſt is the tenderer, but the other more pleaſant meat and delicat in taſt; for thoſe within-houſe feed vpon briers and brambles. The clothes and couerings made of the Arabick wooll, are chiefe of all.

CHAP. XLVIII.

¶ Diuers kinds of wooll and clothes.

THe beſt wooll of all other, is that of *Apulia*: then, that which in Italy is named the Greek ſheepes wooll, but in other countries is named Italian. In the third ranke, the Mileſian ſheep and their wooll, carrie the prize. The wooll of *Apulia* is of a ſhort ſtaple, and ſpecially in requeſt for cloaks and mantles, and nothing elſe. About *Tarentum* and *Canuſium*, the richeſt of this kind are found: alſo at *Laodicea* in *Aſia*. As for whitenesse, there is none better than that which groweth along the *Po*, namely, about *Piemont* and *Lombardie*: and yet neuer to this day, a pound of it hath exceeded the price of an hundred ſeſterces. In all places they uſe not to ſheare ſheep: for the manner of plucking their ſells continueth ſtill in ſome countries. Sundry ſorts of colours there be in wooll, and ſo many, that we are not able to giue ſeueral names ſo much as to thoſe that we call *Natiue*, i. growing vpon the ſheeps backe. For black fleeces, *Spaine* is chiefe, *Pollentia* for white; and *G.ey*, the tract of *Piemont* neere to the *Alpes*: *Aſia* for red hath no fellow, and ſuch kind of wools are called *Erythraæ*. In *Bœtia* likewiſe, that is to ſay, in the kingdome of *Granade* and *Andaluſia*, the ſame colour is to be found. Neere to *Canuſia*, the ſheep be deepe yellow or tawnie: and about *Tarentum*, they are of a browne and duſkiſh colour. Generally, all kind of wools newly ſhorne or plucked, vnwaſht and greaſy ſtill, be good and medicinable. About *Iſtria* and *Liburnia*, the ſheeps fleece reſembleth haire rather than wooll, nothing at all good for to make frized clothes with a high nap: but ſerueth only for the Artizan or workman in *Portugall*, whoſe artificial weauing in net or ſcutcheon work with ſquares, commends this wooll. The like wooll is common about *Piſſenæ* in the prouince *Narbonenſis*, i. *Languedoc* in *Fraunce*: and ſuch is found in *Ægypt*: the cloth made thereof, after it is worne bare, is then died and ſerueth new againe, and will weare ſtill and laſt a mans life. The coarſe rough wooll with the round great haire, hath been of ancient time highly commended and accounted of in tapeſtrie worke: for euen *Homer* himſelfe witneſſeth, that they of the old world uſed the ſame much, and tooke great delight therein. But this tapeſtry is ſet out with colours in *Fraunce*, after one ſort, and among the *Parthians* after another. Moreouer, wooll of it ſelfe driuen together into a felt without ſpinning or weauing, ſerueth to make garments with: and if vinegre be uſed in the working of it, ſuch felts are of good proof to bear off the edge and point of the ſword, yea and more than that, they will check the force of the fire. And the laſt clenſing and reſuſe thereof (when it is taken out of the coppers and leads of thoſe that haue the ſulling and dreſſing thereof) ſerueth for flock-worke and to ſtuſſe matreſſes: an inuention (as I ſuppoſe) which came firſt out of *France*: for ſurely theſe flocks and quilted matreſſes, are at this day diſtinguiſhed and knowne one from another by French names. But I am not able eaſily to ſet downe at what time firſt this workmanſhip began: for certaine it is that in old time men made them pallets and beds of ſtraw, or elſe lay vpon bare mats, like as now adays ſouldiers in the camp make ſhift with hairy rugges. As for our mantles, frized deep both without and within, they were inuented & came to uſe firſt, no longer ſince than in my fathers daies: as alſo theſe hairy counterpoints and carpets. For the ſtudded caſſocks that Senatours and noble men of *Rome* do weare, begin but now for to be wouen after the manner of deep frieze rugges. Wooll that is blacke, will take no other hew, nor be dyed into any colour.

As

As touching the manner how to die other woolls, we wil speake in conuenient place, namely, **G** when we shall treat of the purples and sea shell fishes, and of certain hearbs good for that purpose. *M. Varro* writeth, That within the temple of *Sanguis*, there continued vnto the time that he wrote his booke, the wooll that ladie *Tanaquil*, otherwife named *Cata Cacia*, spun: together with her distaffe and spindle: as also, within the chappell of Fortune, the very roiall robe or mantle of Estate, made with her owne hands after the manner of water-chamlot in waue worke, which *Seruius Tullus* vsed to weare. And from hence came the fashion & custome at Rome, that when maidens were to be wedded, their attended vpon them a distaffe, drest and trimmed with kembd wooll, as also a spindle and yeare vpon it. The said *Tanaquil* was the first that made the coat or cassock wouen right out all thorough, such as new beginners (namely, young souldiers, barristers, & fresh brides) put on vnder their white plaine gownes, without any guard of purple. **H** The waued water Chamelot, was from the beginning esteemed the richest and brauest wearing. And from thence came the branched damaske in broad workes. *Fenestella* writeth, That in the latter time of *Augustus Caesar* they began at Rome to vse their gownes of cloth shorne, as also with a curled nap. As for those robes which are called Crebrae and Papaueratae, wrought thick with floure-worke, resembling poppies, or pressed euen and smooth; they be of greater antiquitie: for euen in the time of *Lucilius* the Poet, *Torquatus* was noted and reprooued for wearing them. The long robes embroidered before, called *Prætextæ*, were deuised first by the *Tuscanes*. The *Trabæ* were roiall robes, and I find that kings & princes only ware them. In *Homers* time also they vsed garments embroidered with imagerie and floureworkes: & from thence came the triumphant robes. As for embroidery it selfe and needle-work, it was the *Phrygians* inuention: **I** and hereupon embroiders be called in Latine *Phrygiones*. And in the same Asia, king *Attalus* was the first that deuised cloth of gold: and thence come such clothes to be called *Attalica*. In Babylon they vsed much to weaue their cloth of diuers colours, and this was a great wearing among them, & clothes so wrought were called *Babylonica*. To weaue cloth of tiffue with twisted threads both in woofe and warp, and the same of sundry colours, was the inuention of *Alexandria*, and such clothes and garments were named *Polymita*. But France deuised the scutchion, square, or lozenge damask-work. *Metellus Scipio*, among other challenges and imputations laid against *Capito*, reproched and accused him for this, That his hanging s and furniture of his dining chamber, being Babylonian worke or cloth of Arras, were sold for 800000 sesterces: and such like of late daies stood prince *Nero* in 400 hundred thousand sesterces, i. 40 millions. **K** The embroidered long robes of *Seruius Tullus*, wherewith he couered and arraied all ouer the Image of Fortune, by him dedicated, remained whole and found vnto the end of *Seianus*. And a wonder it was, that they neither fell from the image, nor were moth-eaten in 560 yeares. I haue my selfe seen the sheeps fleeces vpon their backs while they be aliue, died with purple, with scarlet in grain, and the violet liquor of the fish *Murex*: by the means of certaine barks of a foot and a halfe long dipped in these colors, and so imprinted and set vpon their fleeces: as if riotous wantonnes and superfluitie should force Natures work, and make wooll to grow of that colour. As for the sheep it selfe, she is knowne to be kindly enough by these marks, If she be short legged, and wel woollled vnder the bellie, for such as were naked there and pilled, they condemned and held for naught, and those they called *Apicæ*. In Syria, sheep haue tailes a cubit long, and they beare most wooll there. To lib lambs before they be fve moneths old, it is thought to be with the soonest, and daungerous. **L**

CHAP. XLIX.

¶ Of a beast called *Musmon*.

T Here is in Spaine, but especially in the Isle Corfica, a kind of *Musmones*, not altogether vnlike to sheep, hauing a shag more like the haire of goats, than a fleece with sheeps wooll. That kind which is engendred between them and sheepe, they called in old time *Vmbri*. This beast hath a most tender head, and therefore in his pasture he is forced to feed with his taile to the sunne. Of all liuing creatures, those that bare wooll are most foolish: for take but one of them by the horne and lead him any whither, all the rest will follow, though otherwise they were afraid to go that way. The longest that they liue in those parts, is 9 yeares; howsoeuer in *Æthiopia* they come to 13. In which country, goats also liue 11 yeares, whereas in other

other countries of the world, for the most part, they passe not eight. And both sorts, as well the one as the other, be sped within foure leapings.

CHAP. L.

¶ Of Goats, and their breeding.

G Oats bring forth foure kids otherwhiles, but that is very seldome. They goe with young fve months as ewes do. Shee goats waxe barren with fatnesse. When they be come once to be three yeares old, they are not so good to breed: ne yet when they be elder, and namely, being past foure yeares of age. They begin at the seuenth month, euen whiles they sucke their dammes. And as well the bucke as the Doe are held the better for breed, if they be nott, and haue no hornes. The first time that the shee goats are leaped, they stand not to it: the second leaping speedeth better, and so forward. They chuse willingly to take the buck in the month of Nouember, that they might bring kids in March following, when all shrubs put forth and begin to sprout and bud, for them to brouze. And this is sometime when they be a yeare old, but they neuer faile at two yeares: yea and when they be full three, they are not vtterly decayed and done, but are good still: for they beare 8 yeares. Subject they be in cold weather, to cast their young and yeane vntimely. The Doe, when she perceiueh her eies dimme and ouer-cast either with pin and web or catarract, pricketh them with the sharp point of some bulrush, and so leeteth them blood: but the bucke goeth to the brier and doth the like. *Mutianus* reporteth, that he had occasion vpon a time to mark the wit of this creature: It happened, that vpon a narrow thinne plank that lay for a bridge, that one goat met another coming both from diuers parts: now by reason that the place was so narrow that they could not passe by nor turne about, ne yet retire backwards blindly, considering how long the plank was & so slender withall; moreover, the water that ran vnderneath ran with a swift streame, and threatned present death if they failed and went besides: *Mutianus* (I say) affirmeth, that he saw one of them to lie flat down, and the other to goe ouer his backe. As for the male goats, they are held for the best which are most camoise or snout nosed, haue long eares, and the same slit in, with great store of shag haire about their shoulders. But the mark to know the kindest female is this, they haue two lappets, locks, or plaits as it were of haire, hanging downe along their bodie on either side from their neck. They haue not al of them hornes, but some are nott; but in those which are horned, a man may know their age by the number of the knots therein more or lesse: and in very truth the nott shee goats are more free of milke. *Archelaus* writeth, that they take their breath at the eares, and not at the nostrils: also that they be neuer cleare of the ague. And this haply is the cause, that they are hotter mouthed, and haue a stronger breath than sheepe, and more egre in their rut. Men say moreover, that they see by night as well as by day: therefore they that when euening is come see nothing at all, recover their perfect sight again by eating ordinarily the liuer of goats. In Cilicia and about the Syrtis, the people clad themselues with goats haire, for there they shere them as sheep. Furthermore it is said, that goats toward the Sun-setting, cannot in their pasture see directly one another, but by turning taile to taile: as for other houres of the day, they keep head to head, & range together with the rest of their fellows. They haue all of them a tuft of haire like a beard hanging vnder their chin, which they call *Aruncus*. If a man take one of them by this beard and draw it forth of the stock, all the rest will stand still gazing thereat, as if they were astoned, and so wil they doe if any of them chance to bite of a certaine hearb. Their teeth kill trees. As for an oliue tree, if they doe but lick it, they spoile it for euer bearing after: and for this cause they be not killed in sacrifice to *Minerva*.

CHAP. LI.

¶ Of Swine, and their natures.

S Wine goe a brimming from the time that the Westerne wind *Fauonius* beginnes to blow, vntill the spring *Æquinoctiall*: and they take the bore when they be eight months old: yea in some places at the fourth month of their age, and continue breeding vnto the seuenth yeare. They farrow commonly twice a yeare: they be with pig foure months. One sow may bring at one farrow twenty pigges, but reare so many she cannot. *Nigidius* saith, that those pigs which

which are farrowed ten daies vnder or ten daies ouer the shortest day in the yeare, when the sun entrencheth into Capricorn, haue teeth immediatly. They stand lightly to the first brimming, but by reason that they are subiect to cast their pigs, they had need to be brimmed a second time. Howbeit the best way to preuent that they doe not slip their young, is to keepe the bore from them at their first grunting and seeking after him, nor to let them be brimmed before their ears hang downe. Bores be not good to brim swine after they be three yeres old. Sows when they be wearie for age that they cannot stand, take the bore lying along. That a sow should eat her own pigs, it is no prodigious wonder. A pig is pure & good for sacrifice, 5 daies after it is farrowed; a lamb, when it hath been yeaned 8 daies; and a calfe, being 30 daies old. But *Gornucanus* saith, That all beasts for sacrifice which chew cud, are not pure and right for that purpose, vntill they haue teeth. Swine hauing lost one eie, are not thought to liue long after; otherwise they may continue vntill they be fifteen yeres old, yea & some to twenty. But they grow to be wood and raging otherwhiles: and besides are subiect to many maladies more, & most of all to the squinancie, and wen or swelling of the kernels in the neck. Will ye know when a swine is sick or vnfound, pluck a bristle from the back and it will be bloudie at the root: also he will cary his neck at one side, as he goeth. A sow, if she be ouer-fat, soone wanteth milke; and at her first farrow bringeth fewest pigs. All the kind of them loue to wallow in dirt and mire. They wrinkle their tails, wherein this also is obserued, that they be more likely to appease the gods in sacrifice, that rather writh & turn their tails to the right hand, than the left. Swine wil be fat and wel larded in sixtie daies; and the rather, if before you begin to frantk them vp, they be kept altogether from meat three daies. Of all other beasts, they are most brutish; inso much as there goes a pleasant by-word of them, and fitteth them well, *That their life is giuen them in stead of salt*. This is known for a truth, that when certaine theeues had stolne and driuen away a companie of them, the swinheard hauing followed them to the water side (for by that time were the theeues imbarged with them) cried aloud vnto the swine, as his manner was: whereupon they knowing his voice, learned all to one side of the vessel, turned it ouer and sunke it, tooke the water, and so swam againe to land vnto their keeper. Moreover, the hogs that vse to lead and goe before the heard, are so well trained, that they wil of themselves goe to the swine-market place within the citie, & from thence home againe to their maisters, without any guid to direct them. The wild bores in this kind, haue the wit to couer their tracks with mire, and for the nones to run ouer marish ground where the prints of their footing will not be sene; yea and to be more light in running, to void their vrine first. Sows also are plaied as well as camels, but two daies before, they be kept from meat: then hang they by the fore-legs, for to make incision into their matrice, and to take forth their stones: and by this means they will sooner grow to be fat. There is an Art also in cookerie, to make the liuer of a sow, as also of a goose, more daintie (and it was the devise of *M. Apicius*) namely, to feed them with drie figges, and when they haue eaten till they bee full, presently to giue them mead or honied wine to drink, vntill they die with being ouercharged. There is not the flesh of any other liuing creature, that yeeldeth more store of dishes to the maintenance of gluttonie, than this; for fittie sundrie sorts of tastes it affordeth, whereas other haue but one a peece. From hence came so many edicts and proclamations published by the Censors, forbidding and prohibiting to serue vp at any feast or supper, the belly and paps of a sow, the kernels about the neck, the brizen, the stones, the womb, and the fore-part of the bores head: and yet for all that, *Publius* the Poet and maker of wanton songs, after that he was come to his freedom, neuer (by report) had supper without an hogs belly with the paps: who also to that dish gaue the name, and called it *Sumen*. Moreover, the flesh of wild bores came to be in great request and was much set by: in such sort, as *Cato* the Censor in his inuictiue orations, challenged men for brawne. And yet when they made three kinds of meat of the wild bore, the loine was alwaies serued vp in the mids. The first Romane that brought to the table a whole bore at once was *P. Sernilius Rullus*, father of that *Rullus*, who in the time that *Cicero* was Consul, published the law *Agraria*, as touching the diuision of lands. See how little while ago it is since these superfluities began, which now are taken vp so ordinarily euerie day. And yet the thing was noted and recorded in the Annals, as strange and rare; no doubt for this intent, To repress these inordinate enormities. One supper then or feast was taxed and reprooued therein at the beginning: but now, two and three bores at a time are serued vp whole and eaten together.

CHAP.

CHAP. LII.

¶ Of Parks for wild beasts.

The first man of the long robe that deuised parks as well for these bores, as for other deere and sauage beasts, was *Fulvius Lippinus*, who in the territorie of *Tarquinius* began to keepe and feed wild beasts for his game. And long it was not but others followed his steps, to wit, *L. Lucullus* and *Q. Hortensius*. Sows of the wild kind bring forth pigs but once a yere; and the bores in briming time are exceeding fierce and fel: then they fight one with another, they harden their sides, rubbing them against the bodies of trees, and all to wallow themselves in the mire, coating their backs with dirt. But they are not so raging then, but the sows in their farrowing are much worse, and lightly it is so in all other kind of beasts. Wild bores are not fit for generation before they be a yere old. The wild bores of India haue two bowing fangs or tusks of a cubit length, growing out of their mouth, and as many out of their foreheads like to calues horns. The bristly haire of the wild sort is like to brasse: but of others black. In Arabia swine will not liue.

CHAP. LIII.

¶ Of Beasts halfe sauage.

There is no creature ingenders so soon with wild of the kind, as doth swine: & verily such hogs in old time they called Hybrides, as a man would say, halfe wild; inso much as this terme by a translation hath bin attributed to mankind. For so was *C. Antonius*, colleague with *Cicero* in the Consulship, nicknamed. And not in swine onely, but also in all other liuing creatures, looke where there be any tame and domestical, you may find also wild and sauage of the same kind: seeing that euen of wild men there be also many sorts in diuers places, as wee haue before said. As for the goats kind, how many & how sundry resemblances are to be found in them of other beasts: for among them you shall haue the roebucke, the shamois, the wilde goat called the Eueck, wonderfull swift, albeir his head be loden with huge hornes like sword scabberds: by these they hang and poise themselves from rockes, namely, when they minde to leap from one to another, for by swinging to and fro they skip and jump the more nimbly, and fetch a jerk out to what place they list, as it were forth of an engin. Of this kind be the *Origes*, the only beasts, as some thinke, of all others, that are said to haue their haire growing contrariwise and turning toward the head. To these belong the Does, and a kinde of fallow Deere called *Pygargi*, as also those that are named *Strepsicerotes*, and many other not far vnlike. As for the former sort they come out of the Alps. These last rehearsed are sent from other parts beyond-sea.

CHAP. LIV.

¶ Of Apes and Monkeys.

All the kinde of these Apes approach neere of all beasts to the resemblance of a mans shape: but they differ one from another in the taile. Marvellous crafty and subtilly they be to beguile themselves: for by report, as they see hunters doe before them, they will imitate them in euery point, euen to besmeare themselves with glew & birdlime, & shoo their feet within grins and snares, and by that means are caught. *Mutianus* saith, that he hath seene Apes play at chesse and table: and that at first sight they could know nuts made of waxe from others. He affirmes also, that when the moon is in the wain, the monkeys & Marmosets (which in this kinde haue tails) are sad and heauy, but the new moone they adore and ioy at, which they testifie by hopping and dancing. As for the eclipse of Sun or Moone, all other foure footed beasts also do greatly dread and feare. The she Apes of all sorts are wondrous fond of their little ones: and such as are made tame within house will carry them in their armes all about so soone as they haue brought them into the world, keepe a shewing of them to euery bodie, and they take pleasure to haue them dandled by others, as if thereby they tooke knowledge that folke ioyed for their safe deliuerance: but such a culling and hugging of them they keep, that

in the end with very claspings and clipping they kill them many times. Apes that be headed and long snouted like dogs, and thereof called Cynocephali, are of all other most curst, shrewd and unhappy: like as the Marmozets and Monkeys called Sphinges & Satyri, are gentlest and most familiar: as for those called Callitriches, they be clean of another form & shape all over in a manner; they have a beard on their visage, & the forepart of their taile spreadeth broad. But this creature is said to live in no other climat but Ethiopia, where it breedeth.

CHAP. LV.

¶ Of Hares and Connies.

OF Hares also there be many sorts: vpon the Alps & such high mountains they be white of colour so long as the snow lieth; and it is verily thought, that all Winter long they live with eating of snow: for surely when it is thawed and melted, all the yere after they be brown and reddish as before: and a creature it is otherwise bred in extreme and intolerable cold. Of the Hares kind are they also which in Spain they call Connies, which are exceeding fruitfull, and of wonderfull increase: in so much, as having deuoured all the corn in the field before harvest, in the Baleare Islands, they brought thereby a famine vpon the people. There is a most daintie dish serued vp at the table, made of Leuerets or rabbits, either cut out of the dams bellies, or taken from them when they are suckers, without clensing them at all of the garbage, and such the Latines call Laurices. It is know for certain, that the Islanders of Majorca & Minorca made means to the Emperor Augustus Caesar, for a power of soldiers to destroy the infinit increase of Connies among them. Ferrets are in great account for chasing and hunting these Connies: the manner is to put them into their earths, which within the ground haue many waies and holes like mines, and thereupon these creatures are called *Cuniculi*: and when they are within, they so course the poore Connies out of their earth, that they are soon taken about ground at the mouth of their holes. *Archelanus* writes, that looke how many receptacles & waies of passage the Hare hath for his dung and excrements, so many yeares old he is iust. And verily some haue more than others. The same writer is of opinion, that euery hare is both male and female, and that any of them can breed without the bucke. Certes herein Nature hath shewed her bounty and goodnesse, in that she hath giuen this creature (so good to eat, and so harmlesse otherwise) the gift of fertilitie and fruitfull wombe. The Hare, naturally exposed to be a prey and game for all men, is the only creature, vnles it be the Connie again called *Dasipus*, which after it be once with yong, conceiue again vpon it: in so much as at one time shee hath some Leuerets sucking of her, others in her belly; and those not of the same forwardnesse, for some of them are covered with haire, others are naked without any downe; and there be againe of them that as yet are not shapen at all, but without all forme. Moreouer, men haue assaied to make cloath of Hares and Connies haire: but in the hand they are not so soft as is the fur vpon the skin or case: neither will they last, by reason that the haire is short and will soon shed.

CHAP. LVI.

¶ Of Beasts halfe tame.

AS for Hares, seldome be they made tame and to come to hand; and yet iustly they cannot be simply called wild: for many other such creatures there be besides, that neither are language, nor tame and gentle, but of a middle nature betwixt both: as namely among flying fowles in the aire, the Swallow: likewise the Bee: and among fishes the Dolphin in the sea.

CHAP. LVII.

¶ Of Mice and Rats, Dormice, Reer-mice, and Bats.

IN the rank of those that be neither tame nor wild, many haue ranged the Mice and rats that haunt our houses. A creature this is of no smal reckoning for presaging somewhat to a state, by some strange and prodigious tokens. By gnawing the siluer shields & bucklers at Lavinium, they portended and foreshewed the Marrian war. Vnto *Carbo* the L. Generall, by eating of his hose garters and shooe-strings at Clusium they prognosticated his death. Many forts

A there be of them in the country of Cyrene, some with a broad flat forehead, others with a sharp pointed: and there be of them seen to haue sharp prickles like to vetchins or hedge-hogs. *Theophrastus* reporteth, that these vermin hauing dispeopled the Isle Gyaros, and driuen away the inhabitants, gnawed and deuoured euery thing they could meet withal, euen to their very iron. And surely it seemes that is their nature so to doe: for euen amongst the Chalybes they serue them so, in eating their iron and Steele within their very forges: yea, & in gold mines they play the like part: & therefore being caught, their bellies be ript by the pioners in the mine, where they euermore find their stolen gold again. See what delight this creature takes in theeuing. We read in the Chronicles, that whiles *Annibal* lay in sieg before the towne Casilinum, a rat was sold within the town for 200 Sesterces: the man who bought it at that price liued; but the party who sold it through greedines of money died for hunger. By the learning of Soothsayers obserued it is, that if there be store of white ones bred, it is a good signe and presageth prosperitie. And in truth our stories are full of the like examples, and namely, that if rats be heard to cry or squeak in the time of ceremoniall taking the Auspices and signes of birds, all is marred; and that businesse clean dasht. *Nigidius* saith, that rats lie close hidden all winter, like as Dormice. By the Edicts of the Censors, and principally by an Act of *M. Scaurus* in his Consulship, provided it was, & streight order taken, that no Rats, Mice, or Dormice should be serued vp to the table at their great suppers and feasts: like as all shell fish or fowle set out of foreign countries far remote. Counted are Dormice betwene tame and wilde: and verily he that first deuised to keepe wilde bores in parkes, found means also to nourish and feed these creatures in great tuns, pipes, and drifats. In the experiment and triall whereof this hath bin found & obserued, That willingly these little creatures will not sort together vnlesse they were countrymen as it were, and bred in one & the same Forrest: and if it chance that there be intermingled among them any strangers, to wit, such as had either some riuer or mountain between the places where they were bred, they kil one another with fighting. The yong Dormice are exceeding kind and louing to their fires that begat them; for when they be old and feeble, full tenderly will they feed and nourish them. They renew their age euery yere by sleeping all winter; for they lie by it close snug all the while, and are not to be seen: but come the sommer once they be yong and fresh againe. And thus the field mice likewise take their rest, and do the same.

CHAP. LVIII.

¶ What Creatures live not but in certaine places.

A Wonderfull thing it is to see, that Nature hath not only brought forth diuers creatures in sundrie Countries, but also in one region vnder the same climate hath denied some of them to live in euery corner thereof. And namely in the Forrest of Moesia in Italie, these Dormice are found but only in one part thereof. And in Lycia, the wild goats, roe-bucks, and Does neuer passe the mountaines that confine vpon the Syrians: no more than the wilde Asses transmount that hill which diuides Cappadocia from Cilicia. Within Hellepont the Stags and Hinds neuer go forth and enter into the marches of other countries: and those about *Arginussa* passe not the mountaine *Elatos*: which may be knowne by this, that all vpon that hill haue their eares marked and slit. In the Island *Poroselenum* the weezels will not crosse ouer the highway. And about *Lebadia* in *Boeotia*, those moldwarps or warts that are brought thither from other parts, will not abide the very soile, but flie from it; which neere-by in *Orthomenus*, vndermine and hollow all their corn fields: and such store there is of them, that I haue seen all the hangings, carpets, counterpoints, and couerlets of chambers made of their skinned. See how men for no religion and feare of the gods will be kept from taking their pleasures and making their delights of these creatures, otherwise prodigious & portending things to come. The strange Hares that be brought into Ithaca will not liue there, but seeking to escape, are found dead vpon the very banks of the sea side. In the Island *Eubusis* be no Connies at all: and yet in Spain and the Baleare Isles there are so many, that they pester the whole country. Frogs were euer in Cyrene naturally mute, and would not cry: but brought there were thither out of the continent such as would cry in the water: and that whole kind still remaineth vocal. In the Island *Scriphos* you shall not yet heare a Frogge to cry: let the same be carried forth to other

other places, they will keep a singing as well as the rest: And (by report) the like hapned in a lake of Theffaly named Sicendus. In Italy the hardy shrews are venomous in their biting: but passe over the Apennine once there are no more such to be found. In what country soeuer they be, let them go ouer the tract of a cart wheele they die presently. In Olympus a mountaine of Macedony there are nowolues, ne yet in the Isle of Candy: and there verily are to be found no Foxes nor Beares, and in one word, no hurtfull or noisome beast, vnlesse it be a kinde of spider called *Phalangium*, whereof we will speake more in due time and place. And that which is more wonderfull, in the same Isle there are no stags or hinds, saue only in the region and quarter of the Cydoniates: no wild bores likewise, nor the fowle called the Godwit or Attagene, ne yet Vrchins. To conclude, in Africk ye shall find no wild bores, no Stags and Hinds, no roe-bucks and Does, ne yet Beares.

CHAP. LIX.

¶ *What Creatures are hurtfull to strangers.*

Now, some liuing creatures there be that do no harm at all to the inhabitants of the same countries, but kill all strangers. Namely, certain serpents in Tirinthe, which are supposed to breed of themselves out of the very earth. Semblably, in Syria there be snakes, and specially along the banks of Euphrates, that will not touch the Sirians lying along asleep: nay, if a man that leans vpon them be stung or bitten by them, he shall find no hurt or mischief thereby. But to men of all other nations whatsoeuer they are most spitefully bent, them they will with great greedinesse eagerly assaile and fly vpon, yea, and kill them with extreme paine and anguish: and therefore it is that the Sirians destroy them not. Contrariwise *Aristotle* reporteth, That in Latmos (a mountain in Caria) the Scorpions will do no harm to strangers, marie the inhabitants of the same country they will sting to death. Now let vs proceed to other liuing creatures besides those of the land, and discourse of their sundry sorts and kinds.



THE NINTH BOOKE OF THE HISTORIE OF NATVRE, WRITTEN BY C. PLINIVS SECVNDVS.

CHAP. I.

¶ *The nature of water Creatures.*



Haue thus shewed the nature of those beasts that liue vpon the land, and therein haue some societie & fellow ship with men. And considering, that of all others besides in the world, they that flie be the least, we will first treat of those fish that keep in the sea, not forgetting those also either in running fresh riuers or standing lakes.

CHAP. II.

¶ *What the reason is why the sea should breed the greatest liuing creatures.*

The waters bring forth more store of liuing creatures, and the same greater than the land. The cause whereof is euiden, euen the excessiue abundance of moisture. As for the fowls & birds, who liue hanging, as it were, & hovering in the aire, their case is otherwise. Now

A in the sea, being so wide, so large and open, readie to receive from heauen about the genitall seeds and causes of generation, being so soft and pliable, so proper & fit to yeeld nourishment and encrease; assisted also by Nature, which is neuer idle, but alwaies framing one new creature or other: no maruell it is if there are found so many strange and monstrous things as there be. For the seeds and vniuersall elements of the world are so interlaced sundry waies, and mingled one within another, partly by the blowing of the winds; and partly with the rolling and agitation of the waues, insomuch as it may truly be said, according to the vulgar opinion, that whatsoeuer is engendred and bred in any part of the world besides, is to be found in the sea: and many more things in it, which nowhere else are to be seen. For there shall ye meet with fishes, resembling not onely the forme and shape of land creatures liuing, but also the figure and fashion of many things without life: there may one see bunches of grapes, swords, and sawes, represented; yea, and also cucumbers, which for colour, smell, and taste, resembleth those growing vpon the earth. And therefore we need the lesse to wonder, if in so little shell fishes as are cockles, there be somewhat standing out like horse-heads.

CHAP. III.

¶ *Of the monstrous fishes in the Indian sea.*

The Indian sea breedeth the most and biggest fishes that are: among which, the Whales and Whirlepools called *Balæna*, take vp in length as much as foure acres or arpens of land: likewise the *Pristes* are two hundred cubits long: and no maruell, since *Locusts* are there to be found of foure cubits in length: and yeeles within the riuer *Ganges* of thirtie foot in length. But these monstrous fishes in the sea, are most to be seen about the midst of Summer, & when the daies be at the longest with vs. For then by the means of whirle winds, storms, winds, and blustering tempests which come with violence down from the mountains and promontories, the seas are troubled from the very bottome, and turned vpside downe: whereupon the surging billowes thereof, raise these monsters out of the deep, and roll them vp to be seen. For in that manner so great a multitude of *Tunnies* were discovered and arose, that the whole armada of king *Alexander* the great, seeing them comming like to an armie of enemies in order of battell, was driuen to range & make head against them, close vnited together: for otherwise, if they had failed scattering asunder, there had bin no way to escape, but ouerturned they had bin, with such a force and sway came these *Tunnies* in a skull vpon them. And verily, no voice, crie, hollaing and houting, no nor any blowes and raps affrighted this kind of fish, only at some cracke or crashing noise they be terrified: and neuer are they troubled and disquieted so much as when they perceiue some huge thing ready to fall vpon them.

In the red sea there lies a great demie Island named *Cadara*, so farre out into the sea, that it maketh a huge gulf vnder the wind, which king *Prolemeus* was 12 daies and 12 nights a rowing through: forasmuch as there is no wind at all vses to blow there. In this creeke so close and quiet, there be fish and Whales grow to that bignes, that for their very weight and vnweldines of their bodie, they are not able to stirre. The Admirals and other capitaines of the fleet of the foresaid *Alexander* the great, made report, That the *Gedrosi*, a people dwelling vpon the riuer *Arbis*, vse to make of such fishes chawes, the dores of their houses; also that they lay their bones ouerthwart from one side of the house to another, in stead of beames, joists and rafters to beare vp their floores and rouses: and that some of them were found to be fortie cubits long.

In those parts there be found in the sea certaine strange beasts like sheep, which goe forth to land, feed vpon the roots of plants and herbes, and then returne againe into the sea. Others also which are headed like Horses, Asies, and Bulls: and those many times eat downe the standing corne vpon the ground.

CHAP. IIII.

¶ *Which be the greatest fishes in any coast of the Ocean sea.*

The biggest and most monstrous creature in the Indish Ocean, are the whales called *Pristis* & *Balæna*. In the French Ocean there is discovered a mighty fish called *Physeter*, [i.e. Whirlepole] rising vp aloft out of the sea in manner of a columnne or pillar, higher than the

the very failles of the ships: and then he spouteth and casteth forth a mightie deale of water, as it were out of a conduit, enough to drowne and sinke a ship. In the Ocean of Gades, betweene Portugale and Andalusia, there is a monstrous fish to be seen like a mightie great tree, spreading abroad with so mightie armes, that in regard thereof onely, it is thought verily it neuer entered into the streights or narrow sea there by of Gibraltar. There shew themselves otherwhiles fishes made like two great wheelles, and thereupon they be called: framed distinctly with foure armes, representing as many spokes: and with their eies they seem to couer close the naues from one side to the other, wherein the said spokes are fastened.

CHAP. V.

¶ Of Tritons, Nereides, and sea-Elephants, and their formes.

IN the time that *Tiberius* was Emperour, there came vnto him an Embassador from *Flisipon*, sent of purpose to make relation, That vpon their sea-coast there was discovered within a certain hole, a certain sea goblin, called *Triton*, founding a shell like a trumpet or cornet: and that he was in forme and shap like those that are commonly painted for Tritons. And as for the Meremaids called *Nereides*, it is no fabulous tale that goes of them: for look how painters draw them, so they are indeed: onely their bodie is tough & skaled all ouer, euen in those parts wherein they resemble a woman. For such a Mermaid was seen and beheld plainly vpon the same coast neere to the shore: and the inhabitants dwelling neere, heard it a far off when it was a dying, to make pitteous mone, crying & chattering very heauily. Moreouer, a lieutenant or gouernor vnder *Augustus Caesar* in Gaule, aduertised him by his letters, That many of these *Nereides* or Mearmaids were seen cast vpon the sands, and lying dead. I am able to bring forth for mine authors diuers knights of Rome, right worshipfull persons and of good credit, who testifie, that in the coast of the Spanish Ocean neer vnto Gades, they haue seen a Mere-man, in euery respect resembling a man as perfectly in all parts of the bodie as might be. And they report moreouer, that in the night season he would come out of the sea aboard their ships: but look vpon what part fouer he settled, he waied the same downe, & if he rested and continued there any long time, he would sinke it cleane. In the daies of *Tiberius* the Emperour, in a certain Island vpon the coast of the prouince of Lions, the sea after an ebbe left vpon the bare sands 300 sea-monsters and aboue, at one fote together, of a wonderfull varietie and bignesse, differing asunder. And there were no fewer found vpon the coast of the Santones. And among the rest there were sea-Elephants and rams, with teeth standing out, & hornes also, like to those of the land, but that they were white like as the fore-said teeth: ouer & besides, many Meremaids. *Turanus* hath reported, That a monster was driuen and cast vpon the coast of Gades, betweene the two hindmost fins whereof in the taile, were 16 cubits: it had 122 teeth, whereof the biggest were a span or nine inches in measure, and the least halfe a foot. *M. Scaurus* among other strange and wonderfull sights that he exhibited to the people of Rome, to doe them peasure in his Edifice-ship, shewed openly the bones of that sea-monster, before which ladie *Andromeda* (by report) was cast to be deuoured: which were brought to Rome from Ioppe, a towne in Iudæa: and they caried in length fortie foot: deeper were the ribs than any Indian Elephant is high, and the ridge-bone a foot and halfe thicke.

CHAP. VI.

¶ Of the Balænes and Orca.

THESE monstrous Whales named Balæne, otherwhiles come into our seas also. They say that in the coast of the Spanish Ocean by Gades, they are not seen before midwinter when the daies be shortest: for at their set times they lie close in a certain calme deep and large creeke, which they chuse to cast their spawn in, and their delight aboue all places to breed. The Orca, other monstrous fishes, know this full well, and deadly enemies they be vnto the foresaid whales. And verily, if I should pourtrait them, I can resemble them to nothing else but a mightie masse and lump of flesh without all fashion, armed with most terrible, sharpe, and cutting teeth. Well, these being ware that the Whales are there, breake into this secret by-creek out of the way, seeke them out, and if they meet either with the youug ones, or the dammes that haue newly

- A newly spawn'd, or yet great with spawn, they all to cut & hack them with their trenchant teeth: yea, they run against them as it were a foist or ship, of warre armed with sharp brazen pikes in the beake-head. But contrariwise, the Balænes or Whales aforesaid, that cannot wind and turne aside for defence, and much lesse make head and resist, so vnweldie as they bee by reason of their owne weightie and heauie bodie, (and as then either big bellied, or else weakened lately with the paines of trauell and caluing their young ones) haue no other meanes of helpe and succor but to shoot into the deepe, and gaine sea-rome to defend themselves from the enemy. On the other side, the Orca labour (to cut them short of their purpose) to lie betweene them and home in their very way, and otherwhiles kill them vnawares in the streights, or drieue them vpon the shelues and shallows, or else force them against the very rocks, & so bruite them;
- B When these combats and fights are seen, the sea seemes as if it were angry with it selfe: for albeit no winds are vp, but all calme in that creek and gulfe, yet ye shall haue waues in that place where they encounter (with the blafts of their breath, and the blowes giuen by the assailant) so great, as no tempestuous whirle windes whatsoeuer are able to raise. In the haue of Ostia likewise there was discovered one of these Orcas, and the same assailed by *Claudius* the Emperour. It chanced to come as he was making the said harbour or pere, drawne and trained thither with the sweetnes of certaine beasts hides that were brought out of Gaule, and were cast away and perished by the way. Of them for certaine daies she had fed, and still following them, with the weight of her heauie bodie had made a furrow and channel (as it were) with her bellie in the bottome among the shelues: and by reason of the flowing of the sea she was so inuested and compassed in with the sands, that by no means possible she could turn about: but stil while
- C she goes after these hides whereof she fed, she was by the billows of the sea cast afloate on the shore, so as her back was to be seene a great deale aboue the water, much like to the bottome or keele of a ship turned vpside downe. Then the Emperour comanded to draw great nets and cords with many folds along the mouth of the haue on euery side behind the fish, himselfe accompanied with certaine Pretorian cohorts, for to shew a pleasant sight vnto the people of Rome, came against this monstrous fish, and out of many hoies and barks the souldiers launced darts and jaelines thicke. And one of them I saw my selfe sunke downe right with the abundance of water that this monstrous fish spouted and filled it withall. The Whales called Balæne haue a certaine mouth or great hole in their forehead, and therefore as they swim afloate on the water, they send vp on high (as it were) with a mighty strong breath a great quantity of water when they list, like stormes of raine.

CHAP. VII.

¶ Whether fish do breath and sleepe, or no.

- ALL writers are fully resolu'd in this, That the Whales aforesaid, as well the Balæne as the Orca, and some few other fishes bred & nourished in the sea, which among other inward bowels haue lights, doe breath. For otherwise it were not possible, that either they or any other beast, without lights or lungs should blow: and they that be of this opinion, suppose likewise, that no fishes hauing gills, do draw in and deliuer their wind again to and from: nor many other kinds besides, although they want the foresaid gills. Among others, I see that *Aristotle* was of that mind, and by many profound and learned reasons perswaded & induced many more to hold the same. For mine owne part, if I should speake frankly what I think, I professe that I am not of their judgment. For why? Nature if she be so disposed, may giue in steed of light some other organs and instruments of breath: to this creature one, to that another: like as many other creatures haue another kind of moist humor in lieu of blood. And who would maruel, that this vitall spirit should pierce within the waters, considering that he seeth evidently how it riseth againe and is deliuered from thence: also how the aire entreth euen into the earth, which is the grossest & hardest of all the elements: As we may perceiue by this good argument, that some creatures, which albeit they be alwaies couered within the ground, yet liue and breath neuertheless, and namely, the Wants or Mold-warpes. Moreouer, I haue diuers pregnant & effectual reasons inducing me to beleue, that all water creatures breathe each one after their maner, as Nature hath ordained. First and principally, I haue obserued oftentimes by experience, That fishes evidently breath and pant for wind (after a sort) in the great heat of Summer: as also that they

they yawne and gape when the weather is calme & the sea still. And they themselves also who hold the contrary, confesse plainly, that fishes doe sleepe. And if that be true, How, I pray you, can they sleep if they take not their wind? Moreouer, whence come those bubbles which continually are breathed forth from vnder the water? and what shall we say to those shell fishes which wax and decay in substance of bodie, according to the effect of the Moones encrease or decrease? But about all, fishes haue hearing and smelling, and no doubt both these senses are performed and maintained by the benefit and matter of the aire: for what is smell and sent, but the verie aire, either infected with a bad, or perfumed with a good saour? Howbeit I leaue euery man free to his own opinion, as touching these points. But to returne againe to our purpose: this is certaine, that neither the Whales called *Balenæ*, nor the Dolphins, haue any gills: and yet do both these fishes breathe at certaine pipes and conduits, as it were reaching downe into their lights: from the forehead, in the *Balenæ*, and in the Dolphins, from the backe. Furthermore, the Sea-calues or Seales, which the Latines call *Phoca*, doe both breath and sleepe vpon the drie land. So do the sea Tortoises also, whereof we will write more anon.

CHAP. VIII.

¶ Of Dolphins.

THe swiftest of al other liuing creatures whatsoeuer, & not of sea-fish only, is the Dolphin, quicker than the flying fowle, swifter than the arrow shot out of a bow. And but that this fish is mouthed far beneath his snout, and in manner towards the mids of his belly, there were not a fish could escape from him, so light and nimble he is. But nature in great prouidence fore-seeing so much, hath giuen these fishes some let & hinderance, for vlesse they turned vpright much vpon their backe, catch they can no other fish: and euen therein appeareth most of all their wonderfull swiftnesse and agilitie. For when the Dolphins are driuen for very hunger to course and pursue other fishes down into the bottom of the sea, and thereby are forced a long while to hold their breath, for to take their wind again, they lance themselves aloft from vnder the water as if they were shot out of a bow; and with such a force they spring vp again, that many times they mount ouer the very sailes and mastes of ships. This is to be noted in them, that for the most part they sort themselves by couples like man and wife. They are with yong nine moneths, and in the tenth bring forth their little ones, and lightly in Summer time; and otherwhiles they haue two little dolphins at once. They suckle them at their teats, like as the whales or the *Balenæ* do: yea, & so long as their little ones are so yong that they be feeble, they carry them too and fro about them: nay when they are growne to be good big ones, yet they beare them companie still a long time, so kind and louing be they to their yong. Young Dolphins come very speedily to their growth, for in ten yeres they are thought to haue their full bignes: but they liue thirtie yeres, as hath bin known by the experience and triall in many of them, that had their taile cut for a marke when they were yong, and let go again. They lie close euery yere for the space of thirty daies, about the rising of the Dog-starre; but it is strange how they be hidden, for no man knowes how: and in very deed a wonder it were, if they could not breath vnder the water. Their manner is, to breake forth of the sea and come aland, and why they should so do, it is not known: for presently as soon as they touch the dry ground, they die: and so much the sooner, for that their pipe or conduit about-said incontinently closeth vp and is stopped. Their tongue stirreth within their heads, contrary to the nature of all other creatures liuing in the waters: the same is short and broad fashioned like vnto that of a swine. Their voice resembleth the pittifull groning of a man: they are saddle-backed, & their snout is camoise and flat, turning vp. And this is the cause that all of them (after a wonderfull sort) know the name *Simo*, and take great pleasure that men should focall them. The Dolphin is a creature that carries a louing affection not only vnto man, but also to musicke: delighted he is with harmony in song, but especially with the sound of the water instrument, or such kind of pipes. Of a man he is nothing affraid, neither auoides from him as a stranger: but of himselfe meeteth their ships, plaieth and disportes himselfe, and fetcheth a thousand frisks and gambols before them. He will swim along by the mariners, as it were for a wager, who should make way most speedily, and alwaies outgoeth them, saile they with neuer so good a fore-wind.

In the daies of *Augustus Caesar* the Emperour, there was a Dolphin entred the gulfe or poole *Lucrinus*,

A *Lucrinus*, which loued wondrous well a certain boy a poore mans son: who vsing to goe euery day to schoole from *Baianum* to *Puteoli*, was wont also about noone-tide to stay at the water side, and to call vnto the Dolphin, *Simo*, *Simo*, and many times would giue him fragments of bread, which of purpose he euer brought with him, and by this meanes allured the Dolphin to come ordinarily vnto him at his call. [I would make scruple and bash to insert this tale in my storie and to tell it out, but that *Mecenas Fabianus*, *Flavius Alfus*, and many others haue set it downe for a truth in their chronicles.] Well in proceesse of time, at what houre soeuer of the day, this boy lured for him & called *Simo*, were the Dolphin neuer so close hidden in any secreet and blind corner, out he would and come abroad, yea and skud amaine to this lad: and taking bread and other victuals at his hand, would gently offer him his back to mount vpon, and then downe went the sharpe pointed prickles of his fins, which he would put vp as it were within a sheath for fear of hurting the boy. Thus when he had him once on his back, he would carry him ouer the broad arme of the sea as farre as *Puteoli* to schoole; and in like manner conuey him backe again home: and thus he continued for many yeeres together, so long as the child liued. But when the boy was fallen sicke & dead, yet the Dolphin gaue not ouer his haunt, but vsually came to the wonted place, & missing the lad, seemed to be heauie and mourne againe, vntill for very grieffe & sorrow (as it is doubtles to be presumed) he also was found dead vpon the shore.

Another Dolphin there was not many yeeres since vpon the coast of *Affricke*, neere to the citie *Hippo*, called also *Diarrhytus*, which in like manner would take meat at a mans hand, suffer himselfe gently to be handled, play with them that swom and bathed in the sea, and carrie on his backe, who soeuer would get vpon it. Now it fell out so, that *Flavianus* the Proconsull or lieutenant General in *Affricke* vnder the Romans, perfumed and besmeared this Dolphin vpon a time with a sweet ointment: but the fish (as it should seem) smelling this new & strange smell fell to bedrow sie and sleepe, and lulled to and fro with the waues, as if it had bin halfe dead: and as though some iniurie had bin offered vnto him, went his way and kept aloofe, and would not conuerse any more for certaine moneths with men, as before-time. Howbeit in the end he came again to *Hippo*, to the great wonder & astonishment of all that saw him. But the wrongs that some great persons and lords did vnto the citizens of *Hippo*, such I mean as vsed to come for to see this sight: and namely, the hard measure offered to those townesmen, who to their great cost gaue them entertainment, caused the men of *Hippo* to kill the poore Dolphin.

D The like is reported in the citie *Iassus*, long before this time: for there was seene a Dolphin many a day to affect a certaine boy, so as he would come vnto him where soeuer he chanced to espy him. But whiles at one time about the rest he followed egerly after the lad going toward the towne, he shot himselfe vpon the dry sands before he was aware, and died forthwith. In regard hereof, *Alexander* the Great ordained that the said young boy should afterwards be the chiefe priest and sacrificer to *Neptune* in *Babylon*: collecting by the singular fancie that this Dolphin cast vnto him, That it was a great signe of the special loue of that god of the sea vnto him, and that he would be good and gracious to men for his sake.

E *Egesidemus* writeth, that in the same *Iassus* therewas another boy named *Hermias*, who hauing vsed likewise to ride vpon a Dolphin ouer the sea, chanced at the last in a sodaine storme to be ouerwhelmed with waues as he sat vpon his backe, and so died, and was brought backe dead by the Dolphin: who confessing as it were that he was the cause of his death, would neuer retire againe into the sea, but launced himselfe vpon the sands, and there died on the drie land.

The semblable happened at *Naupactum*, by the report of *Theophrastus*. But there is no end of examples in this kinde: for the *Amphilochians* and *Tarentines* testifie as much, as touching Dolphins which haue bin enamoured of little boies: which induceth me the rather to beleue the tale that goes of *Arion*. This *Arion* being a notable musician & plaier of the harpe, chanced to fall into the hands of certain mariners in the ship where he was, who supposing that he had good store of money about him, which he had gotten with his instrument, were in hand to kill him and cast him ouer boord for the said monie, and so to intercept all his gaines: he, seeing himselfe at their deuotion and mercie, besought them in the best manner that he could deuise, to suffer him yet before he died, to play one fit of mirth with his harpe; which they granted: (at his musicke and sound of harpe, a number of Dolphins came flocking about him:) which done, they turned him ouer shipbord into the sea; where one of the Dolphins tooke him vpon his backe, and carried him safe to the bay of *Tenarus*.

To conclude and knit vp this matter: In Languedoc within the prouince of Narbon, and in the territorie of Nemaufum, there is a standing poole or dead water called Laterra, wherein men and Dolphins together, vse to fish: for at one certain time of the yeare, an infinite number of fishes called Mulletts, taking the vantage of the tide when the water doth ebbe, at certain narrow weares and passages with great force break forth of the said poole into the sea: and by reason of that violence, no nets can be set and pitched against them strong enough to abide and beare their huge weight, and the streame of the water together, if so be men were not cunning and craftie to wait and espie their time to lay for them, and to entrap them. In like manner the Mulletts for their part, immediately make speed to recouer the deepe, which they do very soon by reason that the channell is neere at hand: and their onely hast is for this, to escape and passe that narrow place which affordeth opportunitie to the fishers to stretch out and spread their nets. The fisher-men being ware thereof, and all the people besides (for the multitude knowing when fishing time is come, run thither, and the rather for to see the pleasant sport) crie as lowd as euer they can to the Dolphins for aid, & call *Simo, Simo*, to help to make an end of this their game and pastime of fishing. The Dolphins soon get the care of their crie, and know what they would haue; and the better, if the North-winds blow and carrie the found vnto them: for if it be a Southerne wind, it is later ere the voice be heard, because it is against them. Howbeit, be the wind in what corner soeuer, the Dolphins resort thither flock-meale, sooner than a man would thinke, for to assist them in their fishing. And a wondrous pleasant sight it is to behold the squadrons as it were of those Dolphins, how quickly they take their places and be aranged in battell array euen against the very mouth of the said poole, where the Mulletts vse to shoot into the sea: to see (I say) how from the sea, they oppose themselves and fight against them, and driue the Mulletts (once affrighted and skared) from the deep, vpon the shelles. Then come the fishers and beset them with net and toile, which they beare vp and fortifie with strong forkes: howbeit for all that, the Mulletts are so quicke & nimble, that a number of them whip ouer, get away, and escape the nets. But the Dolphins then are readie to receiue them: who contenting themselves for the present to kill only, make foule worke and hauocke among them; & put off the time of preying and feeding vpon, vntil they haue ended the battell & archieued the victorie. And now the skirmish is hot, for the Dolphins also perceiuing also the men at worke, are the more egre and couragious in fight, taking pleasure to be enclosed within the nets, and so most valiantly charge vpon the Mulletts: but for feare lest the same should giue an occasion vnto the enemies & prouoke them to retire and flie backe, between the boats, the nets, and the men there swimming, they glide by so gently and easily, that it cannot be seen where they gat out. And albeit they take great delight in leaping, & haue the cast of it, yet none assaieth to get forth, but where the nets lie vnder them: but no sooner are they out, but presently a man shall see braue pastime between them, as they scuffle & skirmish as it were vnder the rampier. And so the confli& being ended, and all the fishing sport done, the Dolphins fal to spoile and eat those which they killed in the first shock and encounter. But after this seruice performed, the Dolphins retire not presently into the deep againe, from whence they were called, but stay vntil the morrow, as if they knew very well that they had so carried themselves, as that they deserved a better reward than one daies refection and vi&als: and therefore contented they are not and satisfied, vnlesse to their fish they haue some sops and crums of bread giuen them soaked in wine, & that their bellies ful. *Mutianus* makes mention of the semblable maner of fishing in the gulfe of Iassos: but herein is the difference, for that the Dolphins come of their own accord without calling, take their part of the bootie at the fishers hands: and euery boat hath a Dolphin attending vpon it as a companion, although it be in the night season & at torch light.

Ouer and besides, the Dolphins haue a kind of common-wealth and publick society among themselves: for it chanced vpon a time, that a king of Caria had taken a Dolphin, and kept him fast as a prisoner within the harbor: whereupon a mighty multitude of other Dolphins resorted thither, and by certain signes of sorrow and mourning that they made, euident to be perceiued and vnderstood, seemed to craue pardon and mercie for the prisoner: and neuer gaue ouer vntill the king had giuen commandement that he should be enlarged and let goe. Also the little ones are euermore accompanied with some one of the bigger sort, as a guide to guard & keep him. To conclude, they haue bene seene to carry one of their fellows when he is dead, into some place of securitie, that he should not be deuoured and torne of other sea-monsters.

The Porpuisses, which the Latines call *Tursiones*, are made like the Dolphins: howbeit they differ, in that they haue a more sad and heauie countenance: for they are nothing so gamesome, playfull, and wanton, as be the Dolphins: but especially they are snouted like dogges when they snarle, grin, and are readie to doe a shewd turne.

Here be found Tortoises in the Indian sea so great, that one only shel of them is sufficient for the rouse of a dwelling house. And among the Islands principally in the red sea, they vse Tortoise shells ordinarily for boats and wherries vpon the water.

Many waies the fisher-men haue to catch them; but especially in this manner: They vse in the mornings when the weather is calm and still, to fote aloft vpon the water, with their backs to be seen all ouer: and then they take such pleasure in breathing freely & at libertie, that they forget themselves altogether: inso much as their shell in this time is so hardened and baked with the sun, that when they would they cannot diue and snke vnder the water againe, but are forced against their wills to fote aboue, and by that meanes are exposed as a prey vnto the fishermen. Some say that they go forth in the night to land for to feed, where, with eating greedily, they qe wearie; so that in the morning, when they are returned again, they fall soon asleep aboue the water, and keepe such a snorting and routing in their sleepe, that they bewray where they be, and so are easily taken: and yet there must be three men about euery one of them: and when they haue swom vnto the Tortoise, two of them turne him vpon his backe, the third casts a cord or halter about him, as hee lyeth with his belly vpward, and then is he haled by many more together, to the land. In the Phœnician sea, they make no great ado to take them; for why, at a certaine time of the yeere they resort of themselves by great multitudes in skulls vp into the riuer Eleutherius.

The Tortoise hath no teeth, but the sides and brimmes of his neb or becke, are sharpe and keene: whereof the vpper part or chaw shutteth close vpon the nether, like to the lid of a boxe. In the sea they liue of muscles, cockles, and such small shell-fishes, for their mouths are so hard that they be able to crush and break stones therewith. Their manner is to goe aland; where among the grasse they lay egges as bigge as birds egges, to the number commonly of a hundred. When they haue so done, they hide them within the earth in some little hole or gutter, sure enough from any place where the water commeth, they couer them with mould, beat it hard downe with their brest, and so pat it smooth, and in the night time sit vpon them: they couie a whole yeare before they hatch. Some say, that the looking wisely vpon their egges with their eies serueth in stead of sitting. The female flieth from the male, and will not abide to engender, vntill such time as he pricke her behind and sticke somewhat in her taile for running away from him so fast.

The Troglodites haue among them certaine Tortoises, with broad hornes like the pegs in a Lute or Harpe, and the same will wagge and stirre so, as in swimming they helpe themselves therewith, and are guided and directed by them. And this kind of Tortoise is called *Celtium*: of exceeding great bignesse, but rare to be found, and hard to come by: for their exceeding sharpe prickles like rockes, among which they keepe, fright the *Chelônophagi* (who delight to feed vpon them) that they dare not search after them. And the Troglodites, vnto whom these Tortoises vse to swim, adore them as holy and sacred things.

There be also land Tortoises (called thereupon in the workes that are made of them in pannel wife, *Chersina*) found in the deserts and wilderness of Affrick, and principally in that part which is drie and full of sands: and they are thought to liue on nothing else but the moist dew. And in very truth, no other liuing creature there breedeth besides them.

CHAP. XI.

¶ *Who first deuised the cleauing of Tortoise shells into thin plates like pannel.*

THe first man that inuented the cutting of Tortoise shells into thin plates, therewith to seele beds, tables, cupbords, and presses, was *Carbilius Pollio*, a man very ingenious and inuentiue of of such toies, seruing to riot and superfluous expense.

CHAP. XII.

¶ *A diuision of water beasts into their severall kindes.*

THe creatures that breed and liue in the water, be not all couered and clad alike: for some haue a skin ouer them, and the same hairie, as the Seales and Water horses. Others haue but a bare skin, as the Dolphins. There be again that haue a shell like a barke, as the Tortoises: and in others, the shell is as hard as the flint, and such be the oysters, muscles, cockles, and winkles. Some be couered ouer with crusts or hard pills, as the locusts: others haue besides them, sharpe prickles, as the vchins. Some be scaled, as fishes: others are rough coated, as the Soles, and with their skins folke vse to polish and smooth wood and yuorie. Some haue a tender and soft skin, as Lampreys: others none at all, as the Pourcuttle or Pourcontrell.

CHAP. XIII.

¶ *Of the Sea-calf, or Seale.*

THe great Whales, called *Priftis* and *Balæna*, bring forth their young aliue, and perfect liuing creatures: likewise all those that are couered with haire, as the Sea-calf or Seale. She calueth on the drie land as other cattell, and whensoever she calues, she gleans afterwards as kine do. The female is tied and lined to the male, like as bitches to dogges: she neuer bringeth more than two at once, and she giueth milke at her dugs and paps, to her young. She bringeth them to the sea not before they be twelue daies old, and then she traines and acquainteth them to swim and keepe the water ordinarily. These Seales be hardly killed, vntill a man dash out their braines. In their sleepe, they seeme to low or blea, and thereupon they be called Sea-calues. Docible they be & apt to learn whatsoever is taught them. They will salute folke with a kind of countenance and regard: also with a voice such as it is, resembling a certain rude and rumbling noise. If a man call them by their name, they will turn again, and in their language answer. There is no liuing creature sleepeth more soundly than they. The fins which they vse to swim withall in the sea, serue their turnes in stead of feet to go vpon, when they be on land. Their skins, after they be flaid from their bodies, retaine still a proprietie and nature of the seas; for euer as the water doth ebbe, they are more rugged, and the haire or bristles stand vp. Moreover, their right finnes or legs are thought to haue a power and vertue to prouoke sleep, if they be laid vnder ones beds head.

CHAP. XIII.

¶ *Of fishes that be without haire, how they breed, and how many, sorts there be of them.*

OF such creatures as want haire, two only there be that bring forth their young with life: and namely, the Dolphin and the Viper. Of fishes, properly so called, there be 74 kinds: besides those that haue rough crustie skins, which I count not; wherof there be 30 sorts. Of every one of them in particular, we will speake else-where, and at another time: for now we are to treat of the natures of the chiefe and principall.

CHAP. XV.

¶ *Of the names and natures of many fishes.*

THe Tunies are exceeding great fishes: we haue scene some of them to weigh 15 talents, and the taile to be 3 cubits broad and a span. In some fresh riuers also, there be fish found full

A full as bigge: and namely, the riuer-Whale called *Silurus*, in *Nilus*; the *Lax*, in the *Rhene*; the *Artilus*, in the *Po*. This fish growes so fat with ease & lying still, that otherwhiles it weigheth 1000 pounds, and being taken with a great hooke fastened and linked to a chaine, cannot be drawne forth of the riuer but with certaine yokes of oxen. And yet as big as he is, there is one little fish in comparison of him called *Clupea*, that killeth him: for vpon a maruellous desire that he hath to a certain vein that he hath within his iawes, he bites it in sunder with his teeth, and so dispatcheth the forenamed great fish *Artilus*.

As for the *Silurus*, a cut-throat he is where soeuer he goeth, a great deuourer, and maketh foule worke: for no liuing creatures come amisse vnto him; he setteth vp all indifferently. The very horses oftentimes as they swim, he deuoures, and specially in *Mœnus*, a riuer of Germany neere to *Lisboa* or *Erlisbornis*.

B Moreover, in the riuer *Donow*, there is taken the *Mario*, a fish much like to a ruffe or *Porpuis*. Also in the riuer *Boryllhenes*, there is found a fish by report, exceeding great, with no chine nor bone at all betwene; and yet the meat thereof is passing sweet and pleasant.

Within *Ganges* a riuer of *India*, there be fishes snouted and tailed as Dolphins, 15 cubits long, which they call *Platanistæ*. And *Statius Sebosus* reports as strange a thing besides, namely, that in the said riuer there be certain wormes or serpents with two finnes of a side, sixtie cubits long, of color blew, and of that hew take their name [and be called *Cyonocides*]. He saith moreover, that they be so strong, that when the Elephants come into the riuer for drinke, they catch fast hold with their teeth by their trunks or muzzles, and mauger their hearts force them

C downe vnder the water; of such power and force they are.

The male *Tunies* haue no finnes vnder their bellies. In the spring time they goe out of the great [Mediterranean] sea, and by whole flotes and troupes enter into *Pontus*; for in no other sea doe they bring forth their young. Their young frie, which accompanie their dams (when they are lightened of their burden) into the sea againe in the autumnne, are called *Cordylæ*. Afterwards, they begin to call them *Pelamides*, and in *Larine Limosæ*, of the mud wherein they are kept: and when they be aboue one yere old, then they be *Tunies* indeed, & so called. These *Tunies* are cut into pieces, wherof the nape of the necke, the belly, and the flesh about the canell bone of the throat, are most commendable for meat, but these parcels only when they be fresh and new killed, and yet then will they rise in a mans stomacke, and make him belch sower. The other parts being full of good meat and oleous withall, are laid in salt, and so put vp in barrels and kept. And these pieces of the *Tunie* thus conduit and powdred, are called *Melandrya*, cut in slices like to oke shingles for all the world. The worst pieces of all others, be those that are next the taile, because they are not fat: but the best is that which is toward the throat: how soeuer in other fishes the taile-peece is in greatest request, as being most stirred & exercised. As for the yong *Tunies* called *Pelamides*, they are diuided & cut into parcels, that be named *A-polectii*: but when they be cut peece-meale into certain squares, those pieces are named *Cybia*.

All kind of fishes grow exceeding soon to their bignesse, and especially in the sea *Pontus*: the reason is, because a number of riuers bring fresh water into it, & in some sort make it sweet: and namely in it, there is one called *Amia*, which grows so fast & so euidently, that a man may perceiue how it waxeth from day to day. These fishes, together with the old *Tunies* and the yong, called *Pelamides*, enter into great flotes & skuls into the sea *Pontus*, for the sweet food that they there find: and euery companie of them hath their severall leaders and captains: and before them al, the *Maquerels* lead the way, which, while they be in the water, haue a colour of brimstone; but without, like they be to the rest. The *Maquerels* serue the market well in *Spaine*, and furnish the fish thambles: namely, when as the *Tunies* repaire not into their seas. As for the sea *Pontus*, there enter into it few or no rauenours that haunt and deuoure fishes, vntill it be the Seales & little Dolphins. The old *Tunies*, when they come into it, chuse the right side (vpon the coast of *Asia*) but go forth at the left. And this is the reason thereof, as it is thought, For that they see better with their right eie; & yet the sight of either of them is very good. With-
F in the channell of the *Thracian Bosphorus*, by which *Propontis* ioyneth to the sea *Euxinus*, in the very height of the Firth that diuides *Asia* from *Europe*, neer to *Chalcedon* vpon the coast of *Asia*, there standeth a rocke, exceeding white and bright withall, which is so transparent and shining from the verie bottome of the sea to the top of the water, that the *Tunies* (affrighted at the sodaine sight thereof) to auoid it, goe alwaies amaine in whole flotes, toward the cape

ouer against Bizantium, which cape therupon beareth the name of Auricorum. And therefore it is, that the Bizantines make great gaine by fishing for them: whereas the Chalcedonians haue a great misse of that commoditie, and yet the arme of the sea or frith betweene them, is not past halfe a mile, or a mile at the most, ouer. Nost they euer wait for the North wind, that (together with the tide) they might with more ease passe out of Pontus. Howbeit, the onely taking of them at Bizantium, is when they return again into Pontus. In Winter the Tunnies stirre not nor raunge abroad: but looke, wherefoeuer they are then found to be, there they take vp their Winter herbour, and make their abode vntill the spring Equinoctiall about mid-March. Many times they will accompanie the ships that saile thereby with full winde, and it is a wonderfull pleasant sight for the sailers to see them from the sterne, how for certaine houres together, and for the space of some miles, they will follow and attend vpon the poupe, be the wind neuer so good, nay, although they strike at them with the trout-spear sundry times, or lance at them some three-tined instrument, yet will they not be chafed away, nor skared. These Tunnies that thus wait vpon the ships vnder saile, some call Pompli. Many of them passe the Summer-time in Propontis, and neuer enter into Pontus. Soles likewise vse the same manner, and yet yee shall haue many Turbots there. Neither shall a man finde the Cuttil there, although there be good store of Sea-cuts or Calamaries. Moreouer, of stone fishes, such as liue among rocks, the sea Thrush, the sea Merle, and the purple shel-fishes are not to be found, where Oysters notwithstanding are in great abundance. For all such Winter in the Egean sea, called now Archipelago. Of them that enter into the sea Pontus, there is none staies there, but goes forth again, saue only the shell fish called the Saredane, or Trichia: for I thinke it good, in such diuersitie of fishes names, seeing that one and the self same fish is in many countries called diuerfly, to vse the Greeke name for the most of them. These fish, I say, alone go vp the riuier Ister, and out of it they passe againe by certain issues and conduits vnder the ground, and so descend into the Adriatick sea: and euermore a man shall see this kind of fish comming down thither, but neuer mounting vp again out of that sea. The right fishing for the Tunnies, & the only taking of them is from the rising of the star Vergiliae, to the setting of Arcturus. All the winter time besides they lie hidden in the deep, at the bottom of pits and gulfes within the sea, vnlesse they come forth to take their pleasure in some warme season, or otherwhiles when the Moon is at the full. They grow sometime so fat, that their skins will not hold, but they are ready to cleaue and burst withall. The longest time that they liue is 2 yeres and not aboue. Moreouer, there is a little creature or vermine, made somewhat like a Scorpion, & as big as a spider, which vsually will set her sharpe sting vnder the finne, both of the Tunnies and also of the sword-fish (which many times is bigger than the Dolphin) and put them to such pain, that to auoid them they oftentimes are driuen to lance themselves, and skip into the very ships. Which propertie they haue also at other times, for feare of the violence of other fishes: & most of all, the Mullers haue this cast with them; and this they doe with such exceeding swiftnesse and agilitie, that they will sling themselves otherwhiles crosse ouer the ships.

CHAP. XVI.

¶ Of presages and foretokenings by fishes, and of their diuersitie.

Nature willing to endue this Element also of the water with some Auguries, hath giuen to fishes likewise a kind of prescience and foreknowledge of things to come. And verily during the Sicilian war, as *Augustus Caesar* walked along the shore vpon the sands, there was a certain fish leapt forth of the sea, and light at his very feet. The Soothsaiers and wifards vpon this occurrent, being sought vnto, gaue this construction thereof, and presaged thereby, That they who at that time were lords of the sea, and held it in subiection, should be ranged vnder the obedience of *Caesar*, and at his deuotion. And yet at that present it is thought and said, That god *Neptune* had adopted *Sec. Pompeius* for his son, so fortunate he was, and such exploits had he achieued vpon the sea.

The female kind of fishes are commonly bigger than the males. And there are some sorts of them, whereof there be no males at all, but all females, as the Erythini and the Chani. For they be taken alwaies spawners, and full of eggs.

Fishes that be skaled, for the most part swim in troups, and fort together. The best fishing is before the sun be vp: for then fishes see least or not at all. For if the nights be cleere and Moon-shine

shine, they see as well by night as day. Moreouer, they say that it is good fishing twise in one and the same hole: for commonly vpon the second cast, the draught is better than the first. Fishes loue passing well to tast oile; they ioy also and like well in soft & gentle shewers, & therewith they will feed and grow fat. And good reason there is of it: for why? we see by experience that canes & reeds, although they breed in meers and standing waters, yet they grow not to the purpose without rain. Moreouer, it is obserued, that fish keeping euermore in one dead poole and neuer remoued, wil die wherefoeuer it be, vnlesse there fall rain water to refresh them. All fishes feele the cold of a sharpe and hard winter, but those especially, who are thought to haue a stone in their head, as the Pikes, the Chromes, Scienæ, & Pagri. If it be a bitter season in winter, many of them are taken vp blind. And therefore during those cold moneths, they lurk hidden in holes, and within rocks, like as we haue said, certain land creatures doe. But aboue all others the Lobstars called Hippuri, and the Goracini, cannot abide extremity of cold, & therefore be neuer caught in winter, vnles it be at certain times when they come forth of their holes, which they keep duly, and neuer stir but then. In like sort, the Lamproie, the Orphe, the Conger, Perches, and all Stone-fishes that loue rocks and grauell. Men say verily, that the crampe-fish, the Plaice, and the Sole lie hidden all winter in the ground, that is to say, in certain creuises and chinks which they make in the bottome of the sea. Contrariwise, some again be impatient of heat, and can as ill away with hot weather, and therefore about Mid-summer for 60 daies they lie hidden and are not to be seen: as the fish Glaucus, the Cod, and the Gilt-head. Of riuier fishes, the Silurus or Sturgeon in the beginning of the dog-daies is blasted and stricken with a planet: at other times also in a thunder & lightening he is smitten, so as therewith he is astonied and lieth for dead. And some thinke that the like accident befalleth to the sea Bream Cyprinus. And verily, all quarters of the sea throughout, feele the rising of the dog-starre: but most of all the influence and power thereof is to be seen in the streight of Bosporus: for then may a man perceiue ordinarily the reits of the sea, and the fishes flete aloft, and the sea so troubled, that euery thing is cast vp from the bottome to the vpper part of the water.

CHAP. XVII.

¶ Of the Mullet and other fishes: and that the same in all places are not of like request.

THE Mullers haue a naturall ridiculous qualitie by themselves, to be laughed at: for when they be afraid to be caught, they wil hide their head, and then they thinke they be sure enough, weening that all their body is likewise hidden. These Mullers neuertheless are so lecherous, that in the season when they vse to ingender, in the coasts of Phoenice & Lianguedock, if they take a milter out of their stews or pooles where they vse to keep them, and draw a long string or line through the mouth and gills, and so tie it fast, and then put him into the sea, holding the other end of the line still in their hands, if they put him again vnto them, they shall haue a number of spawners or femals follow him hard at taile to the bank side. Semblably, if a man do the same with a female in spawning time, hee shall haue as many milters follow after her. And in this manner they take an infinit number of Mullers.

In old time our ancestors set more store by the Sturgeon, & it carried the name aboue all other fishes. He is the only fish that hath the scales growing ouer the head: hee swims against the streame. But now adaies there is no such reckoning & account made of him: wherat I maruell much, considering he is so hard and feldome to be found. Some call him Elops: afterwards *Cornelius Nepos*, and *Laberius* the Poet and maker of mery rimes haue written, that the sea Pikes and the cods got away all the credit from the Sturgeon, & were of greatest request. As for the Pikes aforesaid, the best and most commendable of all others be they which are called Lanati, as a man would say cotton Pikes, for the whitenesse & tenderesse of their flesh. Of cods there be two sorts, Callariæ, or Haddocks, which be the lesse: and Bacchi, which are neuer taken but in the deep, and therefore they are preferred before the former. But the Pikes that are caught in the riuier be better than all others. The fish called Searus now carrieth the price & praise of all others, & this fish alone is said to chew eud, to liue of grasse and weeds, and not to prey vpon other fishes. In the Carpathian sea great store of them is found: & by their good will they neuer passe the cape or promontorie Lectos in Troas. In the daies of *Tiberius Claudius* the Emperor,

Optatus his freed man (who sometime had bin a slave of his) and then Admiral and Lieutenant G
 generall of a fleet vnder him, brought them first out of that sea, and with them stored the whole
 coast of our seas betweene Sicilia and Campania. Order was taken by straight inhibition for
 the first five yeares, to kill those that were put into those seas, but if any were taken, that they
 should be cast in againe. In proceesse of time many of them came to be found and taken vp all a-
 long the coast of Italy, whereas before, they were not to be had in those parts. See how glutton-
 rie, and the desire to please a dauidy tooth, hath deuised means forsooth to fow fish, & to trans-
 plant them as it were, so to store the sea with strange breed: so that now we need no more mar-
 tuell, that forraine birds and foules, set out of far countries, haue their aeries at Rome, and breed
 there. Next to those fishes aboue named, the table is serued with a kinde of Lamprels or Ele-
 points like to sea Lampreis, which are bred in certain lakes about the Alps, and namely, in that
 of Rhœtia called Brigantinus: & a strange thing it is, that they should be so like in proportion
 to those of the sea. Of all other fishes of any good account, the Barbell is next, both in request,
 and also in plenty. Great in quantity they are not: for hardly shall you find any of them weigh
 about two pound, neither wil they feed & grow in stews and ponds. They are bred only in the
 Northern sea: and neuer shall you see them in the coast of the West Ocean. Moreover, of this
 Fish there be sundry sorts. And they liue all of Reirs and Seawds, of Oysters, of the fat mud, &
 of the flesh of other Fishes. They haue all of them 2 beards, as it were, hanging down euident-
 ly from their nether jaw. The worst of all this kind, is that which is called Lutarius: & this fish
 hath another named Sargis, that willingly euermore beareth him company: for whiles hee is
 rooting into the mud (wherof he taketh his name) then commeth the Sargus, and deuoures the
 food that is raised therewith. Neither are the Barbells much accepted that keep neere the shore
 and in the river within land. But the best simply are those that tast like vnto the shel-fish Con-
 chylilium: *Penestella* gaue them the name Mulli, of certaine moyles or fine shooes, which in co-
 lour they do resemble. They cast spawn thrice in one yere at the least: for so often their young
 Fry is seen. Our great belligods say, that a Barbell when he is dying, changeth his hue, and turn-
 neth into an hundred colours: the prooffe and experience wherof may be seen if he be put into
 a glasse: for through it, it is a prety sport to see how he altereth and changeth his scales beeing
 ready to die, one way into a pale and wan colour, otherwhiles into a reddish hue, one after ano-
 ther for many times together. *M. Apicius* (who was a man of all others most inuentiue and won-
 derful for his witty deuises to maintain riot and excess) thought it was a singular way to thide
 and kill these Barbells in a certain pickle, called the Roman Allies sauce (see how euen such a
 thing as that, hath found a synname forsooth & a proper addition.) And he also went about to
 prouoke men to deuise a certain manger or broth made of their liuers, like to that dripping or
 graue called Alec, that commeth of Fishes when they pine and corrupt. For surely it is more
 easie for me to say who set men a work that way first, than set down who woon the best game in
 the end, and was the greatest glutton. *Asiurus Celer*, a man of great calling and high place, who
 sometime had bin Consul, shewed his prodigallitie in this Fish, & it was when *C. Caligula* was
 Emperor: for he gaue for one Barbell eight thousand Sesterces. Certes, the consideration here-
 of rauisheth my mind, and carrieth it away to behold & wonder at those, who in their reproofs
 of gluttonie and gourmandise, complained that a cooke carried a greater price in the market
 than a good horse of seruice. For now adaies a cooke will cost as much as the charge of a tri-
 umph: and one Fish as deare as a cook. And to conclude, no man is better esteemed and regar-
 ded more, than he that hath the most cunning cast to wast the goods, & consume the substance
 of his lord and master.

CHAP. XVIII.

¶ Of the Barbil, the fish Coracinus, Stock-fish, and Salmon.

Licinius Mutianus reporteth, That in the red sea there was taken a Barbell that weighed 80 M
 pounds. Oh, what a price would he haue borne among our gluttons here with vs! What
 would he haue cost our prodigall spendthrifts, if hee had bin taken vpon our coasts neere
 Rome? Moreover, this is the nature of fish, that some are chiefe in one place, and some in ano-
 ther. As for example, the Coracinus in Egypt carrieth the name for the best fish. At Gades in
 Spain, the Doree or Goldfish, called Zeus and Faber. About the Isle Ebusus, the Stock-fish is
 much

A much called for; whereas in other places it is counted but a base muddy and filthy fish; and
 which no where else they know how to seeth perfectly, vnlesse it be first well beaten with cud-
 gels. In the country of Aquitaine or Guienne in France, the riuer Salmon passeth all other sea
 Salmons whatsoeuer.

Of fish, some haue many folds of gills, some single, others double. At these gills they deli-
 uer again and put forth the water that they take in at the mouth. You may know when fish be
 old by their hard scales: and yet all fishes are not scaled alike. There be two lakes in Italy at
 the foot of the Alps, named Larius and Verbanus, wherein fishes are to be seen euery yeare at
 the rising of the star Vergilia, thicke of scales, and the same sharp pointed like to the tongues
 of buckles, wherewith horsemen or men at arms do fasten their greiues: and neuer els but about
 that moneth do they appeare.

CHAP. XIX.

¶ Of the fish Exocoetus.

The Arcadians make wonderous great account of their Exocoetus; so called, for that hee
 goeth abroad and taketh vp his lodging on the dry land to sleep. This fish (by report) a-
 bout the coast Clitorius hath a kind of voice, and yet is without gills. And of some he
 is named Adonis. But besides him, the sea Tortoises also, (called Mures Marini) the Polypes
 & Lampreis vse to go forth to land. Moreover, in the riuers of India there is one certaine fish
 doth so, but it leaps back again into the water: for whereas many other fishes passe out of the
 sea into riuers and lakes, there is great euident reason thereof, namely, for that they are in
 more safetie there, both to cast their spawn vnder the wind where the water is not so rough, and
 full of waues: and also to bring forth their little ones, because there be no great fishes to de-
 uour them. That these dumb creatures should haue the sence herof, thus to know these causes,
 and obserue duly their times, is very strange and wonderfull, if a man would found the depth
 thereof: but more he would maruell to consider, how few men there be that know which is the
 best season for fishing, while the Sun passeth through the signe Pisces.

CHAP. XX.

D ¶ A diuision of fishes according to the forme and shape of their bodies.

OF sea fishes some be plain and flat, as Byrts or Turbors, Solds, Plaice, & Flounders. And
 these differ from the Turbors onely in the making of their body: for in a Turbot the
 right side turns vpward, and in a Plaice the left. Others again be long and round, as the
 Lamprey and Congre. And hereupon it is that they haue a difference in their fins, which Na-
 ture hath giuen to fish in stead of feet. None haue aboue foure, some two, some three, others
 none at all. Only in the lake Fucinus there is a fish which in swimming vseth 8 fins. All that
 be long and slipperie, as Eccles and Congres, haue ordinarily two in all, and no more. Lampries
 haue none to swim with, ne yet perfect gills: all of this kind winde and wriggle with their bo-
 dies within the water, and so erche forward like as serpents doe vpon the earth. They creepe
 also when they are vpon dry land, and therefore such liue longer than the rest out of the water.
 Also of the fore said flat fishes some haue no finnes, as the puffin or fork-fish: for their breadth
 serueth them sufficiently to beare them vp, and to swim. And amongst those that are counted
 soft, the Pourcuttell hath no fins, for his feet standeth him in stead of fins to swim with.

CHAP. XXI.

¶ Of Yeales.

Yealess liue 8 yeares. And if the North wind blow, they abide aliue without water 6 daies,
 but not so long in a Southern wind. But yet in Winter time they may not endure to be
 in a little water, nor if it be thick and muddy: wherupon, about the rising of the star Vir-
 gilia they be commonly taken, for that the riuers about that time vse to be troubled. Their
 feeding most commonly is in the night. Of all fish, they alone, if they be dead, stote not about
 the water.

¶ *The manner of taking them in the lake Benacus.*

THere is a lake in Italy called Benacus, within the territorie of Verona, through which the riuer Mincius runs: at the issue whereof euerie yere about the moneth of October, when the Autumne star Arcturus ariseth, whereby (as it euidently appeareth) the lake is troubled as it were with a winter storme and tempest, a man shall see rolling amongst the waues a wonderfull number of these Yeels wound & tangled one within another: insomuch as in the leapweeles and weernets deuised for the nonce to catch them in this riuer, there be found sometime a thousand of them wrapped together in one ball.

¶ *Of the Lamprey.*

THe Lamprey spawneth at all times of the yere, whereas all other fishes are deliuered of their yong at one certain season or other. The eggs or spawne grow to a great passe exceeding soon. If they chance to slip out of the water to dry land, the common sort is of opinion that they ingender with serpents. The male or milter of this kinde *Aristotle* calls Myrus. And herein is the difference, that the spawner, properly called Muræna, is of sundry colors, and withall but weake: but the Mylter or Myrus is of one hue, & withall very strong, hauing teeth standing without his mouth. In the North parts of France all the Lampreis haue in their right jaw seuen spots, resembling the seuen stars about the North pole, called *Charlemaines Waine*. They be of a yellow colour, and glitter like gold so long as the Lampreies be aliue; but with their life they vanish away, and be no more seene after they be dead. *Vedius Pollio*, a gentleman of Rome by calling, and one of the great fauorits and followers of *Augustus Cesar*, deuised experiments of cruelty by means of this creature: for hee caused certain slaues condemned to die, to be put into the stewes where these Lampreies or Murænes were kept, to be eaten and deuoured by them: not for that there were not wilde beafts ynow upon the land for this feat, but because he tooke pleasure to behold a man torne and pluckt in pieces all at once: which pleasant sight he could not see by any other beaft upon the land. It is said, if they taste vineger, of all things, they become enraged and mad. They haue a very thin and tender skinne: contrariwise, Yeels haue as thick & tough. And *Perrins* writeth, that boyes vnder 17 yeres of age were wont to be swinged and whipped with Yeeles skinnes, and therefore they were freed from all other mulct and punishment.

¶ *Of flat and broad Fishes.*

OF flat and broad fishes there is another sort, which in lieu of a chine or backe bone haue a gristle. As the Ray or Skait, the Puffin like vnto it, the Maids or Thornbacke, and the Crampfish: moreover, those which the Greekes haue termed by the names of their sea Cow, their Dog-fish, their Egle and Frog of the sea. In this rank are to be ranged the Squall also, albeit they are not so flat and broad. All this kind in general *Aristotle* hath called in Greek *Selache*, and he was the first that gaue them that name: we in Latine cannot distinguish them, vnlesse we call them all Cartilaginea, that is to say, Gristly fish. But all the sort of them that deuoure flesh are such: and their manner is to feed lying backward, like as we obserued in the dolphins. And whereas other fishes cast spawn which resemble knots of eggs; these gristly fishes only, as also those great ones which we call Cete, i. Whales, bring forth their yong aliue. And yet I must except one kind of them which they call Rana, i. sea Frogs.

¶ *Of Echeneis [i. the Stay-ship.]*

THere is a very little fish keeping vsually about rocks, named Echeneis: it is thought, that if it settle and stick to the keele of a ship vnder water, it goeth the slower by that means: whereupon

A whereupon it was so called: and for that cause also it hath but a bad name in matters of loue, for enchanting as it were both men and women, and bereauing them of their heat and affection that way: as also in law cases, for delay of issues and iudicial trials. But both these imputations and slanders it recompenseth again with one good vertue and commendable quality that it hath: for in great bellied women if it be applied outwardly it stayeth the dangerous flux of the womb, and holds the child vnto the full time of birth: howbeit it is not allowed for meat to be eaten. *Aristotle* thinketh, that it hath a number of feet, the fins stand so thick one by another.

B As for the shell fish Murex, *Atutianus* saith it is broader than the Purple, hauing a mouth neither rough nor round, ne yet with a becke pointed cornered-wise, but plain and euene, hauing a shell on both sides winding and turning inward. These fishes chanced vpon a time to cleaue fast vnto a ship, bringing messengers from *Periander*, with commission to gueld all the Noblemens sonnes in *Gnidos*, and stayed it a long time, notwithstanding it was vnder saile, and had a strong gale of a fore-winde at the poupe. And hereupon it is, that these Shell fishes for that good seruice are honoured with great reuerence in the Temple of *Venus* among the *Gnidians*.

But to returne again vnto our Stay-Ship Echeneis, *Trebius Niger* saith it is a foot long, and five fingers thicke, and that oftentimes it stayeth a ship. And moreover, as he saith, it hath this vertue being kept in salt, to draw vp gold that is fallen into a pit or well being neuer so deep, if it be let downe and come to touch it.

¶ *The changeable nature of Fishes.*

THe Cackarels change their colour: for these fishes being white all Winter, wax blacke when Summer comes. Likewise the Mole or Lepo called Phycis, doth alter her hue: for howsoeuer all the yere besides it be white, in the Spring it is speckled. This is the only fish that builds vpon the reites and mosse of the sea, and layes her eggs or spawneth in her nest. The sea Swallow flieth, and it resembleth in all points the bird so called. The sea Kite doth the same.

¶ *Of the fish called the Lanterne, and the sea Dragon.*

THere is a fish comes ordinarily about the water, called Lucerna, for the resemblance that it hath of a light or lantern: for it litleth forth the tongue out of the mouth, which seemeth to flame and burne like fire, and in calme and still nights giues light and shineth. There is another fish that puts forth hornes about the water in the sea, almost a foot and halfe long, which thereupon tooke the name Cornuta. Againe, the sea Dragon if he be caught and let go vpon the sand, worketh himselfe an hollow trough with his snout incontinently, with wonderfull celeritie.

¶ *Of bloudlesse fishes.*

Some fishes there be which want bloud, whereof wee now will speake. Of them are three sorts: first, those which be called Soft: secondly, such as be couered within crusts: & in the last place, they that are inclosed within hard shels. Of the first sort, counted soft, be reckoned the sea Cut or Calamarie, the Cuttle, the Polype, and the rest of that sort. These haue their head betwene their feet and the belly, and euery one of them haue 8 feet. As for the Cuttil and Calamarie, they haue two feet apiece longer than the rest, and the samerough, wherewith they conuey and reach meat to their mouths: and with those they stay themselves as it were with anchor hold against the surging waues: the rest of their feet be smal like hairs, and with them they hunt and catch their prey.

Also the Calamarie lanceth himselfe out of the water, as if he were an arrow; and euen so dorth little Scalops. The male of the Cuttles kind are spotted with sundry colors more dark and blackish, yea and more firme and steady than the female. If the female be smitten with a Trout-speare, or such like three-forked weapon, they wil come to aid & succor her: but she again is not so kind to them, for if the male be stricken she will not stand to it, but runs away. But both of them, the one as well as the other, if they perceiue that they be taken in such streights that they cannot escape, shed from them a certain black humor like to ink, and when the water therewith is troubled and made duskish, therein they hide themselves and are no more seen.

Of Polypes or Pourcontrels there be sundry kinds. They that keep neere the shore are bigger than those that haunt the deep. All of them help themselves with their fins and armes, like as we do with feet and hands: as for their taile, which is sharp and two forked, it serueth them in the act of generation. These Pourcontrels haue a pipe in their back, by the help whereof they swim all ouer the seas; and it they can shift one while to the right side, & another while to the left. They swim awry or sidelong with their head aboue, which is very hard and as it were puffed vp so long as they be aliue. Moreouer, they haue certain hollow concauities dispersed within their claws or arms like to ventoses or cupping glasses, whereby they will stick to, and cleaue fast as it were by sucking, to any thing, which they clasp & hold so fast, lying vpward with their bellies, that it cannot be plucked from them. They neuer settle so low as the bottom of the water, and the greater that they be, the lesse strong they are to clasp or hold any thing. Of all soft fishes they only goout of the water to dry land, especially into some rough place, for they cannot abide those that are plaine and euen. They liue vpon Shell-fishes, and with their haire or strings that they haue they will twine about their shels and crack them in pieces: wherefore a man may know where they lie and make their abode, by a number of shels that lie before their nest. And albeit otherwise it be a very brutish and senselesse creature, so foolish withall, that it will swim and come to a mans hand; yet it seems after a sort to be witty and wise, keeping of house and maintaining a familie: for all that they can take they carry home to their nest. When they haue eaten the meat of the fishes, they throw the empty shels out of dores, and lie as it were in ambuscado behind, to watch and catch fishes that swimme thither. They change their colour oftsoons, and resemble the place where they be, & especially when they be afraid. That they gnaw and eat their own elces and arms, is a meere tale; for they be the congres that do them that shrewd turn: but true it is that they will grow againe, like as the taile of snakes, adders, & lizards. But among the greatest wonders of nature, is that fish which of some is called Nautilus, of others Pompilos. This fish, for to come aloft aboue the water turnes vpon his back, and raiseth or heaueth himself vp by little and little: and to the end he might swim with more ease, as disburdened of a sinke, hee dischargeth all the water within him at a pipe. After this, turning vp his two foremost claws or armes, he displaieth and stretcheth out betwene them a membrane or skin of a wonderfull thinnesse: this serueth him in stead of a saile in the aire aboue water: with the rest of his arms or claws he roweth and laboreth vnder water, & with his taile in the mids he directs his course, and steereth as it were with an helme. Thus holds he on and maketh way in the sea, with a faire shew of a foist or gally vnder saile. Now if he be afraid of any thing in the way, he makes no more ado but drawes in water to ballace his body, and so plungeth himselfe down, and sinketh to the bottom.

Of the Polypus or Pourcontrell kind with many feet, is the Ozæna, so called of the strong fauor of their heads, for which cause especially, the Lampreys follow in chase after him.

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As for the Many-feet or Pourcuttels, they lie hidden for two months together: and aboue two yeares they liue not. They die alwaies of a consumption or Phthisicke: the female sooner than the males, and ordinarily after that they haue brought forth their yong frie. I cannot ouerpasse but record the reports of *Trebius Niger*, one of the traine and retinue of *L. Lucullus* Proconsull in Boetia, which he vpon his knowledge deliuered as touching these Many-feet fishes called Polypi, namely, That they are most desirous and greedie of cockles, muscels, and such like shell-fishes: and they againe on the contrarie side, so soone as they feele themselves touched of the Polypes, shut their shels hard, and therewith cut asunder their claws or armes, that were gotten within: and thus fall they to feed vpon those, who sought to make a prey of them. [Now in very truth these shell-fishes, all of them see not at all, neither haue they any other sense, but tasting of their meat, & feeling of their drinke.] These Polypi foreseeing all this, lie in wait to spiewhen the said cockles, &c. gape wide open, and put in a little stone between the shels, but yet beside the flesh & bodie of the fish, for feare lest if it touched and felt it, he would cast it forth againe: thus they theecue, and without all daunger and in securitie get out the fleshie substance of the meat to deuoure it: the poore cockles draw their shels together for to clasp them between (as is aboue said) but all in vaine, for by reason of a wedg between, they will not meet close nor come neere together. See how subtle and craftie in this point these creatures be, which otherwise are most fortish and senselesse. Moreouer, the said *Trebius Niger* affirmeth, that there is not any other beast nor fish in the sea more daungerous to doe a man a mischief within the water, than is this Pourcuttle or Many-feet Polypus: for if he chance to light on any of these diuers vnder the water, or any that haue suffered shipwracke and are cast away, he assailes them in this manner: He catcheth fast hold of them with his claws or armes, as if he would wrestle with them, and with the hollow concauities and noukes between, keepeth a sucking of them; and so long he suckes and fokes their blood (as it were cupping-glasses set to their bodies in diuers places) that in the end he draweth them drie. But the only remedie is this, to turne them vpon their backe, and then they are soone done and their strength gone: for let them lie so, they stretch out themselves abroad, and haue not the power to clasp or comprehend any thing. And verily all liuing creatures in the sea loue the smell of them exceeding well, which is the cause that fishers besmare and anoint their nets with them, to draw and allure fishes thither.

The rest which mine author hath related as touching this fish, may seem rather monstrous **D**lies and incredible, than otherwise: for he affirmed, that at Carteia there was one of these Polypi, which vsed commonly to go forth of the sea, and enter into some of their open cisterns and vaults among their ponds and stews, wherein they keep great sea-fishes, and otherwhiles would rob them of their salt-fish, and so go his waies againe: which he practised so long, that in the end he gat himselfe the anger and displeasure of the maisters and keepers of the said ponds and cisterns, with his continuall & immeasurable filching: whereupon they staked vp the place and empalled it round about, to stop all passage thither. But this thief gaue not ouer his accustomed haunt for all that, but made meanes by a certaine tree to clamber ouer and get to the fore-said salt fish; and neuer could he be taken in the manner, nor discouered, but that the dogges by their quick sent found him out and baied at him: for as he returned one night toward the sea, they assailed and set vpon him on all sides, and therewith raised the fore-said keepers, who were affrighted at this so sudden an alarm, but more at the strange sight which they saw. For first and foremost this Polype fish was of an vmeasurable and incredible bignesse: and besides, he was besmeared & beraied all ouer with the brine and pickle of the fore-said salt-fish, which made him both hideous to see to, and to sinke withall most strongly. Who would euer haue looked for a Polipe there, or taken knowledge of him by such marks as these? Surely they thought no other, but that they had to deale and encounter with some monster: for with his terrible blowing and breathing that he kept, he draue away the dogs, and otherwhiles with the end of his long stringed winding feet, he would lash and whip them; somtimes with his stronger claws like arms he rapped and knoked them well and surely, as it were with clubs. In summe, he made such good **F**shift for himselfe, that hardly and with much adoe they could kill him, albeit he receiued many a wound by trout-spears which they launced at him. Wel, in the end his head was brought and shewed to *Lucullus* for a wonder, & as big it was as a good round hoghead or barrel that would take and containe 15 Amphores: and his beards (for so *Trebius* tearmed his claws and long-stringed feet) carried such a thicknesse and bulke with them, that hardly a man could fathome

one

one of them about with both his armes, such knockers they were knobbed and knotted like clubs, and withall 30 foot long. The concavities within them, and hollow vessels like great bassons, would hold 4 or 5 gallons apeece: and his teeth were answerable in proportion to the bigness of his bodie. The rest was faued for a wonder to be seene, and weighed 700 pound weight. This author of mine *Trichinus* affirmeth, that Cuttels also and Calamaries have been cast vpon that shore, full as big. Indeed in our sea there be Calamaries taken of 5 cubits long, and Cuttels of twaine, in length: and these liue not about two yeares

Mutianus reporteth, that himselfe saw in Propontis another kind of fish carying as it were a ship of his owne, and making faile with it like to some galley: and a shel-fish it was fashioned with a keele like to a barge or barke, with a poupe embowed and turned vp: yea and armed as it were in the prow with a three-forked pike. Within which lay hidden (as he saith) another liuing creature called Nauplius, resembling a Cuttle fish; and for no other reason in the world, but to make sport and play with it for companie. Now the manner of this pastime and sailing was in two sorts: for if it were a calme sea and the winds downe, the Nauplius afore-said that went as a passenger in this shell, would put downe his feet into the water like ores, and row therewith; but if a gale of wind were aloft, he would stretch the same length & make them serue in stead of an helme to steere withall; and then the Coquill or shel-fish would spread and display it selfe like sailes, to gather wind: so as the one of them tooke a pleasure to carrie, in manner of the vessell; the other had his delight to labour as a mariner, and to direct withall like a pilot. Thus these two fishes (otherwise senselesse & blockish) take their pleasure together, vnles peraduenture it fall out vnhappily (for certain it is that such a sight as this presages no good to sailers) that men marre their sport, and either part them asunder, or force them to sinke vnder water.

The Lobsters (becing of that kinde which wanteth bloud) haue a tender and brittle cruft to couer and defend them. For five months they lie hidden. The Crabs likewise, who at the same time keep clofe & secret: and both of them in the beginning of euery spring cast their old coats or shels as snakes do their skins, & take them that be new & fresh. All others of this kind swim within the water: but the Lobsters stote aloft, and creepe as it were vpon the water. So long as they are secure of any feare and danger, they go directly straight, letting downe their hornes at length along their sides, which naturally by themselves haue a round point or bob at the end: but if they be in any feare, go vp those hornes straight, and then they creepe byas and goe side-long. With these hornes they oftentimes maintaine battaile one with another. Of all creatures, this only hath a tender and short kind of flesh, which in the seething will not hang together, vnlesse it be foddren aliue in scalding water, and then it will be stiffe and callous as brawne.

CHAP. XXXI.

Of Sea-crabs, Vrchins of the sea, and great Vrchins called Echinometra.

As for the Lobsters, they loue rocks and stonie places: but Crabs delight in soft and delicate places. In winter, they seeke after the warme or sun-shine shore: but when summer is come, they retire into the coole and deepe holes in the shade. All the sort of them take harme and paire by winter: in autumn and spring, they battle and wax fat, and especially when the moon is at the full: because that planet is comfortable in the night time, & with her warme light mitigareth the cold of the night. Of these Crab-fishes, there be many kinds: to wit, Lobsters, Creyfishes of the sea, crabs of Barbarie called Maia, Grampels, Grits or Pungiers, Crabs of Heraclea, yellow riuier Creyfishes, and diuers others of more base account. As for the Lobsters, they differ from the rest in taile. In Phoenicia, there is a kind of Crabs called Hippoe, or rather Hippois (that is to say, Horses or Horsmen) which are so swift, that it is impossible to ouertake them. Crabs liue long: eight clees or feet they haue apeece, all crooked and hooked: the female hath the fore clee double, the male but single. Moreover, two of the legs or arms are forked and toothed like pincers. The vpper part of these foreclawes doth stir: the nether part moeth not. The right leg in them all is bigger than the left. When they come in skuls all together (as sometimes they doe) they are not able to passe one by another the streights of the sea Pontus about Constantinople, whereupon they are forced to returne back againe and fetch a compasse about, and the bearen way with their tracks may be seene. The least of all these kind of Crabs, is called

A called Pinnotheres [or Pinnoterer] and for his smalnesse most subiect and exposed to iniurie. But as subtil and crafty he is as he is little; for his maner is to shroud and hide himself within the shels of empty oysters, and euer as he growes bigger and bigger, to go into those that be wider. Crabs when they be afraid will recule backward as fast as they went forward. They will fight one with another, and then ye shall see them iur and butt with their hornes like rams. Singular good they are against the bitings and stings of serpents. It is reported, that while the Sun is in the signe Cancer, the bodies within of dead crabs that lie without the water vpon drie land, wil turne to be scorpions. Of the same sort that the crabs be are the vrchins of the sea called Echini; and these in stead of feet haue certain pointed prickles. Their maner of going is to roll themselves and tumble round; and therefore many times shall yee finde them with their prickles worne. And of this sort be they that are called Echinometra. The longest prickles they haue of all others, and the least shels or cases wherein they are. Neither are they all of the same colour of glasse; for about Torone they are found to be white, hauing small prickles. They haue all of them siue eggs when they lay, but they are bitter. Their mouths stand in the mids of their bodies, bending down toward the earth. It is said they haue a fore-knowledge of a sea tempest: for by reason that they are so round, and therefore soone whirled and caried here and there, they fall then to labor and gather stones, wherewith they charge and peise their bodies as with ballast, that they may abide more stedfast, for that they are not willing to weate their prickles with rolling and turning ouer and ouer: which when the mariners and sailers perceiue once, they presently cast many anchors and stay their ships.

CHAP. XXXII.

Of Winkles and Sea Snacles.

I N the same ranke are to be reckoned the Winkles as well of land as water. When they put themselves out of their shels they thrust out two hornes that they haue, and wil pluck them in again when they list. Eyes they haue none to see withall, and therefore these little hornes sense them in good stead to sound, as it were, and try the way as they go.

CHAP. XXXIII.

Of Scallops: of the greatest Winkle called Murex, and other kinds of shell-fishes.

T He great Scallops in the sea are counted for the same race which lie hid also in the time as well of great heat as cold. They haue certaine nailes as it were shining like fire in the night season; yea in their very mouthes that eat them. As for the Pourcelanes or Murexes, they haue a stronger skaled shell; as also all the kind of Winkles great and small. Wherini a man may see the wonderfull varietie of Nature in this play and pastime of hers, giuing them so many and sundry colours, with such diuersitie of formes and figures; for of them yee shall haue flat and plain, hollow, long, horned like the moon croissant, full round, halfe round, & cut as it were iust through the mids, bow-backt, and rising vp, smooth, rough, toothed and indented like a saw, ridged and chamfered between, wrinkling and winding vpward to the top like Calatropes, bearing out sharpe points in the edges, without forth broad and spread at latge, within rolled in pleits. Moreover, there be other distinct shapes besides all these: some be striped and raied with long streaks, others crested and blasing with a bush of long haire: some againe crisped and curled, others made like an hollow gutter or pipe: some fashioned as it were a comb, others waving with plaits one aboue another tile-wise, others framed in the manner of a net or lattise: some are wrought crooked and byas, others spred out directly in length. A man shall see of them those that are made thick and mossie thrust together and compact, others stretched forth at large: ye shall haue of them wrapt and lapt one within another: and to conclud, yee shall find them run round into a short fast knot, and all their sides vnited together in one: some flat and plain good to giue a clap, others turning inward crooked like a comet, made as it were to sound and wind withall. Of all these sorts, the Pourcelanes or Venus-Winkles swim aboue the water, and with their concavities or hollow part which they set into the weather, help themselves in stead of sailes, and so gathering wind, saile as it were aloft vpon the sea. The manner

of the Scalops is to skip, and otherwhiles they will leap forth of the water. They also can find G the means to make a boat of themselves, and so flore aboue and saile handfomly.

CHAP. XXXIV.

¶ *The riches of the sea.*

BVt what meane I all this while to stand vpon these small trifling matters, when as in very truth the ouerthrow of all honestie, the ruin of good maners, and in lieu thereof all riot and superfluity proceeds from these shel-fishes, and from nothing so much? for now the world is grown to this passe, that there is nothing in it whatsoeuer so chargeable to mankind, nothing so hurtfull and dangerous as is the very sea, and that so many waies; namely, in furnishing the table with such varietie of dishes, in pleasing and contenting the taste with so many dainty and delicate fishes; and those carry the highest price that be gotten with greatest hazard and danger of those that take them, otherwise they be of no regard and value to speake of.

CHAP. XXXV.

¶ *Of Pearles, how and where they be found.*

HOwbet al that before named is nothing in comparifon of the Purples, pretious Coquils and Pearls that come from thence. It was not sufficient belike to bring the seas into the kitchen, to let them down the throat into the belly, vnlesse men and women both caried them about in their hands and eares, vpon their head, and all ouer their body. And yet what societie and affinitie is there betwixt the sea and apparell? what proportion betwixt the waues and surging billowes thereof, and wooll? for surely this element naturally receiues vs not into her bosom vnlesse we be stark naked: and set the case there were so great good fellowship with it and our bellies; how comes our backe and sides to be acquainted with it? But wee were not contented to feed with the peril of so many men, vnlesse we be clad and araied also therewith. O the folly of vs men! see how there is nothing that goeth to the pampering and trimming of this our carcasse, of so great price and account, that is not bought with the vtmost hafard, and costeth not the venture of a mans life! But now to the purpose. The richest merchandise of all, and the most soueraigne commoditie throughout the whole world are these Pearles. The Indian ocean is chief for sending them: and yet to come by them, we must go and search among those huge & terrible monsters of the sea, which we haue spoken of before: we must passe ouer so many seas, and saile into far countries so remote, and come into those parts where the heate of the sun is so excessiue and extreme; and when all is done we may perhaps misse of them: for euen the Indians themselves are glad to seeke among the Islands for them, & when they haue done all they can, meet with very few. The greatest plenty of them is to be found in the coast of Taprobane and Toidis, as hath bin said before in our Cosmographie and description of the world: and likewise about Perimula a promontorie and city of India. But the most perfect and exquisite of all others be they that are gotten about Arabia, within the Persian gulf. This shell-fish which is the mother of Pearle, differs not much in the maner of breeding and generation from the Oysters: for when the season of the yeare requireth that they should engender, they seeme to yawne and gape, and so do open wide; and then (by report) they conceiue a certaine moist dew as seed, wherewith they swell and grow big, and when time commeth labor to be deliuered hereof: and the fruit of these shell fishes are the Peares, better or worse, great or small, according to the qualitie and quantitie of the dew which they receiued. For if the dew were pure and cleare which went into them, then are the Pearles white, faire, and Orient: but if grosse and troubled, the Pearles likewise are dimme, foule, and duskyish; pale (I say) they are, if the weather were close, darke, and threatning raine in the time of their conception. Whereby (no doubt) it is apparant and plaine, that they participate more of the aire and sky, than of the water and the sea; for according as the morning is faire, so are they cleere: but otherwise, if it were misty and cloudy, they also will be thicke and muddy in colour. If they may haue their full time and season to feed, the Pearles likewise will thriue and grow bigge; but if in the time it doth chance to lighten, then they close their shells together, and forwant of nourishment

A rishment are kept hungrie and fasting, and so the pearles keepe at a stay and prosper not accordingly. But if it thunder withall, then suddenly they shut hard at once, and breed only those excellences which be called Physemata, like vnto bladders putt vp and hooued with wind, & no corporal substance at all: and these are the abortiue & vntimely fruits of these shel fishes. Now those that haue their full perfection, and be found and good indeede, haue many folds and skins wherein they be lapt, not vnproperly as it may be thought, a thicke, hard, and callous rind of the body, which they that be skillfull do pill and clenfe from them. Certes, I cannot chuse but wonder how they should so greatly be affected with the aire, and joy to much therein: for with the same they wax red, and lose their native whitenesse and beau. ie, exen as the bodie of a man or woman that is caught and burnt with the sun. And therefore those shells that keep in the maine sea, and lie deeper than that the sun-beames can pierce vnto them, keep the finest and most delicate pearles. And yet they, as orient as they be, waxe yellow with age, become riuclcd, and looke dead without any liuely vigor: so as that commendable orient lustre (so much sought for of our great lords and costly dames) continueth but in their youth, and decaieith with yeares. When they be old, they will proue thicke and grosse in the very shells, and sticke fast vnto their sides, so as they cannot be parted from them, vnlesse they be filed asunder. These haue no more but one faire face, and on that side are round, for the backe part is flat and plaine; and hereupon such are called Tympania, as one would say, Bell bearies. We see daily of these shells which serue as boxes to carrie sweet perfumes and precious ointments, and most commendable they are for this gift, that in them there be pearls of this sort naturally growing together like twins. The pearle is soft and tender so long as it is in the water, take it forth once and presently it hardeneth. As touching the shell that is the mother of Pearle, assoon as it perceiuerth and feelerh a mans hand within it, by and by she shutteth, and b that means hideth and couereth her riches within: for well woteth she that therefore she is sought for. But let the fisher looke well to his fingers, for if she catch his hand between, off it goeth: so trenchant and sharp an edge she carrieth, that is able to cut it quite a two. And verily this is a just punishment for the theefe, and none more: albeit he be furnished and armed with other means of reuenge. For they keep for the most part about craggie rocks, and are there found: and if they be in the deepe, accompanied lightly they are with curst Sea-dogs. And yet all this will not serue to skar men away from fishing after them: for why? our dames and gentlewomen must haue their eares behanged with them, there is no remedie. Some say, that these mother-pearles haue their kings and capitaines, as Bees haue: that as they haue their swarmes led by a master Bee, so euery troupe and companie of these, haue one speciall great and old one to conduct it, and such commonly haue a singular dexteritie and wonderfull gift to preuent and auoid all daungers. These they be that the dyvers after pearles are most carefull to come by: for if they be once caught, the rest scatter asunder and be soone taken vp within the nets. When they be thus gotten, it is said that they be put vp into earthen pots and well couered with salt: and when the salt hath eaten and consumed all the flesh within, then certaine kernels that were within their bodies (and those be the very pearles) fall down and settle to the bottome of those pots. There is no doubt but with much vse they will weare, yea and change colour thorough negligence, if they be not well looked vnto. Their chief reputation consisteth in these fise properties, namely, if they be orient white, great, round, smooth, and weightie. Qualities I may tell you, nor easily to be found all in one: inso-much as it is impossible to find out two perfectly sorted together in all these points. And hereupon it is, that our dainties and delicacies here at Rome, haue deuised this name for them, and call them Vnions; as a man would say, Singular, and by themselves alone. For surely the Greeks haue no such tearmes for them, neither know they how to cal them: nor yet the Barbarians, who found them first out, otherwise than Margaritæ. In the very whitenesse it selfe, there is a great difference among them. That which is found in the red sea, is the clearer and more orient. As for the Indian pearle, it resemblerh the skales and plates of the stone called Specularis; howsoeuer otherwise it passeth all others in greatnesse. The most commendation that they haue is in their colour, namely, if they may be truly called Exaluminati, orient and cleare as Alume.

F They that be goodly great ones, are commendable in their degree. As for those that are long and pointed vnto, growing downward broader and broader like a peare, or after the manner of Alabafter boxes, full and round in the bottome, they be called Elenchi. Our dames take a great pride in a brauerie, to haue these not only hang dangling at their fingers, but also two or

three of them together pendant at their eares. And names they haue forsooth newly deuised for them, when they serue their turne in this their wanton excesse and superfluitie of riot: for when they knocke one against another as they hang at their eares or fingers, they call them *Crotalia*, i. Cymbals: as if they tooke delight to heare the sound of their pearles ratling together. Now adayes also it is growne to this passe, that meane women and poore mens wiues affect to weare them, because they would be thought rich: and a by-word it is amongst them, That a faire pearle at a womans eare is as good in the street where she goeth as an huiusier to make way, for that euery one will giue such the place. Nay, our gentlewomen are come now to weare them vpon their feet, and not at their shoo latches only, but also vpon their starrops and fine buskins, which they garnish all ouer with pearle. For it wil not suffice nor serue their turne to carie pearles about them, but they must tread vpon pearles, goe among pearles, and walke as it were on a pavement of pearles.

Pearles were wont to be found in our seas of Italie, but they were small & ruddie, in certain little shell fishes which they call *Myæ*: but more plenty of such were taken vp in the streights of Bosphorus neere Constantinople. Howbeit, in Acarnania there is a little Cochle called *Pinna*, i. a Nacre, which engendreth such. V. hereby it may appeare, that there be more than one sort of Mother-pearles. For king *Inba* likewise hath left in writing, that in Arabia there is a kind of shell fish like vnto a Scallop, saue that it is not chamfered, but thick and rough like a sea Vrecheon, which beares Pearles within the very flesh of the fish, like vnto haile stones. But now adayes there be no such mother-pearles come to our coasts. Neither be there found in Acarnania any of value and reputation. For wily they are all in manner without proportion, neither round nor weighty, and of a marbled colour. They rather about the cape of Actium are better, and yet they be but little ones: like as they also which are taken in the coasts of Mauritania. *Alexander Polyhistor*, and *Sudmes*, are of opinion that they will age, and in the end lose their colour. That they be solid and not hollow within, is euident by this, that with no fall they will breake. But they be not alwaies found in the midst of the flesh within the mother-pearles, but here & there, sometime in one place, and sometime in another. Verily I haue seene of them about the brim and edges of the shell, as if they were readie to goe forth: and in some 4, in others five together. Vnto this day few of them haue been knowne to weigh about halfe an ounce and one scripture. In * Brittain it is certain that some dogrow; but they be small, dim of colour, and nothing orient. For *Julius Caesar* (late Emperour of famous memorie) doth not dissimule, that the cuirace or breast-plate which he dedicated to *Venus* mother within her temple, was made of English pearles.

Imy selfe haue seene *Lollia Paulina* (late wife, and after widdow, to *Caius Caligula* the emperor) when she was dressed and set out, not in statly wise, nor of purpose for some great solemnity, but only when she was to go to a wedding supper, or rather vnto a feast when the assurance was made, & great persons they were not that made the said feast: I haue seene her, I say, so beset and bedeckt all ouer with hemeraulds and pearles, disposed in rewes, ranks, and courses one by another: round about the attire of her head, her cawle, her borders, her peruk of hair, her bondgrace and chaplet; at her eares pendant, about her neck in a carcanet, vpon her wrist in bracelets, & on her fingers in rings; that she glittered & shon again like the sun as she went. The value of these ornaments, she esteemed and rated at * 400 hundred thousand Sestertij: and offered openly to proue it out of hand by her bookes of accounts of reckonings. Yet were not these jewels the gifts and presents of the prodigall prince her husband, but the good and ornaments from her owne house, fallen to her by way of inheritance from her grandfather, which he had gotten together euen by the robbing and spoiling of whole prouinces. See what the iustice and end was of those extortions and outrageous exactions of his: this was it, That *M. Lollius* slandered and defamed for receiuing bribes & presents of the kings in the East; and being out of fauor with *C. Caesar*, sonne of *Augustus*, and hauing lost his amitie, dranke a cup of poison, and preuented his iudiciall triall: that forsooth his neece *Lollia*, all to be hanged with jewels of 400 hundred thousand Sestertij, should be seene glittering, and looked at of euery man by candle-light all a supper time.

If a man would now of the one side reckon what great treasure either *Curius* or *Fabricius* carried in the pompe of their triumphs; let him cast a proffer and imagine what their shews were, what their seruice at the table was: and on the other side, make an estimate of *Lollia*, one only woman

A man, the dowager of an Emperor, in what glory she sitteth at the bound, would not he with rather, that they had been pulled out of their chariots, and neuer triumphed, than that by their victories the state of Rome should haue grown to this wastfull excesse & intollerable pride? And yet this is not the greatest example that can be produced of an excessive riot and prodigality.

Two only pearles there were together, the fairest and richest that euer haue bene knowne in the world: and those possessed at one time by *Cleopatra* the last queen of Egypt, which came into her hands by means of the great kings of the East, and were left vnto her by descent. This princeesse, when *M. Antonius* had strained himselfe to doe her all the pleasure he possibly could, & had feasted her day by day most sumptuously, & spared for no cost in the height of her pride and wanton brauerie (as being a noble curtezan, and a queene withall) began to debase the expence and prouision of *Antonius*, and made no reckoning of all his costly fare. When he thereat

B demanded againe how it was possible to goe beyond this magnificence of his, she answered againe, that she would spend vpon him at one supper * 100 hundred thousand Sestertij. *Antonius*, who would needs know how that might bee (for he thought it was impossible) laid a great wager with her about it, and shee bound it againe, and made it good. The morrow after, when this was to be tried, and the wager either to be won or lost, *Cleopatra* made *Antonius* a supper (because she would not make default, and let the day appointed to passe) which was sumptuous and roiall enough: howbeit, there was no extraordinary seruice seene vpon the board: whereat *Antonius* laughed her to scorne, and by way of mockerie required to see a bill with the account of the particulars. She againe said, that whatsoeuer had been serued vp already, was but the ouerplus

C vpon the full summe that she was leazed at: yea, her selfe alone would eat about that reckoning, and her owne supper should cost * 600 hundred thousand Sestertij, and with that commanded the second seruice to be brought in. The seruitors that waited at her trencher (as they had in charge before) set before her one only crewet of sharpe vineger, the strenght whereof is able to resolute pearles. Now she had at her eares hanging these two most precious pearles, the singular and only jewels of the world, and euen Natures wonder. As *Antonius* looked wistly vpon her, and expected what shee would doe, shee tooke one of them from her eare, steeped it in the vineger, and so soon as it was liquified, dranke it off. And as shee was about to doe the like to the other, *L. Plancius* the iudge of that wager, laid fast hold vpon it with his hand, and pronounced withal,

D That *Antonius* had lost the wager. Whereat the man fell into a passion of anger. There was an end of one pearle: but the fame of the fellow thereof may goe with it: for after that this braue queen the winner of so great a wager, was taken prisoner and deprived of her roiall estate, that other pearle was cut in twaine, that in memoriall of that one halfe supper of theirs, it should remaine vnto posteritie, hanging at both the eares of *Venus* at Rome, in the temple of Pantheon. And yet as prodigall as these were, they shall not go away with the prize in this kinde, but shall lose the name of the chiefe and principall, in superfluitie of expence. For long before their time, *Clodius* the sonne of *Aescop* the Tragedian Poet, the only heire of his father, who died exceeding wealthie, practised the semblable in two pearles of great price: so that *Antonius* needeth not to be ouer proud of his Triumvirate, seeing that he hath to match him in all his magnificence, one little better than a stage-plaier: who vpon no wager at all laid, (and that was more princely, and done like a king) but only in a brauerie, and to know what tast pearles had, mortified them in venegre, and drunke them vp. And finding them to content his pallat wondrous well, because he would not haue all the pleasure by himselfe, and know the goodnesse thereof alone, he gaue to euery guest at his table one pearle apeece to drinke in like manner.

Fenestella writeth, that after Alexandria was conquered and brought vnder obedience to the Romans, Pearles were rife at Rome, and commonly vfed of euery man: also, that about the troublesome time of *Sylla* they began first to be in request: and those were but small ones, and of no price. Howbeit, he is grossely deceiued, and in a great error. For *Albius Stilo* doth report in his Chronicle, that in the time of warre against *Ingritha*, the faire and goodly great pearles began

F to be named *Vniones*. These Pearles (to say a truth) are of the nature (in a manner) of an inheritance to descend by perpetuities. They follow commonly in right the next heires. When they passe in saile, they go with warrantize, in as solemne manner as a good lordship.

As for the rich Purples, and the precious Conchyles, euery coast is full of them. And yet to

that excesse and prodigalitie we are now growne, and out wanton roior (the mother of all inordinate and wastfull expence) hath made them well neere as deere as Pearles.

CHAP. XXXVI.

¶ The nature of purple fishes, and the Murex or Burret.

Purples liue ordinarily seuen yeers. They lie hidden for 30 daies space about the dogdaies, like as the Murexes or Burrets do. They meet together by troupes in the spring, and with rubbing one against another, they gather and yeeld a certaine clammy substance and moisture in manner of waxe. The Murexes doe the like. But that beautifull colour, so much in request for dying of fine cloth, the Purples haue in the midst of the neck and jawes. And nothing else it is, but a little thin liquor within a white veine: & that is it which maketh that rich, fresh, and bright colour of deepe red purple roses. As for all the rest of this fish, it yeeldeth nothing. Fishers strue to get them aliue, for when they die, they cast vp and shed that precious teinture and juice, together with their life. Now the Tyrians, when they light vpon any great Purples, they take the flesh out of their shels, for to get the bloud out of the said veine: but the lesser, they presse and grind in certain milles, and so gather that rich humor which issueth from them. The best purple colour in Asia is this, thus gotten at Tyros. But in Affricke, within the Island Meninx, and the coast of the Ocean by Getulia. And in Europe, that of Laconica. This is that glorious colour, so full of state and maiestie, that the Roman Lictors with their rods, halberds, and axes make way for: this is it that graceth and setteth out the children of princes and noblemen: this maketh the distinction between a knight and a counsellor of state: this is called for & put on when they offer sacrifice to pacifie the gods: this giueth a lustre to all sorts of garments: to conclude, our great Generals of the field, and victorious captaines in their triumphs weare this purple in their mantles, enterlaced and embrodered with gold among. No maruell therefore if Purples be so much sought for: and men are to be held excused, if they run a madding after Purples. But how should the other shell-fishes called Conchylia, be so deere and high prized, considering the teinture of them carries so strong and stinking a fauor, so fullen and melancholie a colour, enclining to a blew or watchet, and resembling rather the angrie and raging sea in a tempest? But to come to the particular description. The Purple hath a tongue of a finger long, pointed in the end so sharpe, and hard withall, that it is able to bore an hole and pierce into other shell-fishes, and thereby shee feeds and gets her liuing. In fresh water they will die all, or if they be plunged and throwne in any riuer: otherwise, after they be taken, they will continue aliue 50 daies, euen with that viscous and slimie humor of their owne. All shel-fish in general grow apace in a very small time: but Purples soonest of all others: for in one yere they wil come to their full bignesse. Now, if I should lay a straw here, and proceed no further in this discourse of Purples and such like, surely our luxurious and riotous spendthrifts would thinke they had great wrong, and were defrauded of their right: they might I say complaine of me, & condemne me of idlenesse, and negligence. Therefore I care not much to put my head within the diers shops and work-houses: that like as euery man for the necessity of this life, knows how the price of come goes; euen so our fine folke and braue dainties, who take such pleasure and delight in these colors, may be perfect what is the reason of this their only life. In the first place, these shel-fishes that serue either for purple colors, or other lighter dyes of the Conchylia, are all one in matter: the difference only is in temperature more or lesse. And indeed, reduced they may all be into two principall sorts. For the lesse shell called Buccinum, fashioned like vnto that horn or corner, wherewith they vse to wind and sound, whereupon in tooke that name, hath a round back, and is cut like a saw in the edges. The other is named Purpura, shooteth out a long backe like a guttur, and within the one side it doth writhe and turne hollow in forme of a pipe, out of which the fish puts forth a tongue. Moreover, this Purple is bestudded (as it were) euen as far as to the sharpe top or turbant thereof round about with sharpe knobs pointed, lightly seuen in number: which the sea-cornet Buccinum hath not. But this is common to both, that looke how many roundles they haue like tendrils clasping about them, so many yeares old they bee. As for the Corner Buccinum, it sticketh alwaies to great stones and rockes, and therefore is euer found and gathered about them.

CHAP.

CHAP. XXXVII.

¶ How many sorts there be of Purples.

Purples haue another name, and be called Pelagia, as one would say, Fishes of the deep sea. But in truth there be many sorts of them, & those differing either in place where they keep, or in food wherof they liue. The first Lutense, i. muddy, because it is nourished of the corrupt and rotten mud: the second Algense (the worst of all) feeding vpon reits or sea weeds named Alga: the third, Tanienis (better than the former twaine) for that it is gathered and taken vp about the brims & borders of the sea, called for the resemblance of fillets or lists in a cloth, Taniaz. And yet this kind yeeldeth but a light colour, and nothing deepe: there be of them also, which they terme Calculosa, of the sea grauell, which is wondrous good for all these kinde of wilkes and shell fishes. And last of all, which simply be the very best, the Purples Dialetæ, that is to say, wandring too and fro, changing their pasture, and feeding in sundry soils of the sea (the muddy, the weedie, and the grauelly.) Now these Purples are taken with small nets, and thinne wrcught, cast into the deep. Within which, for a bait to bite at, there must be certain winckles and cockles, that will shut and open, & be ready to snap, such as we see these limpins be, called Miruli. Halfe dead they should be first, that being new put into the sea again, & desirous to reuiue and liue, they might gape for water: and then the Purples make at them with their pointed tongue, which they thrust out to annoy them: but the other feeling themselves pricked therewith, presently shut their shels together, & bite hard. Thus the Purples for their greedinesse are caught and taken vp, hanging by their tongues.

CHAP. XXXVIII.

¶ The fishing time for Purples.

The best time to take Purples, is after the dog star is risen, & before the Spring: for, when they haue made that viscous musilage in manner of wax, their iuice and humour for colour is ouer liquid, thin, & waterish. And yet the purple diers know not so much, nor take heed thereof, whereas indeed the skill thereof is a speciall point of their art, and wherein lieth all in all. Well, when they are caught, as is abouesaid, they take forth that vein before mentioned, and they lay it in salt, or else they do not well: with this proportion ordinarily, namely, to euery hundred weight of the Purple liquor, a Sestier or pint and halfe of salt. Full three dayes and no more it must thus lie soking in powder. For the fresher that the colour is, so much is it counted richer and better. This don, they seeth it in leads, & to euery Amphore, (i. which containeth about eight wine gallons) they put one hundred pound and a halfe just, of the colour so prepared. Boile it ought with a soft and gentle fire, and therefore the tunnel or mouth of the furnace must be a good way off from the lead and cawdron. During which time, the workemen that tend the lead, must cftsoones skim off and clense away the fleshie substance, which cannot chuse but stick to the veines which containeth the iuice or liquor of purple before said. And then they continue 10 daies, by which time ordinarily the lead or vessell wil shew the liquor cleere, as if it were sufficiently boiled. And to make a triall thereof, they dip into it a fleece of wool wel rensed & washt out of one water into another: & till such time, that they see it giue a perfect dye, they stil ply the fire, & giue it a higher seething. That which staineth red, is nothing so rich as that which giueth the deepe & sad blackish color. When it is come to the perfection, they let the wooll lie to take the liquor 5 houres: then they haue it forth, rouse and card it, and put it in againe, vntil it hath drunke vp all the colour, as much as it will. Now this is to be obserued, that the sea corner Buccinum makes no good colour of it selfe: for their dye wil shed & lose the lustre. And therefore vsually they ioine to it the sea Purple Pelagium, which maketh too deepe and brown a colour: vnto which it giueth a fresh & liuely teinture, as it were in grain, and so maketh that sad purple which they desire. Thus by mixing & medling the force of both together, they mend one another, while the lightnesse or fadnesse of the one doth quicken and raise, or els dorr and take downe the colour of the other. To the dying of a pound of wooll, they vse this proportion of two hundred Buccina or sea Cornets, ioined with a hundred and eleuen Pelagian Purples: & so commeth that rich Amethyst or purple violet colour, so highly commended

mended aboue aliother. But the Tyrians make their deep red purple, by dipping their wool first in the liquor of the Pelagian purples only, whiles it is not thoroughly boiled to the heighth, but as it were green yet and vnripe; and thereof they let it take what it can drinke. Soone after they change it into another caudron or lead, where the colour of the sea Cornets alone is boiled. And then it is thought to haue a most commendable and excellent dye, when it is as deep a red as bloud that is cold and setled, blackish at the first sight, but looke between you and the light, it carieth a bright and shining lustre. And hereupon it is, that *Homer* calleth bloud, Purple.

CHAP. XXXIX.

¶ When they began at Rome to weare Purple first.

I Find in Chronicles, that Purple hath bin vsed in Rome time out of mind. Howbeit, *K. Romulus* neuer ware it but in his roial habit or mantle of estate, called *Trabea*. And wel known it is, that *Tullus Hostilius* was the first Roman king, who after he had subdued the Tuscans, put on the long purple robe named *Pretexta*, and the cassock broched & studded with scarlet in broad guards. *Nepos Cornelius* who died in the daies of *Augustus Caesar* the Emperor, When (quoth he) I was a yong man, the light violet purple was rife and in great request, & a pound of it was sold for a * 100 deniers: and not long after the Tarentine red purple or skarlet was much called for, and of the same price. But after it, came the fine double died purple of Tyros, called *Dibapha*: and a man could not buy a pound of it for a * 1000 deniers, which was the price of ten pound of the other. *P. Lentulus Spinther* in his *Ædileship* of the chaire, first ware a long robe embroidered with it, and was checked and blamed therefore. But now adaies (quoth *Nepos*) what is he that will not hang his parlour and dining chamber therewith, and haue carpets, cushions, & cupboard clothes thereof. And it is no longer ago when *Spinther* was *Ædile*, than in the seuen hundredth year after the foundation of Rome, euen when *Cicero* was *Consull*. This purple in those daies was called *Dibapha*, twice died: & that was counted a matter of great cost, & very stately withall and magnificent. But now ye shall haue no purple cloths at all of any reckoning, but they haue their double die. As for the cloth died with the purple of the shel-fish *Conchylia*, the maner of making the colour, and dying in all respects is the same, saue that there be no sea Cornets vsed thereto. Moreouer, the iuice or liquor for that colour, is tempered with water in stead of the filthy pisse and vrine of a man, altogether vsed in the other: and therein is sodden but the halfe proportion of colours to the foresaid tinctures. And thus is made that light pale stammel so highly commended, for being short of the deep rich colour: and the lesse while that the wooll is suffered to drinke the fill, the more bright and fresh it seemeth.

CHAP. XL.

¶ The prices of wooll died with these colours.

AS for these colours, they are valued dearer or cheaper, according to the coasts where these fishes are gotten more or lesse. Howbeit, it was neuer known that in any place, a pound of the right purple wooll, died with the Pelagian colour, or of the colour it selfe, was more worth than * 500 Sesterces: nor a pound of the Cornets purple cost aboue one hundred. I would they knew so much that pay so deare for these wares by retaile here at home, and cannot haue them, but at an excessiue rate. But here is not all, neither is this an end of expence that way, for one still draweth on another: and men haue a delight to spend and lay on still one thing after another: to make mixtures and mixtures again, and so to sophisticate the sophistications of Nature: as namely to paint and die their feelings, euen the very embowed roofs and arches in building: to mix and temper gold and siluer together, therewith to make an artificiall metall *Electrum*: and by adding brasse or copper thereto, to haue another metall, counterfeiting the Corinthian vessels.

CHAP. XLI.

¶ The manner of dying the Amethyst, Violet, or Purple, the Chrymson and Scarlet in grain, and the light Stammel or Lustie-gallant.

It would not suffice our prodigal spendthrifts to rob the precious stone Amethyst of his name, and to apply it to a colour; but when they had a perfect Amethyst die, they must haue it to be drunken

A drunken againe with the Tyrcan purple, that they might haue a superfluous and double name compounded of both (*Tyriamethistus*) correspondent to their two-fold cost and duple superfluitie. Moreouer, after they haue accomplished fully the colour of the *Conchylum*, they are not content vntill they haue a second die in the Tyrian purple lead. It should seeme, that these double dies and compounded colours, came first from the error and repentance of the workman when his hand missed: and so was forced to change and alter that which he had done before, and vtterly misliked. And hereof forsooth is come now a pretty cunning and art thereof: and the monstrous spirits of our wastfull persons are grown to wish and desire that, which was a fault amended first: and seeing the two-fold way of a double charge and expence troden before them by the diers, haue found the meanes to lay colour vpon colour, and to ouercast and strike a rich die with a weaker, so that it might be called a more pleasant and delicate colour. Nay it will not serue their turn to mingle the aboue-said tinctures of sea fishes, but they must also do the like by the die of land-colours: for when a wooll or cloth hath taken a crimson or skarlet in graine, it must be died againe in the Tyrian purple, to make (I would not else) the light, red, and fresh Lustie-gallant.

As touching the Graine, seruing to this tincture, it is red, and commeth out of Galatia, (as we shall shew in our story of earthly plants) or else about *Emerita* in Portugall, and that of all other is of most account. But to knit vp in one word these noble colours, note this, That when this Graine is but of one yeres age, it maketh but a weake tincture; but after foure yeres, the strength thereof is gone. So that neither young nor old it is of any great vertue. Thus I haue sufficiently and at large treated of those means which men and women both, so highly esteeme, and thinke to make most for their state and honourable port, and setting out of themselves in the best manner.

CHAP. XLII.

¶ Of the Nacre, or his guide and keeper, Pinnoter: and the percei-
nance of fishes.

THE Nacre also called *Pinna*, is of the kind of shell-fishes. It is alwaies found and caught in muddie places, but neuer without a companion, which they cal *Pinnoter*, or *Pinnophylax*. And it is no other but a little shrimpe, or in some places, the smallest crab, which beareth the Nacre companie, and waites vpon him for to get some vituals. The nature of the Nacre is to gape wide, and sheweth vnto the little fishes her feelie body, without any eie at all. They come leaping by and by close vnto her: and seeing they haue good leaue, grow so hardie and bold, as to skip into her shel & fill it full. The shrimp lying in spiall, seeing this good time and opportunitie, giueth token thereof to the Nacre, secretly with a little pinch. She hath no sooner this signall, but she shuts her mouth, and what soeuer was within, cruishes and kills it presently: and then she deuides the boorie with the little crab or shrimp, her sentinell and companion. I maruell therefore so much the more at them who are of opinion, that fishes and beasts in the water haue no sence. Why, the very Cramp-fish *Torpedo*, knowes her own force & power, and being her selfe not benumbed, is able to astonish others. She lieth hid ouer her, and cares within the mud vnseen, ready to catch those fishes, which as they swim ouer her, be taken with a nummednesse, as if they were dead. There is no meat in delicate tenderesse, preferred before the liuer of this fish. Also the fish called the * sea-Frog, (and of others the sea-Fisher) is as crafty euery whit as the other: It puddereth in the mud, and troubleth the water, that it might not be seen: and when the little feely fishes come skipping aboue her, then she puts out her little hornes or Barbils which she hath bearing forth vnder her eies, and by little and little tiltheth and tolleth them so neere, that she can easily seaze vpon them. In like manner the Skate and the Turbot lie secret vnder the mud, putting out their finnes, which stir and crawle as if it were some little wormes; and all to draw them neer, that she might entrap them. Euen so doth the Ray-fish or Thorn-back. As for the Puffen or Fork-fish, he lieth in await like a theefe in a corner, ready to strike the fishes that passe by with a sharpe rod or pricke that he hath, which is his weapon. In conclusion, that this fish is very subtill and crafty, this is a good prooffe, That being of all others most heauie and slow, they are found to haue in their bellie the Mulletts, which of all others be the swiftest in swimming.

CHAP.

Alluding to the word Amethyst, which resists drunkennesse.

* Diabole de mer.

CHAP. XLIII.

¶ *Of the Scolopendres, the sea-Foxes, and the Glanis.*

These Scolopendres of the sea, are like to those long earewigs of the land, which they call Centipedes, or many-feet. The manner of this fish is this, when she hath swallowed an hook to cast vp all her guts within, vntill she hath discharged her self of the said hook, and then she sups them in againe. But the sea-Foxes in the like danger haue this cast with them, namely to gather in and let it go downe into the throat more and more still of the line, vntill he come to the weakest part thereof, which he may easily fret and gnaw asunder. The Glanis is more flie and warie than they both: for his propertie is to bite at the backe of the hooke, and not to goble it vp whole, but nibble away all the bait, and leaue the hooke bare.

CHAP. XLIII.

¶ *Of the Ram-fish.*

This fish is a very strong theef at sea, and makes foule work where he comes: for one while he squats close vnder the shade of big ships that ride at anker in the bay, where he lies in ambush to wait when any man for his pleasure would swim and bath himselfe, that so he might surpriſe them: otherwhiles he puts out his nose about the water, to spie any small fisher boats comming, and then he swimmeth close to them, ouerturneth and sinketh them.

CHAP. XLV.

¶ *Of those that haue a third or middle nature, and are neither liuing creatures nor yet Plants: also of the sea-Nettle-fishes, and Spunges.*

I verily for my part am of opinion, that those which properly are neither beasts nor plants, but of a third nature between or compounded of both (the sea-Nettles I mean, and Sponges) haue yet a kinde of sense with them. As for those Nettles, there be of them that in the night raunge too and fro, and likewise change their colour. Leaues they carry of a fleshie substance, and of flesh they feed. Their qualitie is to raise an itching smart, like for all the world to the weed on the land so called. His manner is, when he would prey, together in his body as close, freight and stiffe as possibly may be. He spieth not so soon a filly little fish swimming before him, but he sprardeth and displaieth those leaues of his like wings; with them he claspeth the poore fish, and so deuoures it. At other times, he lies as if he had no life at all in him, suffering himselfe to be tossed and cast too and fro among the weeds, with the waues of the sea: and look what fish soeuer he toucheth as he is thus floting, hee sets a smart itch vpon them, and whiles they scratch and rub themselves against the rockes for this itch, hee sets vpon them and eates them. In the night season he lieth for sea-Vrchens and Scalops. When he feeleth ones hand to touch him, he changeth colour, and draweth himselfe in close together on a heape: and no sooner toucheth he one, but the place will itch, sting, and be ready to blister: make not good hast to catch him quickly, he is hidden out of hand and gone. It is thought verily, that his mouth lyeth in his root, and that he voideth his excrements at a small pipe or issue aboue, where those fleshie leaues are.

Of Spunges, we find three sorts: the first thicke, exceeding hard, and rough, and this is called Tragos: a second, not all so thicke, and somewhat softer; and that is named Manon: the third is fine and yet compact, wherewith they make sponges to cleane and scoure withall, and this is teamed Achilleum. They grow al vpon rocks: and are fed with wilkes or shel-fish, with naked fish and mud. That they are not senselesse, appeares hereby, for that when they feele that one would pluck them away, they draw in and retire back hard, so as with greater difficulty they are pulled from the rocke. The like doe they when they be beaten vpon with waues. That they liue vpon some food, it is manifest by the little coquill & muscle shels that be found within them. And some say, that about Torone they continue still aliue after they be pulcked from the rocks: and that of the roots which are left behind, they grow againe. Moreover, vpon those rocks from whence they be pulled, there is to be seen as it were some bloud sticking; & especially in those of A fricke, which breed among the Syrtis. The Mane, which otherwise be the least, become very great & most soft withall, about Lycia. But they be more delicate which are nourished in the

A the deep gulfes, where least wind or none is stirring. The rough kind are in Hellespont: and the fine and masse, about the cape Malea. In sun-thine places they will corrupt and putrifie; and therefore the best are in the deep gulfes and creeks, not exposed to the Sun. They be of the same dusk and blackish colour when they liue, as they are afterwards being foked & full of moisture. They cleaue to rocks neither by any one part, nor yet entire and whole all ouer: for there are between, certain void pipes 4 or 5 commonly, by which they are supposed to receiue their food and nourishment. There be more of these pipes and concavities, but aboute they are grown together hard and not hollow. A certain pellicle or thin skin a man may perceiue them to haue at their roots. For certain it is knowne, that they liue long. The worst kind of them all, be those that are called Aplyſia, because vnneth they may bee separated, nor clenfed and made cleane, they are so foule, for great pipes they haue; thicke they are besides throughout, and very masse.

CHAP. XLVI.

¶ *Of Hound-fishes or Sea-dogs.*

The dyuers that vse to plunge into the sea, are annoied very much with a number of Sea-hounds that come about them, and put them in great jeopardie. And they say, that these fishes haue a certain dim cloud or thin web, growing & hanging ouer their heads, resembling broad, flat, and gristly fishes, which clingerth them hard, and hindreth them from retiring backe and giuing way. For which cause the said dyuers (as themselves say) carry downe with them certaine sharp pricks or goads fastened to long poles: for vnlesse they be proked at and pricked with them, they will not turn their backe, by reason (as I suppose) of a mist before their eyes, or rather of some feare & amazednesse that they be in. For I neuer heard of any man that found the like cloud or mist (for this term they giue vnto that vnhappy thing what-euer it be) in the range of liuing creatures. But yet much ado they haue and hard hold with these Hound-fishes notwithstanding; for they lay at their bellies and groines, at their heeles, and snap at euery part of their bodies that they can perceiue to be white. The onely way and remedy is to make head directly affront them, and to begin with them first, and so to terrifie them: for they are not so terrible to a man, but they are as afraid of him againe. Thus within the deepe they are indifferently euen matched: but when the dyuers mount vp and rise againe aboue water, then there is some ods betwene, and the man hath the disaduantage, and is in more danger; by reason that whiles he laboureth to get out of the water, he faileth of means to encounter with the beast, against the streame and sources of the water. And therefore his only recourse is, to haue help and aid from his fellowes in the ship; for hauing a cord tied at one end about his shoulers, he shaketh it with his left hand, to giue signe what danger hee is, whiles hee maintaineth fight with the right, by taking into it the punchcon with the sharpe point before said; and so at the other end they draw him to them: and they need otherwise to pull and hale him but softly: many when he is neere once to the ship, vnlesse they giue him a sudden jerke and snatch him vp quickly, they may be sure to see him worried and deuoured before their face; yea and when they are at the point to be plucked vp, and euen now ready to go aboard, they are many times caught away out of their fellows hands, if they bestir not themselves the better, and put their owne good will to the help of them within the ship; namely, by plucking vp their legs and gathering their bodies nimble together round as it were in a ball. Well may some from ship-board proke at the dogs aforesaid with forks, others thrust at them with Trout speares & such like weapons, and all neuer the neere, so craftie and cautalous is this foule beast, to get vnder the very belly of the barge, and so maintain combat in safety. And therefore all the care that these fishers haue, is to prouide for this mischiefe, and to lie in wait for to entrap these fell, vnhappy, and shrewd monsters.

CHAP. XLVII.

¶ *Of those fishes that lie within a stonie and hard flintie shell: also of those that haue no sense: and of other nasty and filthy creatures.*

The greatest securitie that fishers and dyuers haue of safety, is when they see the broad flat gristly fishes; for certain it is, that they be neuer in any place where hurtfull and noisome beasts

beasts do haunt: which is the cause that these dyuers which ducke and plunge for sponges, call G those fishes Sacred.

We must needs confesse, that fishes within stone shels, haue small or no sense, as namely oysters. Many are of the nature of very Plants, to wit, those that they call Holothuria: also Pulmones, resembling the lungs of a beast: and Star-fishes, made in forme of stars (such stars I meane as it pleaseth the Painter to draw.) In sum, what is there not bred within the sea? Euen the very fleas that skip so merily in summer time within victualling houses and Inns, and bite so shroudly: as also lice that loue best to lie close vnder the haire of our heads, are there engendered & to be found: for many a time the fishers twitch vp their hooks, and see a number of these skippers and creepers settled thicke about their baits which they laied for fishes. And this vermine is thought to trouble the poore fishes in their sleep by night within the sea, as well as vs on the land. Last of all, some fishes there be, which of themselves are giuen to breed fleas and lice, among which the Chalcis, a kind of Turbot, is one. H

CHAP. XLVIII.

¶ Of venomous Sea-fishes.

Moreover, the sea is not without her deadly poisons: for the Sea-hare, which keepeth in the Indish sea, is so venomous, that the very touching of him is pestiferous; & presently causeth vomiting and ouerturning of the stomacke, not without great danger. They which be found in our sea, seeme to be a peece or lump of flesh without all forme or fashion, in colour only resembling the land Hare. But with the Indians they be full as big, and resemble their Hare, only it is more stiffe and hard. And verily they cannot possibly be taken there aliue. The dragon or spider of the sea, is as dangerous & mischieuous a creature as the other: and with the pricks that stick forth of his chine and back-bone, hee doth much hurt. But in no place is there any more detestable and pernicious, than is the pike that standeth out vpon the taile of Trigonius, which we in Latine call *Pastinaca*, the Puslin or Forkfish of the sea, the which pike is five inches long. So venomous it is, that if it be stricke into the root of a tree, it killeth it: it is able to pierce a good cuirace, or iacke of buffe, or such like, as if it were an arrow shot or a dart lanced: but besides the force and power that it hath that way answerable to yron & Steele, the wound that it maketh is therewith poisoned. K

CHAP. XLIX.

¶ Of Fishes diseases.

We do not heare or reade, that all sorts of fishes in generall be subiect to maladies and diseases, as other beasts, and euen those that are wilde and sauage. But that this or that fish in euery kinde may be sicke, it appeareth evidently, that some of them mislike and come to be carrion leane, whereas others of the same sort, be taken, not only in good plight, but exceeding fat. L

CHAP. L.

¶ The wonderfull manner of their generation.

In what sort fishes do engender, if I should not in this place shew, but put it off farther, I should do great wrong to mankind, who desire to know it, as much as they wonder how it should be. In one word, fishes ingender by the friction and rubbing of their bellies one against another: which they performe with such celeritie, that no eye is so quicke as to note and obserue it. Dolphins, and other great whales, haue no other way but that, many they are longer somewhat about their businesse. The spawner, when the time serueth for generation, followeth after the male, and neuer linneth pecking and iobbing at his belly with her muzzle. Semblably a little before spawning time, the milters follow after the female, only for that they would eat their spawn when they haue cast it. But this is to be noted moreover, that the foresaid mixture & ingendering of theirs is not sufficient to accomplish generation, vnlesse when their eggs be laid or spawn cast, both male and female take it betwene them and keepe a turning of it, thereby to

A to breath a liuely spirit into it, and as it were besprinkle it with a vitall dew, as it floteth vpon the water. But turne they it and toss it, breath they vpon it as much as they will, yet all those little eggs of their spawn do not hit and come to prooffe: for if they did, all seas and lakes, and all riuers and pools would be so pestered full with fishes, that a man would see nothing els: for there is not one of these females, but at once conceiue an infinite number in her belly.

CHAP. LI.

¶ More as touching the generation of fishes, and which they be that do spawn in manner of egges.

THe spawn or eggs of Fishes in the sea, do grow vnto perfection, some of them exceeding soon, as that of the Lampreies: others are later ere they do so. All flat and broad Fishes, such namely as haue no tails and sharp pricks to hinder (as haue the Thorn-backe, Skare, and Tortoises) when they engender, leap one another. The many foot Pour-cuttes in this action fasten one of their winding clawes to the nose of the female. The Cuttels and Calamaries do the feat with their tongues or pipes rather thrust into their mouthes, clasping one another with their arms, and swimming one contrary to the other: and as they conceiue at the mouth, so they deliuer their fruit again at the mouth. This onely is the difference, that the she Calamaries in this businesse, beare their heads downward to the earth. As for those that are soft cruisted, they do it backward as dogs. Thus the Lobsters & Shrimpes ingender. Crabs at the mouth. Frogs leap one another: the male with the fore-feet clasps the arm-pits of the female, and with the hind-feet the hanches. That which is ingendered and brought forth, is as it were some little mites of blackish Hesh, which they call Tadpoles or Polwigs, shewing no good form, but that they haue some shew of eies only, and a taile. Some few daies after, their feet are framed, & then parts their taile in twain, which serueth for their feet behind. And a strange thing it is of them: after they haue liued some 6 months, they resolu into a slime or mud, no man seeth how: & afterward with the first rains in the Spring, retorne again to their former state, as they were first shapen, no man know as after what sort, by a secret and vnknown way incomprehensible: notwithstanding it falls out ordinarily to euery yere. As for the Limpins, Muskles, and Scallops, they breed of themselves in the mud and sands of the sea. Those which are of an harder coat, as the Pourcelanes and Purples, of a certain viscus and slimy substance like a muscilage. As for that little fry, resembling small gnats and flies of the sea, they come of a certaine putrifaction and sowerneesse of the water: as the Apua, which are the groundlings and Smies, of the some of the sea set in an heat & chafed after some good shewer. They that are couered with a stony shell, as Oysters, breed of the rotten and putrified slime & mud of the sea: or of the some that hath stood long about ships or stakes and posts set fast in the water, and especially if they bee of Holme wood. Howbeit, it hath bin found of late in Oyster pits, that there passeth from them in stead of Sperm a certain whitish humor like milk. As for Yeels they rub themselves against rocks and stones, and those scrapings (as it were) which are fretted from them, in time come to take life and proue snigs, and no other generation haue they. Fishes of diuers kinds engender not one with another, vnlesse it be the Skate and the Raifish: and of them there commeth a fish, which in the forepart resembleth a Ray, & in Greek hath a name compounded of both [Rhinobaros.] Other fishes there be that breed indifferently on land and sea, according to the warme season of the yere. In Spring time Scallops, Snailles, and Horsleeches do engender, and by the same warmth quicken and come to life, but in Autumne they turn to nothing. The Pike & Sardane breed twice a yere, like as al stone fish: the Barbels thrice, as also a kind of Turbit called Chalcis [r. the Shad:] the Carp 6 times: the Scorpenes and Sargi twice, namely, in Spring and Autumne. Of flat broad Fishes, the Skate only twice in the yere, to wit, in Autumne, and at the setting or occultation of the star *Vergilia*. The greatest number of Fishes ingender for 3 moneths, April, May, & Iune. The Cods or Stockfishes in Autumne. The Sargi, Crampfishes, & Squall about the equinoctiall. Soft skinned Fishes in the spring: and the Cuttel in euery month. The spawn of this Fish, which hangeth together like a cluster of grapes, by the means of a certaine blacke glew or viscositie like inke, the Milter doth blow and breath vpon before it can bee good, for otherwise it commeth to no prooffe. The Pour-cuttes engender in Winter, and in the Spring, and then bring forth a spawn crisped and curled (as it were) like the wreathing

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branches and tendrils of a vine branch; and that in such plenty, that when they are killed they are not able to receive and containe the multitude of their eggs in the concauitie or ventricle of their head and belly, which they bare when they were great. They hatch them in fifty daies, but many of them proue addle and neuer come to good, there is such a number of them. The Lobsters and the rest with thin shels, lay egges after egges, and sit vpon them in that manner. The female Pourcuttle, one while sitteth ouer her eggs, another while she couereth the cranie or gutter where she hath laid them, with her clawes and arms enfolded crosse one ouer another lattise wise. The Cuttle laith also vpon the dry land among the reeds, or els wherefoeuer she can find any sea-weeds or reits to grow, & by the 15 day hatcheth. The Calamaris lay eggs in the deep, which hang close and thick together, as the Cuttles do. The Purples, Burrets, and such like, do lay in the Spring. The sea Vrchins are with egges euery full moone in the winter time: and the winkles or cocles are bred in the winter likewise. The Crampfish is found to haue 80 young at once within her, and hatcheth her tender and soft eggs within her bodie, shifting them from one place of the wombe to another. In like manner do all they which are called Cartilagineus, or gristly. By which it commeth to passe, that fish alone both conceiue with egges, and yet bring forth a liuing creature. The male sheath-fish or riuer-whale *Silurus*, of all others only is so kind as to keep and looke to the eggs of the female after they be laid, many times for fifty daies after, for feare they should be deuoured of others. Other females hatch in three daies, if the male touch them. The Horne-beaks or Needle-fishes *Belona*, are the only fishes which haue within them so great eggs that their wombe cleaueth and openeth when they should lay them: but after that they be discharged of them, it groweth together and vnitheth againe. A thing vsuall (as they say) in Blind-wormes. The fish called *Mus-Marinus*, diggeth a gutter or ditch within the ground, and there laith her eggs, and the same she couereth ouer with earth, and so lets them alone for 30 daies, then she commeth and openeth the place again, findeth her eggs hatched, and leadeh her little ones to the water.

CHAP. LII.

¶ Of fishes wombes.

THe shel-fishes *Erythini* & *Chana*, haue their wombs or matrices. As for that fish which in Greeke is called *Trochos* [i. the top] is thought to get it selfe with yong. The frie of all water creatures, at the first see not.

CHAP. LIII.

Of the exceeding long life of fishes.

IT is not long since that we heard of one fishes memorable example, which proued the long life of fishes. There is a faire house of retreat and pleasure called *Pausilupum*, in Campaine not far from Naples, where (as *Anneus Seneca* writeth) there died a fish in the fish-pooles of *Cesar*, 60 yeres after that it had bin put in by *Pollio Vadius*: and there remained two more of that age and of the same kind, which liued still. And since wee are come to make mention of fish-ponds, me thinks I should do well to write somewhat more thereof, before I giue ouer this discourse of fishes and water creatures.

CHAP. LIIV.

¶ Of oyster pits, and who first deuised them.

THe first that inuented stewes and pits to keep oysters in, was *Sergius Orata*, who made such about his house in Baianum, in the daies of *L. Crassus* that famous orator, before the Mar-
fians war. And this the man did not for his belly and to maintain gourmandise, but of a
couetous mind for very gain. And by this and such wittie deuises, he gathered great reuenues:
for he it was that inuented the hanging baines and pooles to bathe in aloft vpon the top of an
house: and thus when he had set out his manour house for the better sale, he would make good
merchandise of them, and sell them againe for commoditie and gaine. He was the first man that
brought the *Lucrine Oysters* into name and credit for their excellent taste. For so it is,
that

A that the same kinds of fishes, in one place are better than in another. As the Pikes in the riuer *Tiberis*, which are taken between the two bridges: the *Turbot* of *Rauenna*: the *Lamprey* in *Sicilie*: the *Elops* at *Rhodes*, and so forth of other sorts of fishes: for I do not meane here to make a bill of all the dainty fish to serue the kitchin. There was no talk then of English oysters, when *Orata* brought those of the *Lucrine lake* into request, for as yet the Brittain coasts were not ours, which indeed haue the best oysters of all other. But afterwards it was thought it would quit the cost and pay for the pains, to fetch oysters from the furthest part of Italy, euen as far as *Brundisium*. And because there should grow no quarrell, nor controuersie arise, whether these or the former had the more delicate and pleasant taste, it was of late deuised that the hungrie oysters (which in the long cariage from *Brundisium* were almost famished) should be fed with the rest in the *Lucrine Lake*, and so taste alike. In those very daies, but somewhat before *Orata*, *Licinius Murena* deuised pools and stews for to keep and feed other fishes: whose example noblemen followed and did the like after them, namely, *Philip* and *Hortensius Lucullus* cut through a mountain neere vnto *Naples* for this purpose, namely, to let in an arm of the sea into his fish pooles: the doing whereof cost him more money, than the house it selfe which he there had built. Hereupon *Pompey* the great gaue him the name of Roman *Xerxes*, in his long robe. The fishes of that poole of his, after his death, were sold for thirty hundred thousand *Sesterces*, i. three millions of *Sesterces*.

CHAP. LV.

¶ Who inuented the stewes for Lampreys.

Caius *Hirtius* was the man by himselfe, that before all others deuised a pond to keep *Lampreys* in. He it was that lent *Cesar* Dictator for to furnish his feasts and great suppers during the time of his triumph, 600 *Lampreys*, to be paid againe by weight and tale in the same kind: for fel them he would not right out for any money, nor exchange them for other commodities. A house he had for his pleasure in the country, and but a very little one, yet the ponds and fishes about it sold the house for foure millions of *Sesterces*. In processe of time folk grew to haue a loue and cast a fancy to some one feuerall fish about the rest. For the excellent *Orator Hortensius* had an house at *Bauli*, vpon the side that lieth to *Bair*, & a fish-pond to it belonging: and he took such an affection to one *Lamprey* in that poole, that when it was dead (by report) he could not hold but weep for loue of it. Within the same poole belonging to the said house, *Antonia* the wife of *Drusus* (vnto whom they fell by inheritance) had so great a liking to another *Lamprey*, that she could find in heart to decke it, and to hang a paire of golden earrings about the guils thereof. And surely for the nouelty of this strange sight, and the name that went thereof, many folke had a desire to see *Bauli*, and for nothing els.

CHAP. LVI.

¶ The stewes of Winkles, and who first was the deuiser.

Elvius *Hirpinus* was the first inuenter of warrens as it were for Winkles, which he caused to be made within the territory of *Tarquini*, a little before the ciuil war with *Pompey* the great. And those had their distinct partitions, for sundry sorts of them: that the white, which came from the parts about *Reate*, should be kept apart by themselves: the *Illyrian* (and those were chiefe for greatnesse) alone by their selues: the *Africans* (which were most fruitfull) in one feuerall: and the *Solitanes* (simply the best of all the rest) in another. Nay more than that, he had a deuise in his head to feed them far, namely, with a certain paste made of cuit & wheat meale, and many other such like: to the end forsooth, that the gluttons table might be serued plentifully with home-fed & franked great Winkles also. And in time, men grew to take such a pride and glory in this artificial feat, and namely, in striuing who should haue the biggest, that in the end one of their shels ordinarily would containe * 80 measures called *Quadrants*, if *M. Farro* say true, who is mine Author.

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CHAP.

* 3 wine gallons and three quarters: for *Quadrans* is 3 *Cyathi*, i. the 4 part of *Sextarius*, & *Sextarius* is a wine pint & a halfe, or 18 cupes.

CHAP. LVII.

¶ Of Land-fishes.

Theophrastus also telleth strange wonders of certain kinds of fishes, which are about Babylon, where there be many places subject to the inundations of Euphrates and other riuers, and wherein the water standeth, after that the riuers are returned within their bankes: in which the fish remain in certain holes & caues. Some of them, saith he, vse to issue forth aland for food and releeve, going vpon their fins in lieu of feet, and wagging their tailes euer as they go. And if any chase them, or come to take them, they will retire back into their ditches afore-said, and there make head and stand against them. They are headed like to the * sea Frog, made in other parts as Gudgeons, and guilled in manner of other fishes. Moreouer, that about Heraclea and Cromna, and namely neere the riuier Lycus, & in many other quarters of the kingdom of Pontus, there is one kind about the rest that euer haunteth riuers sides, and the vtmost edges of the water: making her selfe holes vnder the banks, and within the land wherin she liueth, yea, euen when the banks are drie, and the riuers gathered into narrow channels. By reason whereof they are digged forth of the earth: and as they say that find them, alieue they be, as may appeare by mouing and stirring of their bodies. Neere vnto the abovesaid Heraclea & the riuier Lycus, when it is false and the water ebbe, there be fishes breed of the egges and spawne left vpon the mud and sand, who in seeking for their food, do stir and pant with their little guills: which they vse to do when they want no water, but euen then when as the riuier is full. Which is the reason also that yeeles liue a long time after they be taken forth of the water. He affirmeth moreouer, that the eggs of fishes lying vpon the dry land, will come to their maturity and perfection, and namely those of the Tortoises. Also, that in the same country of Pontus, there be taken fishes vpon the yce, and gudgeons especially, which shew not that they be alieue, but by their stirring and leaping when they come to be foddren in hot caudrons. Hereof may some reason yet be rendered, although the thing be strange and wonderful. The same author auoucheth, that in Paphlagonia there be digged out of the ground certaine land fishes that be excellent good meat, and most delicate: but they be found in dry places remote from the riuier, & whither no waters flow, wherby they are forced to make the deeper trenches for to come by them. Himselfe maurelleth how they should engender without the help of moisture. Howbeit, hee supposeth that there is a certain minerall and naturall force therein, such as we see to sweat out in pits, forasmuch as diuers of them haue fishes found within them. Whatsoeuer it is, surely lesse wonderfull this is, considering how the Moldwarps liue (a creature naturally keeping vnder the ground) vnlesse haply we would say that fishes were of the same nature that earth wormes be of.

CHAP. LVIII.

¶ Of the mice of Nilus:

But the inundation of Nilus cleareth all these matters: the ouerflowing whereof is so admirable, and so far passeth all other wonders, that we may well beleue these things. For when as this riuier falleth and returneth againe into his channell, a man may find vpon the mud yong Mice halfe made, proceeding from the generatiue vertue of water and earth together: hauing one part of their body liuing already, but the rest as yet mishapen, and no better than the very earth.

CHAP. LIX.

¶ Of the fish Anthias, and how he is taken.

I thinke it not meet to conceale that, which I perceiue many do beleue & hold, as touching the fish Anthias. We haue in our Cosmographie made mention of the Isles Chelidonix in Asia, situate in a sea full of rocks vnder the promontory of Taurus, among which are found great store of these fishes: and much fishing there is for them, but they are suddenly taken, and euer after one sort. For when the time serueth, there goeth forth a fisher in a smal boat or barge for certain daies together, a pretty way into the sea, clad alwaies in apparel of one and the same colour, at one houre, and to the same place stil, where he casteth forth a bait for the fish: but the fish

- A** fish Anthias is so craftie and warie, that whatsoeuer is thrown forth, he suspecteth it euer more, that it is a means to surprise him. He feareth therefore and distrusteth: and as he feareth, so is he as warie: vntill at length, after much practise & often vsing this deuise of flinging meat into one place, one about the rest groweth so hardy and bold, as to bite at it, for now by this time he is grown acquainted with the maner thereof, and secure. The fisher takes good mark of this one fish, making sure reckoning that he wil bring more thither, and be the means that he shall spee'd his hand in the end. And that is no hard matter for him to do, because for certain daies together, that fish, & none but he, dare aduenture to come alone vnto the bait. At length this hardy captaine meets with some other companions, and by little & little he commeth euery day better accompanied than other, vntill in the end he brings with him infinite troupes and squadrons together, so as now the eldest of them all (as crafty as they be) be so well vsed to know the fisher, that they will snatch meat out of his hands. Then hee espying his time, putteth forth an hook with the bait, somewhat beyond his fingers ends, flieth and seizeth vpon them more truly, then catcheth them, and speedily with a quick & nimble hand whippes them out of the water within the shadow of the ship, for feare least the rest should perceiue, & giueth them one after another to his companion within; who euer as they be snatcht vp, larcheth them in a course twillie or covering, & keeps them sure enough from struggling or squeaking, that they should not driue the rest away. The speciall thing that helpeth this game and pretty sport, is to know the captain from the rest, who brought his fellows to this feast, & to take heed in any hand that he be not twitcht vp and caught. And therefore the fisher spareth him, that he may flie and goe to some other flock for to train them to the like banquet. Thus you see the maner of fishing for these Anthæ. Now it is reported moreouer, that one fisher vpon a time (of spitefull minde to do his fellow a shrewd turn) laid wait for the said captain fish, the leader of the rest (for he was very wel known from all others) and so caught him: but when the foresaid fisher espied him in the market to be sold, and knew it was betaking himselfe misused & wronged, brought his action of the case against the other, and sued him for the dammage, and in the end condemned him. Mutianus saith moreouer, That the plaintife was awarded to haue for recompence, 10 pounds of the defendant. The same fishes, if they chance to see one of their fellows caught with an hook, by report, with their sharp fins which they haue vpon their backe like sawes, cut the line in two: for he that hangeth at it, will of purpose stretch it out streight, that it may be cut asunder more easily. But the Sargots haue another trick for that: for he that finds himselfe taken, fretteth the line in twaine, whereto the hooke hangeth, against a hard rocke.

CHAP. LX.

¶ Of the Sea fishes called Starres.

- O**ver and besides all these, I see that some deep clerks and great Philosophers haue made a wonder at the Star in the sea. And verily it is no other than a very little fish, made like a star (as we see it painted.) A soft flesh it hath within: but without forth an hard brawnie skin. Men say it is so fierie hot, that whatsoeuer it toucheth in the sea, it burneth: and look what meat it receiue, it makes a hand with it, & digesteth it presently. What prooffe there is hereof, and how men should come to the knowledge and experience of thus much, I cannot readily set downe. I would thinke that rather more memorable and worthy to be recorded, whereof we haue daily experience.

CHAP. XLI.

¶ Of the Dactyli, and their wonderfull qualities:

- O**f the shell fish kind are the Dactyli, so called of the likenesse of mens nailes, which they resemble. The nature of this fish is to shine by themselves in the darke night, when all other light is taken away. The more moisture they haue within them, the more light they giue: in so much as they shine in mens mouths as they be chawing of them: they shine in their hands: vpon the floore on their garments, if any drops of their fattie liquor chance to fall by: so as it appeareth, that doubtlesse it is the very iuice & humor of the fish which is of that nature, which we do so wonder at in the whole body.

¶ Of the enmitie and amitie which is between fishes and other water beasts.

Such concord there is in some, and such discord in others, as is wonderfull. The Mullet and the sea-Pike hate one another, and be euer at deadly war: likewise the Congre & the Lamprey: inso much as they gnaw off one anothers taile. The Lobster is so afraid of the Polype or Pourcuttell, that if he spie him neere, he euermore dieth for very woe. The Lobsters are ready to scratch and teare the * Congre: the Congre againe do as much for the Polype. *Nigidius* writeth, That the sea-Pike biteth off the Mullers taile: and yet the same fishes in certaine set moneths are good friends, and agree well enough. He saith moreover, that those Mullers liue all, notwithstanding their tails be so cutt off. On the other side, there be examples of friendship among fishes, besides those, of whose societie and fellowship I haue already written: and namely, between the great whale *Balæna*, and the little *Musculus*. For whereas the Whale aforesaid hath no vse of his eyes (by reason of the heauy weight of his cie-browes that couer them) the other swimmeth before him, serueth him in stead of eyes and lights, to shew when he is neere the shelues and shallowes, wherein he may be soone grounded, so big and huge he is. Thus much of fish. Hence forward will we write of Foules.

* Locuste Congrum, ex Arist. lib. 8. c. 2. b. i. f. or animal.



THE TENTH BOOKE OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIUS SECVNDVS.

¶ The nature of Birds and Foules.

It followeth now that we should discourse of the nature of Foules. And first to begin with Ostriches. They are the greatest of all other foules, and in manner of the nature of foure footed beasts: (namely, those in Africke and Æthiopia) for higher they be than a man sitting on horsebacke is from the ground: and as they be taller than the man, so are they swifter on foot than the very horse: for to this end only hath Nature giuen them wings, euen to help and set them forward in their running: for otherwise, neither flie they in the aire, ne yet so much as rise & mount from the ground. Clouen houfs they haue like red deere, and with them they fight; for good they be to catch vp stones withall, & with their legs they whurle them back as they run away, against those that chase them. A wonder this is in their nature, that whatsoeuer they eat (and great deuourers they be of all things, without difference and choise) they concoct and digest it. But the veriest fooles they be of all others. For as high as the rest of their body is, yet if they thrust their head and necke once into any shrub or bush, and get it hidden, they thinke then they are safe enough, and that no man seeth them. Now two things they doe affoord, in recompence of mens pains that they take in hunting and chasing them: to wit, their eggs, which are so big, that some vse them for vessels in the house: and their feathers so faire, that they serue for pennaches to adorne and set out their crests and morions of souldiers in the wars.

CHAP.

¶ Of the Phoenix.

The birds of Æthiopia and India, are for the most part of diuerse colours, and such as a man is hardly able to decipher and describe, But the Phoenix of Arabia passes all others. Howbeit, I cannot tell what to make of him: and first of all, whether it be a tale or no, that there is neuer but one of them in all the world, & the same not commonly seen. By report he is as big as an Ægle: for colour, as yellow and bright as gold, (namely all about the necke,) the rest of the bodie a deep red purple: the taile azure blew, intermingled with feathers among of rose carnation color: and the head brauely adorned with a crest and penach finely wrought; hauing a tuft and plume thereupon, right faire and goodly to be seen. *Manilius*, the noble Roman Senatur, right excellently scene in the best kind of learning and litterature, and yet neuer taught by any, was the first man of the long Robe, who wrot of this bird at large, & most exquisitely. He reporteth, that neuer man was known to see him feeding: that in Arabia he is held a sacred bird, dedicated vnto the Sun: that he liueth 660 yeares: and when he groweth old, and begins to decay, he builds himselfe with the twigs and branches of the Canell or Cinamon, and Frankincense trees: and when he hath filled it with all sort of sweet Aromaticall spices, yeeldeth vp his life thereupon. He saith moreover, that of his bones and marrow there breeds at first as it were a little worme: which afterwards proueth to be a prettie bird. And the first thing that this yong new Phoenix doth, is to perform the obsequies of the former Phoenix late deceased: to translate and cary away his whole nest into the citie of the Sun neere Panchæa, and to bestow it full deuoutly there vpon the altar. The same *Manilius* affirmeth, that the reuolution of the great yeare so much spoken of, agreeth just with the life of this bird: in which yeare the stars returne againe to their first points, and giue significations of times and seasons, as at the beginning and withall, that this yeare should begin at high noone that very day when the Sun entrench the signe *Aries*. And by his saying, the yeare of that reuolution was by him shewed; when *P. Licinius* and *M. Cornelius* were consuls, *Cornelius Valerianus* writeth, That whiles *Q. Plautius* and *Sex. Papinius* were Consuls, the Phoenix flew into Ægypt. Brought he was hither also to Rome in the time that *Claudius Caesar* was Censor, to wit, in the eight hundredth yeare from the foundation of Rome: and shewed openly to be seen in a full hall and generall assembly of the people, as appeareth vpon the publick records: howbeit, no man euer made any doubt, but he was a counterfeit Phoenix, and no better.

¶ Of Ægles.

Ofall the birds which we know, the Ægles carie the price both for honor & strength. Six kinds there be of them. The first named of the Greeks * *Melanaetos*, and in Latin, *Valeria*: the least it is of all others, and strongest withall, blacke also of colour: In all the whole race of the Ægles, she alone nourisheth her yong birds: for the rest (as we shall hereafter declare) doe beat them away: she only crieth not, nor keepeth a grumbling and huzzing as others doe: and euermore converseth vpon the mountaines. Of the second sort is * *Pygæus*. It keeps about townes and plaines, and hath a whitish taile. The third is *Morphnos*, which *Homer* calls also *Perchor*: some name it *Plancus* and * *Anataria*: and she is for bignesse and strength, of a second degree: louing to liue about lakes and meeres. Ladie *Phæmona*, who was supposed & said to be the daughter of *Apollo*, hath reported, that this Ægle is toothed: otherwise mute, as not hauing any tongue: also, that of all other she is the blackest, and hath the longest tail. With her accordeth *Boethus* likewise. Subtle she is and wittie: for when she hath seized vpon Tortoises and caught them vp with her talions, she throweth them downe from aloft to breake their shells. And it was the fortune of the Poet *Æschylus* to die by such a meanes. For when he was foretold by wizards out of their learning, that it was his destinie to die on such a day by some thing falling on his head: he thinking to preuent that, got him forth that day into a great open plain, far from house or tree, presuming vpon the securitie of the cleare and open skie. Howbeit, an Ægle let fall a Tortoise, which light on his head, dasht out his braines, and laid him asleepe for euer.

* The Saker as some thinke.

* A kind of Falcon.

For k. King of Dukies and Mallards.

Of

*The mountain Stork.

Of the fourth kind is *Pernopterus*, the same that **Oripelargus*, fashioned like to a Geire or Vulture: it hath least wings, a bodie bigger than the rest: but a very coward, fearfull & of a bastard and crauen kind, for a rauen will beat her. Besides, she hath a greedie and hungrie worm alwaies in her georg and craw, and neuer is content, but whining and grumbling. Of all Eagles the only carrieth away with her the dead prey, & feedes thereupon in the aire: whereas others haue no sooner killed, but they prey ouer them in the place. This bastard buzzard kind maketh that the fifth, (which is the roiall Eagle) & is called in Greek *Gnesios*, as one would say, true and kindly, as descended from the gentle and right aire of Eagles. This Eagle roiall, is of a middle bignesse and of a reddish colour, a rare bird to be seene. There remaineth now the sixt and last sort, and that is **Haliartus*. This Eagle hath the quickest and clearest eie of all other, soaring & mounting on high: when she spieth a fish in the sea, downe she comes with a power, plungeth into the water, and breaking the force thereof with her brest, quickly she catcheth vp the fish, and is gone. That Eagle which we named in the third place, haunting lakes, fens, and standing waters for to prey vpon water-foule, who, to shift from her, are driuen otherwhile to diue vnder the water: but she presseth so hard vpon them, that they be wearied and astonied in the end, and then she catcheth them vp and carrieth them away. A worthy sport it is to see the maner of their scuffling: whiles the silly riuier bird makes means to gain the bank side for refuge (especially if it be well grown with reeds) and the Eagle for her part driues her from thence with the clap and stroke of the wing, whiles, I say, as the Eagle striketh, and therewith plungeth her selfe down into the water, the poore fowle that swims vnderneath, seeing the shadow of the Eagle houering about the bank side, riseth vp again in another place far enough off from the Eagle, and where she imagined she should be least looked for. Which is the cause that these wild fowle in the water commonly swim in flocks. For when they are many together they are not much troubled and annoied, by reason that with fluttering their pinnions, with dashing and flapping the water with their wings, they dazle the sight of their enemy. Oftentimes also the very Eagles, not able to weld the prey that they haue seised on, are together with it drawne vnder the water, & so drowned. Now as touching the *Haliartus*, or the Osprey, she only before her little ones be feathered, will beat and strike them with her wings, and thereby force them to looke full against the sun beames: now if she see any one of them to winke, or their eies to water at the raies of the Sun, she turns it with the head forward out of the nest, as a bastard, and not right, nor none of hers; but bringeth vp and cherisheth that whose eye will abide the light of the Sun, as she looks directly vpon him. Moreover, these Orfraies or Ospreies are not thought to be a feuerall kind of Eagles by themselves, but to be mungrels, and ingendred of diuers sorts. And their young Orfraies be counted a kind of Ossifragi: from them come the lesser Geires; they again breed the greater, which ingender not at all. Some reckon yet another kind of Eagle, which they call *Barbatæ*; and the Tuscanes, *Ossifrage*.

*The pretious stone Aetites.

But of the six kinds before rehearsed, the 3 first, and the fift, haue in their nest a stone found named **Aetites*, which some call *Gagates*, and it is therein ingendred. This stone is medicinal, and singular good for many diseases, and if it be put into the fire it will neuer a whit consume. Now this stone, as they say, is also with child: for if a man shake it, he shall heare another to rattle and sound within, as it were in the belly or wombe of it. But that vertue medicinable abouesaid is not in these stones, if they be not gotten out of the very nest from the aire. For while they do and make their nests vpon rocks and trees. Three eggs commonly they lay, whereof two only they vse to hatch: howbeit sometimes they haue bin seen to haue 3 yong ones. But lightly one of them they turn out of the nest, because they would not be troubled with feeding & nourishing it. And verily Nature hath wel provided, that at such a time the old Eagles should not be able to puruey sufficient for meat: for otherwise, if they should reare their birds, they were enough to destroy the yong breed of deere & wild beasts in a whole country, that there should be no venison nor game at all for gentlemen. Moreover, by the same providence of Nature, all that while their tallons or clees hooke and turne inward very much: also for very hunger their feathers wax gray & white, so as they haue good cause not to abide their yong. But when they haue cast them off, the Ossifrages which are neere of kin vnto them, are ready to take them and bring them vp with their own birds. But the old Eagles their dammes not content therewith, persecute them still when they are growne to be bigge ones, beating and chasing them away farre off, as their very concurrents, and who would intercommune with them, and rob them of their

- A their prey. And were it not so, certainly one aire of Eagles needs the reach of a whole country to furnish them with venison sufficient to their tull. They haue therefore their feuerall coasts and walks, and without those limits and vsuall haunts they rauen not. When they haue seised of any prey, they carry it not away presently, but first lay it downe, peruse and peise the weight of it, and then away they fly therewith amaine, but not before. They die not for age, nor vpon any sicknesse, but of very famine, by reason that the vpper beake of their bil is so far ouergrown and turns inward so much, that they are not able to open it to feed themselves. Their maner is ordinarily to go to their busines (namely to fly and seek their prey) after noon: for all the forenoon they are perched vp, doing nothing, waiting the time when men be not stirring abroad, but about their markers within the cities and townes, or otherwise busie in their ciuil affaires. The quils or feathers of Eagles laid among those of other fowles, will deuour & consume them.
- B Men say, that of all flying Fowle the Eagle only is not smitten nor killed with lightning: whereupon folke are wont to say, that shee serues *Iupiter* in place of his squire or armor-bearer.

CHAP. IV.

¶ When Eagles began to be the Ensignes and standards of the Roman legions: and what fowles they be that war with Eagles.

- C *Aius Marius* in his second Consulship ordained, that the legions of Romane soldiers only should haue the Eagle for their standard, and no other ensigne: for before-time the Eagle marched formost indeed, but in a ranke of foure others, to wit, of **Wolues*, *Minotauras*, *Horses*, and *Bores*, which were borne each one before their own feuerall squadrons and companies. Not many yeares past, the standard of the Eagle alone began to be aduanced into the field to battell, and the rest of the ensignes were left behind in the campe: but *Marius* reiected them altogether, and had no vse of them at all. And euer since this is obserued ordinarily, that there was no standing campe or leaguer wintered at any time without a paire of Eagle standards.

* Names of Ensignes.

- D Of Eagles, the first and second kind prey not only vpon the lesse foure footed beasts, but also maintain battell with the red Deere, euen the stag and the hind. The maner of the Eagle is, after she hath wallowed in the dust, and gathered a deale thereof among her feathers, to settle vpon the horns of the Deere aforesaid, to shake the same off into his eies, to flap and beat him about the face with his wings, vntill she driue him among the rocks, and there force him to fall down from thence headlong, and so to breake his neck. Moreover, the Eagle hath not enough of this one enemy, but she must war with the dragon also; howbeit the fight betwene them is more sharp and eager, yea, and putteth her to much more danger, albeit otherwhiles they combat in the aire. The Dragon of a naturall spight and greedy desire to do mischief to the Eagle, watcheth euer more where the aire is, for to destroy the eggs, and so the race of the Eagles. The Eagle again wherefoeuer she can set an eye vpon him, catcheth him vp and carrieth him away: but the serpent with his taile windeth about his wings, and so intangleth and tieth them fast, that downe they fall both of them together.

CHAP. V.

E

¶ A strange and wonderfull accident of an Eagle.

- T Here hapned a marvellous example about the city *Sestos*, of an Eagle: for which in those parts there goes a great name of an Eagle, and highly is she honored there. A yong maid had brought vp a yong Eagle by hand: the Eagle again to requite her kindnes, would first when shee was but little, flie abroad a birding, and euer bring part of that shee had gotten vnto her said nurse. In processe of time, being grown bigger and stronger, would set vpon wild beasts also in the Forrest, and furnish her yong mistresse continually with store of venison. At length it fortuneed that the damosell died: and when her funerall fire was set a burning, the Eagle flew into the mids of it, and there was consumed into ashes with the corps of the said virgin. For which cause and in memoriall thereof, the inhabitants of *Sestos* and the parts there adioyning, erected in that very place a stately monument, such as they call *Heroum*, dedicated in the name of *Iupiter* and the virgin, for that the Eagle is a bird consecrated vnto that god.

CHAP.

CHAP. VI.

¶ Of Vultures or Geires.

THe blacke Vultures are the best of that kind. No man euer could meet with their nests : whereupon some haue thought, but vntruly, that they fly vnto vs out of another world, euen from the Antipodes, who are opposite vnto vs. But the very truth is, they build in the highest rocks they can find, and their yong ones haue many times bin seene, two together, and no more. *Vmbrius*, who was counted the most skilfull Aruspex of our age, saith, they vsually lay three eggs, whereof they take one of them to sacre and blesse (as it were) the other eggs and the nest, and then soon after they cast it away. Also that the maner of the Geires is to foresee a carnage, and to fly two or three daies before vnto the place where there wil be any carions or dead carcasses.

CHAP. VII.

¶ Of the Sangualis and Immussulus.

AS touching the Sangualis and the Immussulus, our Augurs at Rome are in a great doubt and make much question, what they should be. Some are of opinion, that the Immussulus is the chicke of the Vulture ; and the Sangualis likewise the yong Ossifraga. *Massurius* saith, that the Sangualis and Ossifraga be both one : and as for the Immussulus, it is the yong bird of the Eagle before it come to haue a white taile. Some haue affirmed confidently, that after the death of *Mutius* the Augure there was neuer any of them seen at Rome. But I rather am of this mind (and me thinkes it founds more like a truth) such is the supine negligence and carelesse of men in all things else, that no maruell it is if they know them not although they see them.

CHAP. VIII.

¶ Of Hawkes.

WE find in Faulconrie 16 kinds of Hawks or Fowles that prey. Of which the *Circos* (which is lame and limpeth of one leg) was held in antient time for the luckiest Augurie in case of weddings and of cattell. Also the Hawke called *Triorches* (of three stones or cullions that it hath) is reputed a bird of good presage : and in Augurie, lady *Phemio* hath giuen vnto it the honor of the best simply and most fortunate. The Romans call it *Buteo*, i. a Buzzard ; and there is a worshipfull house and family in Rome of that surname, by occasion that a Buzzard settled and perched himselfe vpon the Admirall ship where *Fabius* himselfe, one of that house, was, presaging a boone-voyage and happy successe, according as it fell out indeed. As for the Hawk which the Greeks name *Æsalo*, i. the Merlin, the alone is euer seen at all times of the yeare, whereas the rest are gon when winter commeth. In generall, Hawkes are diuided into sundry and distinct kinds, by their greedinesse more or lesse, and their manner in chase and preying : for some there be that neuer seise on a foule but vpon the ground : others againe neuer assaile any birds, but when they spy them flying about some tree. There be also, that take a bird perching and sitting on high : and ye shal haue of them that ouertake them as they fly in the wide and open aire. The doves therefore and pigeons, knowing the danger of flying aloft, so soon as they espy them, either light vpon the ground and settle, or else fly neere the earth, and thus help themselves by taking a contrarie course to the Hawks nature, to auoid their talons. There is in the ocean of Africke an Island called *Cerne*, wherem all the hawks of the coasts of the *Masseyli*, build vpon the very ground, and there breed, and be so accustomed to those countries, you shal not find an aire of them elsewhere. In a part of *Thrace*, somewhat higher in the country beyond *Amphipolis*, men and hawks ioyn in fellowship and catch birds together ; for the men driue the woods, beat the bushes and reeds to spring the fowle ; then the hawks flying ouer their heads, seise vpon them, and either strike or beat them to the ground fit for their hands. On the other side, the hawkers and fowlers when they haue caught the Fowle, diuide the booty with the hawks ; and by report they let such birds fly againe at libertie aloft into

A into the aire, and then are the hawkes ready to catch them for themselves. Moreouer, when the time is of hawking, they will by their manner of crie and flying together, giue signe to the faulconers that there is good game abroad, and so draw them forth to hawking for to take the opportunitee. It is said, that the wolues doe the like, about the lake *Mœotis* : for vnlesse they may haue their part with the fishers, they will rend and teare their nets, when they find them stretched forth. Faulcons or Hawkes willingly eat not the heart of any bird. There is an hawk called *Cymindis*, which preyeth in the night : seldome is she seene in the woods, and by day-light seeth little or nothing. There is deadly war between it and the *Ægle* ; and oftentimes they be both taken, entangled one with another.

CHAP. IX.

¶ Of the Cuckow, which vsually is killed by birds of her owne kind.

AS touching the Cuckow, it seemes that he comes of some hawk changed into his shape at one certaine time of the yeare : for then those other hawkes are not to be seene, vnlesse some very few daies. He sheweth himselfe also but for a small season in summer time, and afterwards appeareth no more. It is the only hawk that hath no talons hooked downward, neither is he headed as other hawkes, nor like vnto them, but in colour : and for bill, he resembleth rather the dove. Nay more than that, the hawk will prey vpon him and deuoure him, if haply they be seen both together : and it is the only bird of all other that is killed by those of the own kind. He altereth his voice also. In the spring, he commeth abroad, and by the beginning of the dog-daies, hides himselfe. These lay alwaies in other birds nests, and most of all in the Stock-doues, commonly one egge and no more (which no other bird doth besides) and seldom twain. The reason why they would haue other birds to sit vpon their eggs and hatch them, is because they know how all birds hate them : for euen the very little birds are readie to war with them : for feare therefore that the whole race of them should be vtterly be destroyed by the furie of others of the same kind, they make none of their owne (being otherwise timorous and fearefull naturally of themselves) and so are forced by this craftie shift to auoid the danger. The Titling therefore that sitteth, being thus deceiued, hatcheth the egge & bringeth vp the chick of another bird. And this yong Cuckow being greedy by kind, beguiling the other yong birds and intercepting the meat from them, groweth hereby fat and faire-looking : whereby it comes into speciall grace and fauour with the dam of the rest, and nource to it. She ioieth to see so goodly a bird toward : and wonders at her selfe that she hath hatched & reared so trim a chick. The rest, which are her owne indeed, she sets no store by, as if they were changelings : but in regard of that one, counteth them all bastards and misbegotten : yea, and suffereth them to be eaten and deuoured of the other euen before her face : and this she doth so long, vntill the yong cuckow being once fledge & readie to flie abroad, is so bold as to seize on the old Titling, and to eat her vp that hatched her. And by that time there is not another bird againe for goodnesse and sweetnesse of meat, comparable to the yong Cuckow.

CHAP. X.

¶ Of Gledes, Kites, or Puttocks.

THe Kites or Gledes are of the same kind of Hawkes or birds of prey, only they be greater. This hath been noted & obserued in them : that being a most rauenous bird, & euer more hungrie, yet were they neuer knowne to snatch any viands ordained at funerall feasts for the dead, out of the platters ; ne yet the flesh of beasts slaine in sacrifice, from off the altar of *Iupiter* in *Olympia*. Nay, it was neuer seen that a Puttocke would catch flesh out of their hands that serued at such feasts : but if it did, a great presage it was of some dolefull & heauie misfortune which should fall vpon the whole town, that made these solempne sacrifices. These Gledes or Puttocks, seem by the winding and turning of their tails to & fro as they flie, to haue taught pilots the skil of steering, and vse of the helme. See how Nature hath shewed that in the aire above, which is so necessary in the deep sea beneath ! Kites likewise are not often seen abroad in the dead time of winter : yet go they not away for altogether before the Swallows. Moreouer, it is said, that after the Sunsteds, alway in summer, they be troubled with the gout in their feet.

CHAP.

CHAP. XI.

¶ A generall diuision of Fowles.

THe first & principall difference and distinction in birds, is taken from their feet: for they haue either hooked tallons, as Hawkes; or round long claws, as Hennes; or else they be broad, flat, and whole-footed, as Geefe and all the sort in manner of water-foule. Those that haue hooked tallons, for the most part feed vpon flesh and nothing else.

CHAP. XII.

¶ Of vnluckie birds, and namely, the Crow, Raven, and Scritch-owle.

THe Crow liueth not altogether of carion, for the Rooke eateth of other food. The Crows and Rookes haue a cast by themselves: for when they meet with an hard nut which they be not able to cracke, nor breake their shales with their bills, they will flie aloft and fling it against some rock or tile house once or twice, yea & many times together, till it be so crushed and bruised, that they may easily breake it quite, and then they eat vp the kernell. These birds all of them keep much prating and are full of chat; which most men take for an vnluckie sign and presage of ill fortune: although some there be who think otherwise, that it is a good bird, and highly esteem of her. Obserued it is, that from the going down or occultation of the starre Arcturus, vnto the coming of the Swallow, the Crow is not to be scene else where but about the groues and temples of *Minerva* (and that is but very seldome) and namely, neere to Athens. Moreover, this bird only feedeth her yong cadowes for a good while after they are able to flie. She is most vnluckie at breeding time and couing, that is to say, after the Sunsted in summer. All other birds, which be as it were of the same race, driue their yong ones out of the nest when they be once fled, and put them to it, forcing them to flie abroad: like as the *Rauens* also, who likewise feed not on flesh only: and they likewise when they perceiue their yong, once to be strong, chase and driue them away farre off. Therefore about little villages and hamlets, there commonly be not about two paire of them at once. And about *Cranon* verily in *Thessalie*, yee shall neuer see about one paire of them: for the old ones giue place to the yong, and fly away. There are some diuers and different properties in this bird, and that before-named: for the *Rauens* engender before the Sunsted, and for sixtie daies are somewhat ill at ease, and troubled with a kind of drought or thirstiness especially, till such time as the figges be ripe in Autumne: and then from that time forward, the Crow beginneth to be diseased and sick. *Rauens* for the most part lay five egges: and the common sort are of opinion, that they conceiue and engender at the bill, or lay their egges by it: and therefore if women great with child chance to eat a *Rauens* egge, they shall be deliuered of their children at the mouth: and generally shall haue hard labour, if such an egge be but brought into the house where such a great bellied woman be. *Aristotle* denies this, and saith, that the *Rauens* conceiue by the mouth, no more than the *Egyptian Ibis*: and he affirmeth, that it is nothing else but a wantonneffe which they haue in billing and kissing one another, which we see them to doe oftentimes, like as the *Doues* and *Pigeons* also. The *Rauens* of all other fowles, seeme to haue a knowledge of their owne significations in presages and fore-tokens: for when the mercinarie hired souldiers of *Media* were all massacred vnder a colour of entertainment and hospitalitie, the *Rauens* flew all away out of *Peloponnesus* and the region of *Attica*. The worst token of ill lucke that they giue, is when in their crying they seeme to swallow in their voice as though they were choked.

The night birds haue also crooked tallons, as the *Owles*, *Scritch-Owle*, & *Howlers*. All these see but badly in the day time. The *Scritch-Owle* alwaies betokeneth some heauie newes and is most execrable and accursed, and namely, in the presages of publick affaires: he keepeth euer in desarts: and loueth not only such vnpeopled places, but also that are horrible and hard of access. In summe, he is the very monster of the night, neither crying nor singing out cleare, but uttering a certaine heauy groane of dolefull mourning. And therefore if he be seen to fly either within cities, or otherwise abroad in any place, it is not for good, but prognosticates some fearful misfortune. Howbeit I my selfe know, that he hath sitten vpon many houses of priuat men, and

A and yet no deadly accident followed thereupon. He neuer flieth directly at ease, as hee would himselfe, but euermore sidelong or byas, as if he were carried away with the wind or somewhat else. There fortun'd one of them to enter the very secret sanctuarie within the *Capitol* at Rome, in that yeare when *Sex. Papellio Ister*, and *L. Pedanius* were Consuls: whereupon at the Nones of March, the city of Rome that yeare made generall processions to appease the wrath of the gods, and was solemnly purged by sacrifices.

CHAP. XIII.

¶ Of the bird Incendiaria.

BHis fire-bird *Incendiaria* is likewise vnlucky, and as our *Chronicles* and *Annals* doe witness, in regard of her the city of Rome many a time hath made solemne supplications to pacifie the gods, and to avert their displeasure by her portended. As for example, when *L. Cassius* and *C. Marius* were Consuls: in that very yeare when by occasion of a *Scritch-Owle* scene, the city likewise was purged by sacrifice, as is aboue said, and the people fell to their prayers & deuotions. But what bird this should be, neither do I know, nor yet finde in any writer. Some giue this interpretation of *Incendiaria*, to be any bird whatsoever, which hath bene scene carying fire either from altar or chappell of the gods. Others call this bird *Spinturnix*. But hitherto I haue not found any man that would say directly, That hee knew what bird this should be.

CHAP. XIV.

¶ Of the bird Cluina or Cluina.

Likewise the bird named in old time *Clivina*, or *Cluina*, which some call *Clamatoria*, and which *Labes* describeth by the name of *Prohibitoria*, I see is as little known as the other. *Nigidius* also maketh mention of a bird called *Subis*, which vseth to squash Egles eggs.

CHAP. XV.

¶ Of other unknowne Birds.

IN the *Augures* bookes which the *Tuscanes* haue composed, there be many birds described and set out in their colours, which haue not been scene some hundreds of yeares past. And I muse and maruell much, that they should be now extinct, and the race of them cleane gone, considering that the kind of those fowles is not lost, but continueth still in great abundance, which men eat daily at their tables, and consume so ordinarily.

CHAP. XVI.

¶ Of night-flying Birds.

OF strangers and forrein writers, *Hylas* is thought to haue written best and most learnedly, as touching *Auguries* and the nature of birds. He reports in his book, that the *Howler*, *Scritch-owle*, the *Spight* that pecketh holes in trees, the *Trogon*, and the *Chough* or *Crow*, when they be hatched come forth of their shels with their taile first: and that by reason of their heads so heauy, the eggs are turned with the wrong end downward, & so the hinder part of the body lieth next vnder the henne or the dam, to sit vpon and cherish with the heat of her body.

CHAP. XVII.

¶ Of Owles or Howlers.

IT is a pretty sight to see the wit and dexteritie of these *Howlers* when they fight with other birds: for when they are ouerlaid and beset with a multitude of them, they lie vpon their backs, and with their feet make shift to resist them: for gathering themselves into a narrow compass, there is nothing in a manner to be seen of them, saue only their bill and talons, which couer the whole body. The *Falcon*, by a secret instinct and societie of nature, seeing the poore *Howler* thus distressed, commeth to succor and taketh equal part with him, and so endeth the fray.

fray. *Nigidius* writeth, that Howlets for sixty daies in winter, keepe close and remain in couert, G and that they change their voice into nine tunes.

CHAP. XVIII.

¶ Of the Spight or Woodpecker.

SOME little birds there are also that haue hooked clees, as the Spights, which are known by the surname of Martius, and be therefore called Pici Martij. These are of great account in Auspices and preface good. They that job and pecke holes in trees, and will climbe vp-right like cats, are of this race. As for them, they will rampe vp with their bellies to the tree, bending backward, & when they peck with their bills against the bark, they know by the sound thereof, that there be worms within for them to feed vpon. These birds alone of all others feed and nourish their yong ones in crannies and chinks of trees. And if it chance that a shepherd or some such do pin or wedge vp their holes, it is thought commonly that they will vnstop the same again by meanes of a certaine herbe, which no sooner they touch the stopple with but it will out. *Trebius* writeth, that let a man driue a spike or great naile, or else a wedge or pinne of wood, as hard as euer he will, into that tree wherein this bird hath a nest, incontinently as shee percheth and setleth vpon the tree, it will presently fly out with such a force, that the tree will giue a crack again therewith. Throughout all Latium these birds beare the name for effectual signification of good or bad fortune, by reason of that king or prince [*i. Picius*] who gaue them that name. And one preface of theirs about the rest I cannot passe ouer: It fortuneth that one of them light vpon the head of *L. Tubero* L. chiefe Iustice of the city of Rome, as hee was sitting vpon the judgement seat in the open face of the Court ministring justice, and there rested so gently, that it suffered him to take it with his hand. The Soothsayer being asked his aduice in this case, answered by booke, That if the bird were let go, it would portend the ruine and overthrow of the whole state and empire: but if it were killed, it denounced the death of the sayd Pretor or L. chiefe Iustice then in place. But the Pretor *Tubero* immediatly vpon this answer, plucked the bird in pieces. It was not long after but the preface of this bird took effect indeed, and was fulfilled in his person. Moreover there be of this kind many that feed on mast, acorns, nuts, apples, and such like fruits, but they be such as liue in maner vpon flesh onely. And yet I must except the Kite, for that propertie in him is noted to be in all Augurie an vn lucky signe, and preface of some heauy and deadly misfortune. K

CHAP. XIX.

¶ Of Birds that haue hooked talons and round long clawes like fingers.

WHAT fowles soeuer haue crooked clawes sort not together in flocks, but prey each one apart for it self; and lightly all such fly aloft, vnlesse it be the night birds aforesaid: and the greater sort especially. They are all of them great winged, little bodied, and heavy in their gate vpon the ground. Seldom or neuer they sit and perch vpon a rock: for why, their nails bowing and hooking inward will not giue them leaue. It remains now that we speak of the second kind or ranke of birds, which also is diuided into two sorts; to wit, Ofcines that sing, and Alites that fly only: for the singing of the one and the bignes of the other makes the difference and distinction between them. These therefore that be greater bodied we wil by order treat first of. L

CHAP. XX.

¶ Of Peacocks, and who was the first that killed them for the table.

THE Peacock far surpasses all the rest of this kind, as well for beauty, as also for the wit and vnderstanding that he hath; but principally for the pride and glory he takes in himself. For perceiuing at any time that he is praised and wel liked, he spreadeth his taile round, shewing and setting out his colours to the most, which shine againe like precious stones: and namely when he turnes them against the Sun, as his manner is; for so he giueth them a more radiant and glittering lustre. And for the same purpose also with his taile, representing fish shels,

A shels, he giues a certain shadow to the rest of his feathers, which seeme the brighter when they be a little shadowed: and withall, he sets all those eyes of his feathers together in a ranke, and gathereth them round, knowing full well that hee is the more looked on for them; and therein he taketh no small ioy and pleasure. On the other side, when he hath lost this taile, which vsually he moulteth euerie yere when trees shed their leaues, vntil such time as trees blossom new, and his taile be grown again, he hath no delight to come abroad, but as if he were ashamed, or mourned, seeketh corners to hide himselfe in. The Peacock ordinarily liueth 25 yeares. At 3 yeres of age he begins to put forth that varietie of colours in his feathers. Authors who haue written of him say, that he is not only a proud and vainglorious creature, but also as malicious and spightfull, as the Goose is bashfull and modest: for so haue some of them obserued these properties and qualities in these birds. But I for my part like not to make such similitudes.

B The first that killed Peacocks to be serued vp as a dish at the table, was *Hortensius* that great Orator, in that solemne feast which he made when he was consecrated high priest: and *M. Aufidius Lurco* deuised first to feed them fat, by which inuention of his, he might dispend by yere-ly reuenue, 60000 Sesterces. And this was about the time of the last Pirats war. 488 lib 15 1/2

CHAP. XXI.

¶ Of Cocks, how they be cut and made Capons: also of a dunghill Cocke that spake.

NEXT to Peacocks, these birds about our houses which are our sentinels by night, & whom Nature hath created to breake men of their sleepe, to awaken and call them vp to their work, haue also a sence and vnderstanding of glory; they loue (I say) to be praised, and are proud in their kind. Moreover, they are Astronomers, and know the course of the stars, they diuide the day by their crowing, from 3 houres to 3 houres: when the Sun goeth to rest, they go to roost: and like sentinels they keepe the reliefe of the fourth watch in the camp: they call men vp to their carefull labour and trauell: they will not suffer the Sun to rise and steale vpon vs, but they giue vs warning of it: by their crowing they tell vs that the day is comming, and they foretell their crowing likewise, by clapping their sides with their wings. They are Commanders and rulers of their own kind, be they Hens or other Cocks; and in what house soeuer they be they will be masters and kings ouer them. This foueraignty is gootten by plain fight one with another, as if they knew, that naturally they had spurs, as weapons, giuen them about their heeles, to try the quarrell: and many times the combat is so sharp and hot, that they kill one another ere they giue ouer. But if one of them happen to be conqueror, presently vpon victorie he croweth, and himselfe soundeth the triumph. He that is beaten makes no words, nor croweth at all, but hideth his head in silence; and yet neuerthelesse it goeth against his stomack to yeeld the gantlet and giue the bucklers. Hardly can he brook to be vnder another; and not only these cocks of game, but the very common sort of the dunghill are as proud and high minded: ye shal see them to march stately, carying their neck bolt vpright, with a combe on their head like the crest of a soldiers helmet. And there is not a bird besides himself that so oft looketh aloft to the Sun and sky; and then vp goeth the taile and all, which he beares on high, turning backward again on the top like a hook. And hereupon it is, that marching thus proudly as they do, the very Lions (which of all wilde beasts be most couragious) stand in feare and awe of them, and will not abide the sight of them.

E Now of these Cocks, some of them are made for nothing els but war and fighting, and neuer are they well but in quarrels, brawles, and fraies; and these be cocks of kind: and the countries from whence they come are grown into name, being much renowned for their breed: as namely Rhodus and Tenagra in the first and highest degree. In a second ranke and place be those of Melos and Chalcis. Vnto these birds (for their worth & dignity) the purple robe at Rome, and all magistrats of state disdain not to giue honor. These be they, that by their *tripudium solisimum* [i. hearty feeding] obserued by the pullitiers, shew good successe. These rule our great rulers every day: and there is not a mighty L. or state of Rome, that dare open or shut the dore of his house, before he knowes the good pleasure of these fowles: and that which more is, the foueraigne magistrate in his majestie of the Roman empire, with the regall ensignes of rods and axes caried before him, neither sets forward nor reculeth backe without direction from these birds: they giue order to whole armies to aduance forth to battel, & again command them to stay

stay and keep within the camp. These were they that gave the signal, and foretold the issue of all those famous foughten fields, whereby we have achieved all our victories throughout the whole world: and in one word, these birds command those great Commanders of all nations upon the earth, as acceptable to the gods in sacrifice with their small fibres & filaments of their inwards, as the greatest and fattest oxen that are killed for sacrifice. Moreover, their crowing out of order, too soon before their hour, or too late, and namely in the evening, portendeth also and presageth somewhat by it selfe. For well known it is, that by their crowing at one time all night long, they fore-signified to the Boeotians that noble victory of theirs achieved over the Lacedæmonians. For this interpretation and conjecture was given thereupon of a fortunate day, because that bird never croweth if he be beaten or overcome. If they be once carued and made capons they crow no more. And this feat is practised upon them two manner of wayes; namely, either by burning their loines toward their kidneys with a red hot yron, or else by cauterising their legs beneath, and their spurs, and then presently applying a plaister unto the exulcerate and blistered place, made of potters white clay or chalky earth: and being thus served they will sooner feed and be fat. At Pergamus every yeare there is a solemne shew exhibited openly to the people, of Cocke-fighting, as if sword-fencers were brought within the lists to fight at utterance. We finde in record among our Annales, that within the territorie of Ariminum, in that yeare when *Marcus Lepidus* and *Quintus Catulus* were Consuls, there was a dung-hill cocke did speake: and it was about a ferme-house in the countrey belonging to one *Galerius*. But this hapned neuer but once, for ought that I could euer heare or learne.

CHAP. XXII.

¶ Of Geese, and who first eat the Goose liver. Also of the lease of a Goose of Comagena.

THE Goose likewise is very vigilant and watchfull: witnesse the Capitoll of Rome, which by the meanes of Geese was defended and saved: whereas at the same time, through the default of dogs (which should have given warning) all had like to have bin lost. Wherefore the first thing that the Censors do by vertue of their office, is to take order for the Geese of the Capitol, and to appoint some one man of purpose to see unto them that they have meat enough. Moreover, they are said to be given much to loue: for at Argos there was a Goose that was wonderously enamoured of a faire boy named *Olenus*: as also of a damosel whose name was *Glauce*, who vsed to play on the lute before king *Ptolomeus*: and by report at the same time a Ram made court unto the said wench, and was in loue with her. It may be credibly thought also, that this creature hath some sparks (as it were) of reason, vnderstanding, and learning, for *Lacydes* the Philosopher had one of them about him, which would neuer leaue him night nor day, neither in the open street abroad, nor in priuat house at home; but would follow him euen to his clofe and secret baines where he vsed to bathe. But our countrimen and citifens of Rome (beleeue me) are wiser now adaies, who know, forsooth, how to make a dainty dish of their Liver. For in those Geese that are kept vp and cram'd fat in coup, the liver grows to be exceeding great; and when it is taken forth of the belly, it waxeth bigger still, if it be steeped in milk and sweet mede together. Good cause therefore it is, that there be some question and controuersie about the first inuention of this great good and singular commoditie to mankind: whether it were *Scipio Metellus*, a man who lately was called to be Consulor *M. Sestius*, who in those daies was by his birth a gentleman of Rome. But to leaue that still vndecided, this is certainly known that *Messalinus Cora*, son to that *Messala* the Orator, found out the secret to broile & fry the flat broad feet of Geese, and together with cocks combs, to make a savoury dish of meat thereof between two platters. For surely I for my part will give every man his due and right, and will not defraud them of their singular praise and honour who have bin benefactors to the kitchen, and proceeded masters in cookerie. A marvellous thing of these birds that a flock of them should come all the way bare foot, from * Terwin and Torney in France, as far as to Rome. Their order was who had the conduct of them in this large voyage, to bring those forward that were weary and lagged behind, into the vaward & forefront: and so the rest by a certain thick united squadron (which naturally they make going together) driue the others before them. A second

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A commoditie that Geese yeeld, (especially those that be white) is their plumie and downe. For in some places their soft feathers are pluckt twice a yeare: and yet they carry feathers again, and be as well couered with plumie as before: and euermore the neerer to the skin and flesh, the softer is the downe. But of all other, the finest and best is that which is brought out of Germanie. The Geese there, be all white, but lesse of bodie than from other parts: and there they be called *Ganza*. And truly, a pound of such feathers be worth * 5 deniers. Hereupon it is, that so many complaints are made of Colonels and Captaines, our companies of auxiliarie souldiers for their disorders. For whereas they should keep them together in a standing *corps de gard*, to watch and ward night and day: they license many times whole bands to straggle abroad, to hunt and chase Geese for their feathers and downe. And now forsooth the world is growne to be so delicate and daintie, that not only our fine smooth dames, but also our men, cannot take their repose and sleep without this ware, but complaine of a paine in their necks and heads, vnlesse they may lay them upon bolsters and pillowes of goose feathers, and their soft downe.

Now, to that part of Syria called Comagena, we are beholden for another proper inuention of theirs. They take me the lease and grease of Geese and Cinnamon together, which they put into a brazen pot, and couer it all ouer with good store of snow, wherein they let it lie in steepe, well infused in this cold humor, to vse in that notable composition and sweet ointment, which of that countrey is called Comagenum.

Of the Geese kind are the Birganders named Chelanopeces: and (than which there is not a daintier dish knowne in England) the Chenerotes, lesse than wild Geese.

C As for the pheasant Bustards, they haue a trim shining brightnesse that becommeth and graceeth them exceeding well in their perfect and absolute black hew: and their eie-browes painted red as it were with deep Scarlet.

Another kind there is of them, bigger than Vultures, but in feather and colour much resembling them. And there is not a Foule (setting the Ostrich aside) that poisseth & weigheth more heauy than they: for they grow to that bignes, that a man can hardly lift them from the ground. These breed in the Alpes and the North countries. If they be mued vp and kept in a pen, they lose their pleasant taste, and are no good meat: nay, they grow so fullen and self-willed, that they will die with holding their breath. Next to these are those which in Spaine they call the Slow-birds, and in Greece Otides: but their meat is naught: for the marrow in their bones, if it be let run out, hath such a stinking smell, that a man cannot abide it, but shall be readie to vomite.

CHAP. XXIII.

¶ Of Cranes, Storkes, Swans, Quails, the Glotis, and strange birds of other countries.

THE nation of the prettie Pigmies enjoy a truce and cessation from armes, every yeare (as we haue said before) when the Cranes, who vse to wage war with them, be once departed & come into our countries. And verily, if a man consider well how far it is from hence to the Leuant sea, it is a mightie great journey that they take, & their flight exceeding long. They put not themselves in their journey, nor set forward without a counsell called before, and a generall consent. They flie aloft, because they would haue a better prospect to see before them: and for this purpose a captain they chuse to guide them, whom the rest follow. In the rereward behind there be certaine of them set and disposed to giue signall by their manner of crie, for to range orderly in ranks, and keep close together in array: and this they doe by turnes each one in his course. They maintaine a set watch all the night long, and haue their sentinels. These stand on one foot, and hold a little stone within the other, which by falling from it, if they should chauce to sleepe, might awaken them, and reprove them for their negligence. Whiles these watch, all the rest sleep, couching their heads vnder their wings: and one while they rest on the one foot, and otherwhiles they shift to the other. The captaine beareth vp his head aloft into the aire, and giueth signall to the rest what is to be done. These Cranes if they be made tame and gentle, are very playfull and wanton birds: and they will one by one dance (as it were) and run the round with their long shankes stalking full vntowardly. This is surely known, that when they mind to take a flight over the sea Pontus, they will fly directly at the first to the narrow streights of the sayd sea, lying between the two capes Criu-Metophon and Carambis, and then presently they

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ballaife themselves with stones in their feet, and sand in their throats, that they flie more steady and endure the wind. When they be halfe way ouer, down they fling these stones: but when they are come to the continent, the sand also they disgorge out of their craw.

Cornelius Nepos, who died in the daies of *Augustus Caesar* Emperor, in that chapter where he wrote, That a little before his time men began to feed and cram Blackbirds and Thrushes in coupes, saith moreover, That in his daies Storks were holden for a better dish at the board than Cranes. And yet see, how in our age now, no man will touch a Storke if it be set before him vpon the board: but euery one is ready to reach vnto the Crane, and no dish is in more request. From whence these Storks should come, or whither they go againe, is not yet known. No doubt from far remote countries they visite vs, and in the same manner as the Cranes do: only this is the difference, that the cranes are our guests in Winter, and the Storks in Summer. When they be minded to part out of our coasts, they assemble all together in one certain place appointed: there is not one left out nor absent of their owne kind, vnlesse it be some that are not at libertie, but captiue or in bondage. Thus (as if it had been published before by proclamation) they rise all in one entire companie, and away they flie. And albeit well knowne it might be afore, that they were vpon their remoue and departure, yet was there neuer any man (watched he neuer so well) that could perceiue them in their flight: neither dowe at any time see when they are coming to vs, before we know that they be alreadie come. The reason is, because they doe the one and the other alwaies by night. And notwithstanding that they flie too and fro from place to place, and make but one flight of it, yet be they supposed neuer to haue ariued at any coast but in the night. There is a place in the open plaines and champion countrey of Asia, called Pithonos-Come: where (by report) they assemble all together, and being met, keepe a jangling one with another: but in the end, look which of them lagged behind and came tardie, him they reare in peeces, and then they depart. This also hath been noted, that after the Ides of August they be not lightly seene there.

Some affirme constantly, that Storks haue no tongues. But so highly regarded they are for slaying of Serpents, that in Thessalie it is accounted a capitall crime to kill a Storke, and by law he is punished as a Fellon in the case of manslaughter.

After the same maner wild Geese and Swans do sort together, when they be passengers from countrey to countrey: but all these are seene when they flie. They makeway forcibly in a pointed Squadron, like as it were the stem of a foist at sea, armed with a sharp beakehead (for by this meanes they breake and cut the aire better, than if they draue it before with a streight, euene, and square front.) And thus wedg-wife by little and little they spread broader and broader behind, and beare a great length besides with them: by which meanes also they gather more wind to haue them vp and set them forward. In this their flight they rest their heads vpon the former: and euer as one that leadeah the way is wearie with bearing his head, he retires behind to ease himself vpon him that flieth next before. Storks keep one nest stil from yeare to yeare, and neuer chang: and of this kind nature they are, that the yong will keep and feed their parents when they be old, as they themselves were by them nourished in the beginning.

Some say that the Swans sing lamentably a little before their death, but vntruly, I suppose: for experience in many hath shewed the contrarie. Howbeit, these foules vse to eat and deuour one another.

But since we are entred into this discourse of those foules that make voiajes by whole flocks ouer sea and land to see strange countries, I cannot put off to speak of lesser birds also, which are of the like nature. For those beforenamed may seeme in some sort to be induced to such great trauell, so bigge they are of bodie, and so strong withall. As touching Quailles therefore, they alwaies come before the Cranes depart. A little bird it is, and whiles she is among vs here, mounteth nor aloft in the aire, but rather flieth below neere the ground. The manner of their flying is like the former, in troupes: but not without some danger of the sailers when they approach neer to land. For oftentimes they settle in great number on their sailes, and there perch, which they doe euermore in the night, and with their poise beare downe barks and small vessels, and finally sinke them. These Quailles haue their set gifts, to wit, ordinarie resting and baiting places. When the Southwind blowes, they neuer flie: for why? it is a moist, heavy, and cloggie wind, & that they know well ynough. And yet they willingly chuse a gale whensoever they flie, by reason that their bodies are too weightie (in comparison of their wings) to beare them

- A them vp: and besides, their strength is but small. And hereupon it is, that as they flie, they seem by their manner of crie to complaine, as though they flew with paine. Commonly therefore they chuse a Northerne wind to flie with: and they haue one mighty great Quaille called *Orytometra*, to lead the way and conduct them, as their captain. The foremost of them, as he approacheth neere to land, paieeth toll for the rest vnto the Hauke, who presently for his welcome preieth vpon him. Whensoever at any time they are vpon their remoue and departure out of these parts, they perswade other birds to beare them company: and by their inducements, there go in their train the Glottis, * Otis, and the Cychramus. As for the Glottis, he putteth forth a long tongue, wherupon he hath that name. This bird is very forward at the first setting out (as being desirous to be a traveller, to see far countries, and to change the aire:) and the first daies journey he vndertaketh with pleasure: but soone finding the tediousnesse and paines in flying, he repents that euer he enterprised the voiage. To go backe again without company, hee is ashamed: and to come lag behind he is as loth: howbeit, for that day he holdeth out so so, and neuer goeth farther: for at the next resting place that they come vnto, hee faire leaueth the company and staith there, where lightly he meeteth with such another as himselfe, who the yere before was left behind. And thus they do from time to time, yere by yere. As for the Cychramus, he is more staid and resolute to indure the trauel: he maketh hast and hath an earnest longing to come into those parts which he so much desires: & therefore in the night season he is as good as a trumpet to awake the rest, & put them in mind of their iourney. The Otis is a bird lesse than the Like-Owle, bigger than the Howlet, hauing two plumed ears standing vp aloft, wherupon he took that name Otis in Greeke. But in Latine some haue called him Asio. This bird besides hath certain qualities by her self, & is skilful to counterfeite and make gestures like a flattering parasite: she can foot it, turn and trip, mount and capre, as if she were a professed dauncer: easie she is to be taken like as the Howlet, for whiles she is amused and looking wistly vpon one that goeth about her, another commeth behind and soon catcheth her. But to return to our Quailles afore said. If a contrarie wind should chance to arise and begin to driue against them, and hinder their flight: to preuent this inconuenience, they be well provided. For they flie well ballaisted either with small weightie stones within their feet, or els with sand stuffed in their craw: the seed or grain of the white Elebore (a very poison) they loue passing wel, & it is their best meat.
- D; But hereupon it is, that they are not serued vp as a dish to the table. Moreouer, they are wont to some and slauer at the mouth, by reason of the falling sicknesse, vnto which they onely of all other creatures, but man againe, are subiect.

* The Bistard
or Hota-owle

CHAP. XXIV.

Of Swallowes, Ousles, or Merles, Thrushes, Stares or Sterlings, Turkie, and Storkedoues.

- THE Swallows likewise (the birds alone of all those that haue not crooked claws, which feed vpon flesh) are gone from vs all Winter time. Howbeit, they depart not far off, but seeke only the Sun-shine noukes, betweene hills neere at hand, and follow the warmth. Where many times they are found naked, and without feathers altogether, as if they had moulted. It is said, that they will neuer build their nests vnder any house in Thebes: because that city had bin many times forced and taken by the enemy. Neither in Bizia, a city of Thrace, by reason of the detestable parts practised by *Tareus* there. *Cecina* of Volaterra, a Gentleman of Rome by calling (gouvernour and master of the coaches and coach-horses that vsed to runne for the prize and best game) was wont to bring with him into the city, a number of these Swallowes, which he had gotten in diuers places where he came, out of his friends houses wherein they were bred. And when the horses which hee had in charge obtained at any time victorie in the race, hee would take the birds, and paint them with that colour which betokened victorie, and so with that liuerie (as it were) let them flie to his friends, for to carry tidings vnto them of the good successe which hee had obtained: knowing right well, that euery one would home to the same nest from whence they came. And thus in small space could hee enforme his comforts and well-willers of his good speed. Also *Fabius Pictor* reporteth in his Annales, That when a fort (which the Roman garrison held) was besieged by the Ligustines; there was a shee Swallow newly taken out of her nest within that fort, from her little ones as shee sat ouer them, and brought

brought to him with this watchword, That by a linnen thred tied to her foot in stead of a letter, he should aduertise them within the fort, by so many knots tied in the said thred, as there would daies passe before aid could come from him vnto them, to the end that they also might be ready vpon that day to fallie forth.

Oufles, Throftles, Blackbirds, and Stares, after the same manner depart aside from vs, but go not far. Howbeit, these cast not their feathers, nor lie altogether hidden: but are seen oftentimes in places, from whence they fetch meat to serue them in the Winter. And therefore it is, that Blackbirds are common in Germany, and specially in Winter time.

The Turtle more properly and truly is said to hide her self, and to shed her plume & moult. Stockdoves likewise depart from vs, but whether they go no man knoweth.

As touching Sterlings, it is the property of the whole kind of them to flie by troupes, and in their flight to gather round into a ring or bal, whiles euery one of them hath a desire to be in the midst.

Of all birds, the Swallow alone flieeth bias, and windeth in and out in his flight: he is most swift of wing, and flieeth with ease: and therefore not so ready to be surprised and taken by other birds. To conclude, he neuer feedeth but flying, and so doth no other bird besides.

CHAP. XXV.

¶ *What birds continue with vs all the yeare long: which be halfe yeares birds, and which be but for three moneths.*

Great difference there is in the seasons and times of birds. Some abide the whole yeare, as house-doves: others halfe the yeare, as Swallows: and some again but a quarter, as blackbirds and Turtle-doves. And there be againe that are gone so soone as they haue hatched and trained their young abroad into the open aire. Such be the Hu-holes, and Houpes [or Lapwings as some thinke.]

CHAP. XXVI.

¶ *Strange stories of birds.*

Writers there be who affirme, That euery yeare certain birds come flying out of Ethiopia to Ilium, and there, about the tombe or sepulchre of Memnon, skirmish and fight a battell. For which cause men call them Memnonides. And Cremutius auoucheth vpon his owne knowledge, That euery fifth yere the same birds do the like in Aethyopia, euen before the roiall palace somtime of the said king Memnon.

Sensibly, the birds named Meleagrides, do fight a field in Boeotia. Now are these Meleagrides a kind of Turkey-cocks, and hens of Africk, hauing a bunch on their back, and bespotted with feathers of sundry colours. Of all strange birds, comming out of forreine parts, these are last receiued and admitted to serue the table, by reason of a certain harsh and vnpleasant strong taste that they haue. But it is the monument and tombe of Meleager which hath giuen them that name and credit which they haue.

CHAP. XXVII.

¶ *Of birds surnamed Selencides.*

The birds called Seleucides, come to succour the inhabitants of the mountaine Casius, against the Locusts. For when they make great waste in their corne and other fruits, Iupiter at the instant praiers and supplications of the people, sendeth these fowls among them to destroy the said Locusts. But from whence they come, or whether they go again, no man knoweth: for neuer are they seene but vpon this occasion, namely, when there is such need of their helpe.

CHAP. XXVIII.

¶ *Of the bird Ibis.*

The Egyptians likewise haue recourse in their prayers & inuocations to their birds named Ibis, w^hat time as they be troubled and annoied with serpents comming among them: and

A in like case the Eleans seeke vnto their god *Myiagros*, for to be rid of a multitude of flies which pester them so, that they breed a pestilence among them. But looke vpon what day they find that Idoll appeased and pacified by their sacrifice, all the flies die forth-with.

CHAP. XXIX.

¶ *What birds they be, which will not abide some places: also which be they that change colour and voice: and then of the Nightingale.*

B Vt that which wee should haue said when wee wrote of the departure and going aside of birds: the Howlets also are reported to lie hidden some few daies. Moteouer, this is known for a truth, That in the Island Candy there be none at all of them: and in case that any one be thither brought, it will die there. A wonderful thing, that nature should make difference of birds and other creatures in that respect. But sure it is, she hath not brought forth all creatures in all places, but hath priuiledged this country more than that: & denied that to one which she hath giuen vnto another. And thus hath shee dealt not onely by fruits of the earth, trees, and plants, but also by liuing creatures. That in some parts this or that should not grow or breed, is a thing commonly seen & known: but, that those things should die so soon as they are brought thither, is very strange & wonderfull. What should that be, which is so contrary vnto one kind and no more, as that it will not suffer it to liue? What enuie is this of Nature, thus to hinder

C the breeding or life of any creature? or why should birds be restrained within any limits and bounds in the whole earth? And yet see! In all the Island of Rhodes a man shall not find one Airie of Eagles. In that tract of Italy beyond the Po, and neere vnto the Alpes, there is a lake which they call there Larius; the place about it is right pleasant and delectable, enriched with goodly trees that beare fruit, and faire fields for pasturage: and yet a man shall neuer see any Stork to come thither, no nor within 8 miles of it. And yet in the neighbor quarters of the Insubrians neer adioyning, ye shall haue infinite and innumerable flocks and flights of choughes and jack-dawes: the veriest theeves, nay the only theeves of all other birds, especially for siluer and gold, that it is a wonder to see what meanes they will make to steale and filch it. Men say that in the territory of Tarentum there be no wood-pecks or tree-jobbers. It is but of late daies

D since that from the mountaine Apennine toward the city of Rome there haue been seen Pyanets with long tailes, party coloured and flacked, wherupon they be called Variæ: and yet such are not common, but very geason to be found. Their property is to be bald euery yeare, what time as men sow rapes or hauewes. The Patridges in the territory of Attica, flie not ouer into the marches of Boeotia. And there is not a bird within the compasse of the sea Pontus, & namely, in the Island wherein Achilles was buried, that will passe beyond the temple consecrated vnto him. In the territory of Fidenæ neer to Rome, Storkes build no nests, neither shall a man find a yong Stork there. But into the parts about Volaterræ, there is not a yeare but one shall see a world of Stockdoves flying from beyond sea. At Rome ye shall not haue a fly or dog that will enter into the chappell of Hercules standing in the beast market. In a word, I could alledge many such like examples, which of purpose I passe ouer, because I would not be tedious in my discourses: seeing that Theophrastus reports, how all the Doves, Peacocks, and Rauens, which are in Asia, haue been brought thither from other parts: like as all the Frogs in Cyrenaica, which doe crie, whereas their owne be mute all,

E As for singing birds, this is another strange and wondrous thing obserued in them. For at certain times of the yere they change their colour in feathers, and alter their voice in singing: and that in such sort, as of a suddaine a man would say they were other birds. A thing that happeneth not to the great fowles aboue-said, saue only vnto Cranes: for they with age wax black. And to begin with the Merle or black-bird, which naturally is blacke, he turnes to be reddish. In Summer he singeth cleare and tunably, in winter he stuteth and stammereth: but about the sun-stead in December he is mute and dumbe altogether. After they be once a yere old, I mean the cockes or males onely of that kinde, their bills turne to be white like yuorie. The Throftles or Mauiffes all Summer be painted about the necke with sundry colours, but in Winter they be all of a colour.

The Nightingale for fiftene daies and nights together, neuer giueth ouer but chauntereth continually, namely, at that time as the trees begin to put out their leaues thicke. And surely this

this bird is not to be set in the last place of those that deserue admiration: for is it not a wonder **G** that so loud and cleare a voice should come from so little a body? Is it not as strange that shee should hold her wind so long, and continue with it as she doth? Moreouer, she alone in her song keepeth time and measure truly, she riseth and falleth in her note just with the rules of Musick and perfect harmony; for one while, in one entire breath she drawes out her tune at length treatable, another while she quauereth, and goeth away as fast in her running points: sometime she maketh stops and short cuts in her notes, another time she gathereth in her winde and singeth descant between the plain song: she fetcheth her breath againe, and then you shall haue her in her carches and diuisions: anon all on a sudden, before a man would thinke it, she drowneth her voice, that one can scarce heare her: now and then she seemeth to record to her selfe; and then she breaketh out to sing voluntarie. In sum, she varieth and altereth her voice to all keies: **H** one while, full of her largs, longs, briefs, semibriefs, and minims; another while in her crotchets, quauers, semiquauers, and double semiquauers: for at one time you shall heare her voice full of loud, another time as low; and anon still and on high: thick and short when she list; drawn out at leisure againe when she is disposed: and then (if she be so pleased) she riseth and mounteth vp aloft, as it were with a wind-organ. Thus she altereth from one to another, & sings all parts, the Treble, the Mean, and the Base. To conclude, there is not a pipe or instrument againe in the world (deuised with all the art and cunning of man so exquisitely as possibly might be) that can affoord more musick than this pretty bird doth out of that little throat of hers. So as no doubt there was fore-signified most excellent and melodious musick, by an excellent preface of a nightingale which settled vpon the mouth of *Stesichorus* the Poet, and there sung full sweetly: **I** who afterwards proued to be one of the most rare and admirable musitians that euer was. And that no man should make a doubt that there is great Art and cunning herein, do but marke, how there is not one Nightingale but hath many notes and tunes. Again, all of them haue not the same, but euerie one a speciall kind of Musick by her selfe: nay, they strue who can do best, and one laboreth to excell another in varietie of song and long continuance: yea, and euident it is, that they contend in good earnest with all their will and power: for oftentimes shee that hath the worse and is not able to hold out with another, dieth for it, and sooner giueth she vp her vitall breath, than giueth ouer her song. Ye shall haue the yong Nightingales studie and meditate how to sing, by themselves; ye shall haue them listen attentiuely to the old birds when they sing, and to take out lessons as it were from them, whom they would seeme to imitate staffe by **K** staffe. The schoher when she hath giuen good care vnto her mistresse, presently rehearseth what she hath heard; and both of them keep silence for a time in their turns. A man shall euidently perceiue when the yong bird hath learned well, & when again it must be taught how to correct and amend wherein it did amisse; yea, and how the teacher will seeme to reprove and finde a fault; no maruell therefore if one of these Nightingales carrie the price (in the market) of a bond-slave; yea and a higher too, than a man might in old time haue bought a good page & harnesse-bearer. I my selfe haue knowne one of them (may it was white, which was a rare thing and not commonly seen) to haue bin sold for 6000 Sesterces, for to be giuen as a Present vnto the Emperesse *Agrippina*, wife of *Claudius Caesar* late Emperor of Rome. And now of late we haue known **L** many of them taught to begin to sing, only when a man would haue them: and keepe their responds in course after others, in good consent and harmony. As also there haue bin found men, who by a deuise of a reed or cane had out of the water, put crosse ouerthwart their mouth, and by putting their tongue into an hole made of purpose in it, and blowing withal, could counterfeit the Nightingale so perfectly, that one might not discern and distinguish the one from the other. Well, these little Nightingales, so great chanters as they be, so cunning and full of their conceits, after 15 daies begin to abate and slack their musick; yet so, as a man cannot say, they were either wearie, or satisfied with singing: for soone after, when the weather groweth hotter, their voice is cleane altered: for neither are they musically and tuneable in their measures with varietie as before, but only sing plain song and keep them to one tune. And more than so, they **M** change their colour in proceesse of time: and last of all, when winter comes, be no more seene. Tongued they are not like other birds, with a thin tip before. They begin to breed with the first in the prime of the Spring, and commonly lay six eggs.

The Gnat-snapper, *Ficedula*, a bird somewhat like vnto the Nightingale, doth otherwise: for at one time it changeth both colour, form, and song. They haue not that name *Ficedula* properly

A perly but in the Autumne, as one would say, fig-feeders: for when that season is once past, they be called *Melanocoryphi*, i. Black-heads.

In like sort, the bird which is named *Erithacus* (i. Robin, or Redbreast) in winter; the same is *Phoenicurus* [i. Red-taile] all summer long.

The Houpe or Vpupa (as *Æschylus* the Poet saith) changeth also her hew, voice, and shape. This is a * nasty and filthy bird otherwise, both in the manner of feeding, and also in nestling: but a goodly faire crest or comb it hath, that will easily fold and be plaited: for one while shee will draw it in, another while set it stiffe vpright along the head.

As for the bird *Oenanthe*, it also for certain daies lieth close and vnseen; & namely, when the Dog-star ariseth, it is hidden: but after the occultation thereof, commeth abroad & sheweth her selfe: a strange thing, that in those daies it should do both. Last of all, the * Witwall or Lariot, * Chlorion,

B which is all ouer yellow, being not seen all winter time, appeareth about the Sun-steads.

CHAP. XXX.

¶ Of the Merles.

A Bout Cyllene in Arcadia, and nowhere els, ye shall find white Merles or Oufles. And Ibis; about Pelusium only in Egypt, is blacke; in all places else of Ægypt, white.

CHAP. XXXI.

¶ The kind of birds breeding and hatching.

C All singing birds, saue only those that are excepted before, lightly breed nor nor lay their eggs before the spring Æquinoctiall in mid-March, or after the Autumnnall, in mid-September. And those that they hatch before the Summer Sunstead (i. Mid-Iune) hardly come to any perfection: but after that time, they do well enough and liue.

CHAP. XXXII.

¶ Of the Halcyones, or Kings-fishers: and the daies good for nauigation which they shew. Of the Sea-gulls and Cormorants.

D And in this regard especially, namely for breeding after the summer Sunstead, the Halcyones are of great name and much marked. The very seas, and they that saile thereupon, know well when they sit and breed. This very bird so notable, is little bigger than a sparrow: for the more part of her pennage, blew, intermingled yet among with white and purple feathers, hauing a thin smal neck and long withall. There is a second kind of them breeding about the sea side, differing both in quantitie and also in voice; for it singeth not as the former doe which are lesser, for they haunt riuers, & sing among the flags & reeds. It is a very great chance to see one of these Halcyones, & neuer are they seen but about the setting of the star *Virgilie*; [i. the Brood-hen:] or els neere Mid-summer or Mid-winter: for otherwhiles they will flie about a ship, but soone are they gone againe and hidden. They lay and sit about Mid-winter when daies be shortest; & the time whiles they are broody, is called the Halcyon daies: for during that season, the sea is calme and nauigable, especially in the coast of Sicilie. In other ports also the sea is not so boisterous, but more quiet than at other times: but surely the Sicilian sea is very gentle, both in the Streights and also in the open Ocean. Now about seuen daies before Mid-winter, that is to say, in the beginning of December, they build; and within as many after they haue hatched. Their nests are wonderously made, in fashion of a round ball: the mouth or entrie thereof standeth somewhat out, and is very narrow, much like vnto great sponges. A man cannot cut and pierce their nest, with sword or hatchet; but breake they wil with some strong knock, like as the dry some of the sea: and no man could euer find of what they be made. Some thinke they are framed of the sharpe pointed prickes of some fishes, for of fish these birds liue.

F They come vp also into fresh riuers within-land: and there do lay ordinarily fiew eggs.

As touching the Gulls or Sea-cobs, they build in rocks: and the Cormorants both in them, and also in trees. They vsually lay foure eggs apiece. The Gulls in summer time, but the Cormorants in the beginning of the spring.

CHAP.

CHAP. XXXIII.

¶ The industrie and wit of birds in building their nests. Of the Swallow, the Argatilis, Cinnamologus, and Partridges.

THe Architecture and building of the Halcyones nest, hath put me in mind of other birds dexteritie in that behalfe: and surely in no one thing is the wit of silly birds more admirable. The swallows frame their nests of clay & earth, but they strengthen and make them fast with straw. In case at any time they cannot meet with soft and tough clay, for want thereof they drench and wet their feathers with good store of water, and then bestrew them ouer with dust. Now when they haue made and trimmed their bare nest, they floore it in the bottom within, and dresse it all ouer with downe feathers or fine floss, as well to keep their eggs warm, as also that their yong birds should lie soft. In feeding of their little ones, they keepe a very good order and euen hand, giuing them their pittance and allowance by course one after another. Notable is their care in keeping them neat and cleane; for euer as they meut, they turne the excrements out of the nest: but be they once growne to any strength and bignesse, they teach them to turne about and lay their tailes without.

Another kinde there is of Swallows, that keep in the country villages and the fields, which seldom nestle vnder mens houses: and they likewise build of the same matter as the former do, namely, of clay and straw, but after another fashion: for their nests are made turning all vpward, with the hole or mouth that leadeth vnto it, stretched out in length freight and narrow, but the capacitie within is very large, in such sort, as it is a wonder to see how prouident & skilful they should be to frame them in this manner, so handsome & conuenient to couer their yong ones; so soft again for their couch and bed. In the mouth of Nilus neere Heraclea in Egypt, there is a mightie banke or causey raised only of a continuall ranke and course of Swallows nests, piled one vpon and by another thicke, for the length almost of halfe a quarter of a mile; which is so firme and strong, that being opposed against the inundations of Nilus, it is able to breake the force of that riuer when it swelleth, and is it selfe inexpugnable: a piece of work that no man is able to turne his hand vnto. In the same Egypt neere vnto the towne Coptos, there is an Island consecrated vnto the goddesse Isis, which euery yere these Swallows do rampier and fortifie, for feare lest the same Nilus should eat the banks thereof and break ouer into it. In the beginning of the Spring, for three nights together, they bring to the cape of that Island, straw, chaffe, and such like stuffe, to strengthen the front thereof: and for the time, they ply their businesse so hard, that for certaine it is knowne, many of them haue died with taking such paines and moiling about this worke. And verily euery yere they go as daily to this taske againe, as the Spring is sure to come about; and they faile not, no more than souldiers that by vertue of their militarie oath and obligation, go forth to seruice and warfare.

A third sort there is of these Swallows and Martinets, which hollow the banks of riuers, and so nestle within between. The yong birds of these Martins, if they be burnt into ashes, are a singular and soueraigne remedy for the deadly squinancy, and helpe many other diseases of mans body. These build not at all, but if they perceiue that the riuer Nilus when it swelleth, will rise as high as their holes, they are gone many daies before.

There be certaine birds of the kind of Partridge, which of drie mosse make a nest, resembling perfectly a round ball, that vnneth or hardly a man can see which way they should goe in. And another there is called Argatilis, which contriueh her nest after the same forme, but it is of hurds and flaxe.

There is a kind of Woodpecker, maketh a nest in manner of a cup or goblet, and hangeth it at a twig vpon the vppermost boughs and branches of a tree, that no foure footed beast should reach it. And as for the birds called Gulguli, men say for a truth, that they take their sleep hanging all by their legges to some branch, thinking by that means they are in more safety. True it is indeed and commonly known, that all these birds in great forecast & prouidence, chuse some crosse boughes in stead of rafters, to suphorth and beare vp their nests; and then to saue them from the raine, either vault them ouer with an arched rooffe, or else couer them close and thicke with leaues.

A bird there is in Arabia called Cinnamologus, which with the twigs and branches of the Cinnamon

A Cinamon tree buildeth her nest. The inhabitants of that country being ware thereof, shake the same downe by shooting arrowes headed with lead, for to make a commoditie thereby. In Scythia, there is a bird of the bignesse of an Otis, which commonly laith two eggs, and when they are lapped within a hares skin, alwaies hangeth them vpon the top of tree boughes. The Pyanets, when they perceiue (by a watching eie that they haue) that a man hath spied their nest, presently build in another place, and remove their eggs thither. Now for those birds which haue no hooked nailes, how they should translate their eggs from one place to another, considering their feet are not made to clasp them, it is a wonderful thing, and reported after a strange manner; for they lay a stick ouer two eggs, and soudier it fast to them with a certain viscositie which

B commeth forth of their own guts when they meut: which done, they put their neckes vnder the stick between both eggs, which hanging equally poised of either side, they carry easily whither they would.

No lesse industrious are they that make their nests in the ground, as being nor able to fly into the aire by reason of their weightie bodies. Among which there is one called Merops, that useth to feed her parents, lying hidden within the earth. The inside of her feathers in the wing is pale, the outside blew; and yet those about their neck, are somewhat red. She makes her nest in an hole six foot deep within the ground. Again, the Partridges do so fortifie and impale their nests with thornes and twigs of shrubs and bushes, that they be sufficiently fenced against the inuasion of wilde beasts. They couer their eggs with a soft carpet or hilling as it were of fine dust: neither do they sit where they laid them first, nor yet in a place which they suspect to be much frequented with resort of passengers, but conuey them to some other place. The hennes verily of this kind, hide themselves from their males the cocks; for so lecherous they be and giuen to intemperate lust, that they would squash their eggs, because they should not be amused and occupied about sitting. Then, for want of the females, the males go together by the eares: and (as they say) he that is ouercome, suffereth himselfe to be troden like an hen. Trogon verily reporteth the very same of the Quailles, yea and of dounghill cocks otherwhiles. He saith moreover, that tame Partridges vse to tread the wild: also that those which are new taken or beaten, be troden of others indifferently one with another. This libidinous heat of theirs is such, and maketh them so quarrelsome, that oftentimes they are taken by that means. For when the fowler

C commeth with his pipe or call (resembling the female) to allure and traine them forth, out goeth the captain of the whole flocke directly against him: and when he is caught, another followeth after, and so the rest one after another, one by one. In like manner, they vse to take the females, at what time as they seeke the male to tread them: for then, forth they goe against the fowlers chantetell or watch which calleth them out, that with their quarrelling and brawling which they make, they might chace and driue it away. In sum, there is not to be found in any other liuing creature, the like againe for lust and lecherie in the act of generation. If the hen do but stand directly ouer against the cocks, the very wind and aire that passeth from them, will cause them to conceiue as well as if they were troden. For so hot they be in that season, that they gape again for aire, and hang the tongue out of their heads. And if the males do but flie ouer

E them, with the very breath and aire that commeth from them, they will be ready to conceiue: yea and many times, if they do but heare their call. And that which more is, so lecherous they are, that setting aside their naturall affection and loue to their yong couie, when they are broody (and in which regard they steale from the cocke, and sit apart in some secret and blind corner) yet if they heare once the Fowlers chanterell comming toward the male, and that he doth call, presently they will leaue the nest and suffer the eggs to chile, and for very ieaousie cry again and call backe the males, and offer themselves to be troden, for feare they would goe to others. Nay more than that, their fury and rage that way many times is such, that otherwhiles in this blind fit and fearfull lust, not knowing where they are nor what they do, they will light and fettle vpon the very head of the fowler. Also, if he chance to approach the nest of the brood-hen, she will run forth and be about his feet, she wil counterfeite that she is very heauy and cannot scarce go, that she is weake and enfeeblished: and either in her running, or short flight that she taketh, she wil catch a fall, and make semblance as if she had broken a leg or a wing: then will she run out againe another way, and when he is ready to take her vp, yet will she shift away and escape, and so put him besides his hope. And all this doth shee to amuse the Fowler after her, vntill she haue trained him a contrary way from the couey. Now by that time that shee is past that

feare

feare, and freed of the motherly care she had of her yong ones, then will she get into the furrow of some land, lie along on her back, catch a clot of earth vp with her feet, and therewith hide her whole body, and so saue both her selfe and her coney. To conclude, Partridges (by report) liue 16 yerres.

CHAP. XXXIV.

¶ Of House-doues.

NExt after Partridges, the nature of Doues would be considered, since that they haue in a manner the same qualities in that respect: howbeit, they be passing chaste, and neither male nor female change their mate, but keep together one true vnto the other. They liue (I say) as coupled by the bond of marriage: neuer play they false one by the other, but keep home still, and neuer visit the holes of others. They abandon not their owne nests, vnlesse they bee in state of single life or widdowhead by the death of their fellow. The females are very meek and patient; they wil indure and abide their emperious males, notwithstanding otherwhiles they be very churlish vnto them, offering them wrong and hard measure; so jealous be they of the hens, and suspicious, though without any cause and occasion giuen: for passing chaste and continent by nature they are. Then shall ye heare the cocks grumble in the throat, quarrell and complain, and all to rate the hens: then shall ye see them peck and job at them cruelly with their beakes; and yet soone after, by way of satisfaction, and to make amends again for their curst vsage, they will fall to billing and kissing them louingly, they will make court vnto them and wooe them kindly, they will turne round about many times together by way of flatterie, and as it were by praies seeke vnto them for their loue. As well the male as the female be careful of their yong pigeons, and loue them alike; nay ye shall haue the cocke oftentimes to rebuke, yea chastise the hen, if she keep not the nest well; or hauing bin abroad, for comming no sooner home againe to her yong. And yet, kind they be to them, when they are about to build, lay, and sit. A man shall see how ready they be, to helpe, to comfort and minister vnto them in this case. So soon as the eggs be hatched, ye shall see them at the very first, spit into the mouths of the yong pigeons salt brackish earth, which they haue gathered in their throat, thereby to prepare their appetite to meat, and to season their stomachs against the time that they should eat. Doues and Turtles haue this property, in their drinking not to hold vp their bills between-whiles, and draw their necks backe, but to take a large draught at once, as horses and kine do.

CHAP. XXXV.

¶ Of Stockedoues.

Some authors we haue, who affirme that Stockdoues liue ordinarily 30 yerres, and some vn- till they be 40 yerres old. In which time they find no infirmitie nor discommodity at all but only this, That their claws be ouergrowne, which is a signe of their age: howbeit they may be pared without danger. They haue all of them one and the same manner of tune in their singing, and commonly they make three rests in their song, besides the fa-burden in the end, which is a kind of grone. All winter they be silent: in spring they are loud enough, & the woods resound with them. *Nigidius* is of opinion, that if a man call vnto a Stockdove within-house as she is sitting vpon her eggs, she will leaue her nest, and come at the call. They doe lay after Mid-summer. These doues and Turtles liue eight yerres.

CHAP. XXXVI.

¶ Of Sparrowes.

Contrariwise, the Sparrow is but short liued, howbeit as lecherous as the best. The cocke Sparrow (by report) liueth but one yeare; the reason why men so thinke, is, because in the spring there is not one of them found with a blacke bill, and yet in summer before, it began to be blacke. The hens liue somewhat longer. But to come againe to Doues, it is generally held, that they haue a certaine sense and feeling of glory: and a man would verily thinke, that they haue a knowledge of their gay feathers, and how they are changeably coloured as a man looketh

A looketh vpon them & as they stand. Moreouer, they seem to take a pride in their flying, whiles they keep a clapping of their wings and cutting of the aire euery way, as if they had a pleasure to be flying abroad. In which brauerie of theirs, whiles they flap with their wings and keepe a glorious noise (which cannot be without the beating of their very pinions together) they are exposed to the Faulcon and other hawks, as prisoners fast bound and tied: for otherwise if they would flie at liberty and ease, without keeping such adow with their clapping, they were much more swift of wing, than the very hawks that prey vpon them. But the hawke like a very theefe lieth hidden among the boughes and branches of trees, marketh the Dove how he fetcheth his flight and taketh his pleasure in the aire; and when he seeth his time (in all this glory of his and the mids of his brauerie) seizeth vpon him and carrieth him away.

CHAP. XXXVII.

¶ Of the Kestrell.

TO preuent this danger therefore, the Doues need to haue with them the bird which is called *Tinnunculus*, i. a Kestrell, or Stannell: for she defendeth them, and (by a certaine naturall power that she hath) skareth and terrifieth all other hawkes in so much, as they cannot abide either to see her, or to heare her cry. Wherevpon Doues about all others, loue these birds. And (as men say) pigeons wil not leaue their own douecoate to flie to another, if in the foure corners thereof there be entered foure Kestrels abovesaid, in foure new earthen pots well nested, and neuer vsed before. But others haue vsed means to keep pigeons in their douehouse (for otherwise they be birds that loue to be ranging and wandring abroad) namely, by stirring, and cutting the ioints of their wings with some thin sharp piece of gold: for if you do not so, their wounds will fester and be dangerous. And in very truth, these birds be soon seduced and trained away from their owne homes: and they haue a cast with them to flatter and entise one another: they take a great delight to inueagle others, and to steale away some pigeons from their owne flocks, and euermore to come home better accompanied than they went forth. Moreouer, Doues haue serued for posts and courriers between, and bin imploied in great affairs, and namely, at the siege of Modenna, *Decimus Brutus* sent out of the town letters, tyed to their feet, as far as to the camp where the Consuls lay, and thereby acquainted them with newes, and in what estate they were within. What good then did the rampier and trench, which *Antony* cast before the towne? To what purpose serued the streight siege, the narrow watch, and ward that he kept: wherefore serued the riuer Po betwene, where all passages are, stopped vp as it were with net and toile, so long as *Brutus* had his posts to flie in the aire ouer all their heads? To be short, many men are growne now to cast a speciall affection and loue to these birds: they build Turrets about the tops of their houses for dove-coats. Nay they are come to this passe, that they can reckon vp their pedigree and race, yea they can tel the very places from whence this or that pigeon first came. And indeed one old example they follow of *L. Axiu* a Gentleman some time of Rome, who before the ciuill war with *Pompey*, sold euery paire of pigeons for 400 deniers, as *M. Varro* doth report. True it is, that there goeth a great name of certaine countries where some of these pigeons are bred: for Campanie is voiced to yeeld the greatest and fairest bodied of all other places. To conclude, their manner of flying induceth and traineth me, so thinke and write of the flight of other foules.

CHAP. XXXVIII.

¶ Of the gate and flight of birds.

ALl other liuing creatures haue one certaine manner of marching and going, according to their seuerall kind, vnto which they keep and alter not. Birds only vary their course, whether they go vpon the ground or flie in the aire. Some walke their stations, as Crows and Choughs; others hop and skip, as Sparrows and Ousels: some run, as Partridges, Woodcocks, and Snites; others again cast out their feet before them, stauk and jer as they go, as Storks and cranes: now for flying, some spread their wings abroad, stirring or shaking them but now & then, hanging

hanging and howering with them all the while [as Kites:] others again ply them as fast; but the ends only of their wings, or the utmost feathers are seen to moue [as the Chaffinch.] Yee shall haue some birds, to stretch out their whole wings & sides, mouing them as they flie [as Rauens] and others a man shall see in their flight to keep them in, for the most part close [as the Woodpeckers.] Some of them are known to giue one or two claps with their wings at first, and then glide smoothly away, as if they were carried and borne vp with the aire [as Linnets:] and others are seen (as if they kept stil the aire within their wings) to shoot vp aloft & mount on high, to flie streight forward; & to fall down again flat [as Swallows.] Yee would think and say that some were hurled out of a mans hand with violence [as the Partridge:] and others again to fall down plume from on high [as Larks,] or els to leap & jump [as the Quails.] Ducks, Mallards, and such like, spring presently from the ground vp aloft, and suddenly mount vp into the skie, even out of the very water: which is the cause, that if any chance to fall into those pits wherein wee take wild beasts, they alone will make good shift to get forth and escape. The Geirs or Vulturs, and for the most part all weightie and heauy fowles, cannot take their flight & flie, vnlesse they fetch their run and biere before, or els rise from some steepe place with the vantage. And such are directed in the aire by their tails. Some looke about them euery way, others bend and turne their necks, in flying: and some fly with their prey within their talons, & eat it as they fly. Most birds cry and sing as they flie, yet some there be contrariwise, that in their flight are euer silent. In one word, some flying carry their breasts and bellies halfe vp right: others again beare them as much downward. Some flie side-long and bias: others directly forward, and follow their bills: and last of all there be that bend backward as they flie, or els bolt vp right. In such sort, that if a man saw them all together, he would take them not to be one kind of creature, so diuers & different are they in their motions.

CHAP. XXXIX.

¶ Of Martinets.

Martinets, which the Greeks call Apodes (because they haue little or no vse of their feet) and others, Cypseli, are very good of wing, and flie most of all others without rest. And in very truth, a kind of Swallows they be. They build in rocks & stony cliffes. And these be they and no other, that are seen euermore in the sea: for be the ships neuer so remote from the land, saile they neuer so fast and far off, ye shall haue these Martinets alwaies flying about them. All kinds els of Swallows and other birds, do sometime light, settle, and perch: these neuer rest, but when they be in their nest. For either they seem to hang, or els lie along: and a number of shifts and deuises by themselves they haue besides, and namely when they feed.

CHAP. XL.

¶ Of the bird Caprimulgus, and the Shouelar.

The Caprimulgi (so called of milking goats) are like the bigger kind of Owls. They bee night-theeues, for all the day long they see not. Their manner is to come into the sheep-heads coats and goat-pens, and to the goats vdders presently they go, and suck the milke at their teats. And looke what vdder is so milked, it giueth no more milke, but misliketh and falleth away afterwards, and the goats become blind withall.

There be other birds named Plateæ, i. Shouelars. Their manner is to flie at those foule that vse to diue vnder the water for fish: and so long will they peck and bite them by the heads, vntil they let go their hold of the fish they haue gotten, and so they wring it perforce from them. This bird when his belly is full of shell fishes that he hath greedily deuour red, and hath by the naturall heat of his craw and gorge in some sort concocted them, casteth vp all vp again: and at leasure picketh out the meat, and eateth it again, leauing the shells behind.

CHAP. XLI.

¶ The naturall wit of some birds.

The Hens of country houses haue a certaine ceremonious religion. When they haue laied an egge, they fall a trembling & quaking, and all to shake themselves. They turne about

A also, as in procession, to be purified, & with some festiue or such like thing, they keep a ceremonie of hallowing, as well themselves as their eggs.

CHAP. XLII.

¶ Of the Linnet, Poppinjay or Parrat, and other birds that can speake.

The Linnets be in manner the least birds of all others: howbeit they be very docible. Doe they will whatsoeuer they are taught & bidden, not only in their voice, but also with their feet and bills, as if they were hands. In the territorie about Arelate, there is a bird called Taurus (because it loweth like a bull or cow, for otherwise a small bird it is.) There is another also named Anthus, which likewise resembleth the neighing of horses: and if haply by the approach of horses they be driuen from their grasse wherof they feed, they will seem to neigh; and flying vnto them, chase them away, and so be reuenged of them again. But about all other birds of the aire, the Parrats passe, for counterfeiting a mans voice: in so much, as they will seeme to parle and prate our very speech. This foule commeth out of the Indies, where they call it Sitace. It is all the body ouer Greene, onely it hath a collar about the necke of vermilion red, different from the rest of her feathers. The Parrat can skil to salute Emperors, and bid good morrow: yea, and to pronounce what words she heareth. She loueth wine well, and when shee hath drunk freely, is very pleasant, plai full, and wanton. She hath an head as hard as is her beak: when she learns to speake, she must be beaten about the head with a rod of yron: for otherwise she careteth for no blowes. When she taketh her flight down from any place, she lighteth vpon her bill, and resteth thereupon, and by that means fauoreth her feet, which by nature are but weake and feeble, and so carrieth her owne weight more lightly.

There is a certain Pie, of nothing so great reckoning and account as the Parrat, because shee is not far fet, but here-by neere at hand: howbeit, she pronounces that which is taught her more plainly and distinctly than the other. These take a loue to the words that they speak: for they not only learn them as a lesson, but they learn them with a delight and pleasure. In so much that a man shall find them studying thereupon, and conning the said lesson: and by their carefull thinking vpon that which they learn, they shew plainly how mindfull and intenuie they be thereto. It is for certain knowne that they haue died for very anger and griefe that they could not learn to pronounce some hard words: as also, vnlesse they heare the same words repeated often vnto them, their memory is so shittie, they will soone forget the same againe. If they misse a word, and haue lost it, they wil seeke to call it againe to remembrance; and if they fortune to heare the same word in the mean time, they will wonderfully ioy therat. As for their beautie, it is not ordinary, although it be not very louely. But surely amiable enough they are in this, that they can so well resemble mans speech. It is said, that none of their kinde are good to bee made scholers, but such only as feed vpon mast: and among them, those that haue fine toes to their feet. But euen these also are not fit for that purpose, after the first two yeares of their age. And their tongue is broader than ordinarie: like as they be all that counterfeit mans voice, each one in their kind, although it be in maner general to all birds whatsoeuer to be broad tongued. Agrippina the Empreffe, wife to Claudius Caesar, had a Black-bird or a Throistle, at what time as I compiled this booke, which could counterfeit mans speech; a thing neuer seen nor knowne before. The two Casars also, the yong princes (to wit, Germanicus & Drusus) had one Stare, & sundry Nightingales, taught to parle Greeke and Latine. Moreouer, they would studie vpon their lessons, and meditate all day long: and from day to day come out with new words still, yea, and were able to continue a long speech & discourse. Now for to teach them the better, these birds must be in a secret place apart by themselves, where they can heare no other voice: and one is to fit ouer them, who must repeat often that which he would haue them to learn; yea, and please them also with giuing them such meat as they best loue.

CHAP. XLIII.

¶ The vnderstanding and wit that Rauens haue.

Let vs not defraud the Rauens also of their due praise in this behalfe, considering, that the whole people of Rome hath testified the same not only by taking knowledge, but also by a publick reuenge & exemplarie punishment. And thus stood the case. In the daies of Tiberius

berius the emperor, there was a yong Rauē hatched in a nest vpon the church of *Castor & Pollux*; which, to make a triall how he could flie, took his first flight into a shoemakers shop just ouer-against the said church. The master of the shop was well enough content to receiue this bird, as commended to him from so sacred a place, and in that regard set great store by it. This Rauē in short time being acquainted to mans speech, began to speak, & euery morning would fly vp to the top of the Rostra or publick pulpit for Orations, where, turning to the open Forum & market place, he would salute and bid good morrow to *Tiberius Caesar*, and after him, to *Germanicus* and *Drusus* the yong princes, both *Caesars*, euery one by their names: and anon the people of Rome also that passed by. And when he had so don, afterwards would flie again to the shoemakers shop aforesaid. This duty practised, yea and continued for many yeres together, to the great wonder and admiration of all men. Now it fell out so, that another shoemaker who had taken the next conuiners shop vnto him, either vpon a malicious enuie that he occupied so neer him, or some sudden spleene and passion of choler (as he would seeme to plead for his excuse) for that the Rauē chanced to meut a little, and set some spot vpon a paire of his shooes, killed the said Rauē. Whereat the people tooke such indignation, that they rising in an vptore, first droue him out of that street, and made that quarter of the city too hot for him: and not long after murdered him for it. But contrariwise the carcase of the dead Rauē was solemnly entered, and the funerals performed with all ceremoniall obsequies that could be deuised. For the corps of this bird was bestowed in a coffin, couch or bed, and the same bedecked with chaplets and garlands of fresh floures of all sorts, carried vpon the shoulders of two blacke-Mores, with minstrels before, founding the Haut-boies, and playing on the Fife, as far as to the Funeral fire; which was piled and made in the right hand of the caufey Appia, two miles without the city in a certain plain or open field called Rediculi. So highly reputed the people of Rome that ready wit and apt disposition in a bird, as they thought it a sufficient cause to ordaine a sumptuous buriall therefore: yea, and to reuenge the death thereof, by murdering a citizen of Rome in that city, wherein many a braue man and noble person died, and no man euer solemnized their funerals: in that city I say which afforded not one man to reuenge the vnworthy death of that renowned *Scipio Aemilianus*, after he had woon both Carthage and Numantia. This happened the fifth day before the Calends of Aprill, in the yere when *M. Seruilius*, and *C. Cestius* were Consuls of Rome. Moreover, euen at this very present, when I wrote this historie, I saw my selfe a Crow belonging to a certain knight of Rome, who brought him out of the realm of Grenado in Spaine, which was a very strange and admirable bird, not only for the exceeding blacke colour of his feathers, but also for that he could pronounce and expresse so perfectly many words and sentences together, and learned still new lessons euery day more than other. It is not long since that there went a great bruit and fame of a notable hunter in Erizena a countrey of Asia, whose name was *Craterus Monoceros*: that vsed to hunt by the meanes and helpe of Rauens. His manner was to carry with him these Rauens into the Forrest, perching vpon his shoulders & his hunting hornes: and these would seeke out and put vp other wilde ones, and bring them to him. Thus by custom & vse he brought his hunting to this good passe, that when he returned homeward out of the forest, the wild as well as the tame would accompany him. Some haue thought it worth the setting downe vpon record, how there was a Rauē scene in time of great drought when water was hard to come by, for to cast stones into the bucket belonging to a sepulchre, wherein there was some rain water remaining toward the bottome, but so deepe, that he could not reach vnto it: and being afraid to go downe into it, by heaping vp many stones, hee brought the water to rise so high, as he might drinke sufficient with ease.

CHAP. XLIV.

¶ Of *Diomedes* his birds.

Neither will I ouerpasse the birds called *Diomedes*, which *K. Inbanameth* Catara &c. Toothed they are, as he saith, and they haue eies as red and bright as the fire: otherwise their feathers be all white. Who also affirms, that they euermore haue two captains, the one for to lead the vaward, and the other for the rereguard. With their bills they dig little trenches & gutters in the ground: ouer which from side to side they lay sticks, acrosse like hurdles,

arti-

artificially, and then couer the same ouer with the earth they cast forth before, vnder which they breed. Euery of these trenches hath two dores, the one regarding the East, at which they go forth to their meat: and the other looking toward the West, by which they come in againe after their returne. Whensoever these birds would meut, they flie euer full into the winde, because they would not file themselves. Found they be in one place of the world, and but in one, namely in a certaine Island, innobled, as we haue written before, for the tombe and Temple of *Diomedes*, and it lieth vpon the coast of Apulia. These birds are like vnto the white sea Mewes with a blacke cop. Their manner is to cry with open mouth vncessantly at any strangers that come a land, saue only Grecians, vpon whom they wil seem to fawn and make signes of loue and amitie in all flattering wise. A wonderfull thing that they should discerne one from another, and giue such friendly welcome to them, as descended from the race of *Diomedes*. Their manner is euery day to charge their throat and wings full of water, and all to drench therewith the said temple of *Diomedes*, in token of purification. Whereupon arose the fable, That the companions of *Diomedes* were turned into these birds.

CHAP. XLV.

¶ What Birds are not apt to learne, and will not be taught.

And now that we are in this discourse of wit and capacitie, I must not omit to note, That of birds the Swallow, and of land beasts the Mouse and the Rat, are very vntoward, and cannot be brought to learn. Whereas we see great Elephants ready to do whateuer they are commanded: the furious Lions brought to draw vnder the yoke: the Seals within the sea, and so many sorts of fishes grow to be tame and gentle.

CHAP. XLVI.

¶ The manner of Birds in their drinking.

Birds drinke sucking, and those that haue long necks make stayes betweene, and euery while hold vp their bil from the water, as if they would poure the water down their throat. The bird *Porphyrio* alone seems to bite the water as he drinketh. And this bird hath this pertie by himselfe, to dip and wet all his meat euer and anon in water, and then with his foot in lieu of an hand to reach it vnto his bil. The best of this kind are in Comagene. Their bills and long shanks that they haue be red.

CHAP. XLVII.

¶ Of the Fowle *Himantipus*, the *Onocrotali*, and other strange fowles.

Like in that respect vnto the *Porphyrio*, is the *Himantipus*, a bird far lesse in body, but full as long legged, and stalking as high. They are bred in *Aegypt*, and go vpon three toes to a foot. Their most feeding is vpon flies. In Italy they liue not many daies. All great & heauie birds liue on seeds and corn: they that fly on high prey vpon flesh. Among water fowles the *Cormorants* vse to deuoure that which other birds either disgorge or meute. The *Onocrotali* much resemble swans, and surely they might be thought the very same and no other, but that they haue within their throat another kind of gizzar besides their craw, in which, these fowles being vnfatiable, bestow all that euer they can get; whereby it is of a wonderfull great capacite, and will receiue very much. Now when they haue done the rauening, and filled this poke, soon after they conuey it from thence by little and little into their mouth, and there chew the cud, vntill after it be well prepared, they swallow it downe into the very craw and belly indeed. These fowles are to be found in the parts of Picardie and Normandy in France, lying vpon the North Ocean. In *Hircinia*, a Forrest of Germanie, we haue heard that there be strange kinds of birds, with feathers shining like fire in the night season. In other respects I haue nothing to say of them worth the writing, saue only they are of some name for being far fetched.

CHAP.

OF water fowls, the Phalerides are thought in Seleucia of the Parthians, and also in Asia, to be the daintiest. Likewise the Fesant hens of Colchis, which haue two ears as it were consisting of feathers, which they will set vp and lay down as they list. The Ginnie or Turkey hens in a part of Africke called Numidia, be in great request, as also throughout all Italy now adaies. *Apicius*, the most riotous glutton and belly-god of his time, taught men first, that the tongue of Phœnicopterus was a most sweet and delicat piece of meat. The Moore-hen of Ionia is much commended and highly esteemed. This bird so soon as she is taken prisoner, loseth her voice and is mute; for otherwise she is vocal and loud enough, and in old time was reputed a rare and singular bird. But now there be caught of them in Frauce and Spain, yea and among the Alps: where also the Plungecons or bald Rauens be, which heretofore were thought proper and peculiar to the Baleare Islands: like as the Pyrrhocorax [i. the red Rauens] with the yellow bill, was supposed to breed onely among the Alps: and with it the Lagopus, a daintie bird, and most pleasant in the dish. And this name it took in Greek, because it is rough footed and haired like the haire foot: otherwise all ouer white, and as big as a pigeon. Haue her out of the ground, vnder which the breedeth, you shall hardly get her to feed, neither will shee be made tame, liue the neuer so long: kill her once, the body presently wil rot and putrifie. There is another besides of that name, and differeth from Quailes onely in bignesse, for it is greater than the Quaille; and with a yellow fauce of saffron it is a most delicate piece of meat. *M. Egnatius Calvinus* gouernor of the parts about the Alps, reporteth, that he hath seen there the Ibis a bird proper to the land of Egypt.

DVring the ciuil wars between *Otho* and *Vitellius*, and namely about the time of the journey or battell of *Bebriacum* beyond the Po, there were these new birds (for so they be called still at this day) brought into Italy. Like they be to Thrushes or Mavisses, somewhat lesse than house doves, pleasant in the eating. The Baleare Isles send vs another *Porphyrio*, better than that before named, cap. 46. Where the Buzards also a kind of Hawk are held for excellent meat, and serued vp at the table. Likewise the *Vipio*, for so they call the lesser Crane. As for the fowles called *Pegasi*, headed like horses; and the Griffons, which are supposed to haue long eares and a hooked bill, I take them to be meere fables: and yet they say that the *Pegasi* should be in Scythia, and the Griffons in Ethyopia. Moreouer, I thinke the same of the *Tragopanades*, which many men affirm to be greater than the Eagle, hauing crooked horns like a ram on either side of the head, of the colour of iron, and the head only red. As touching the Birds *Syrenes*, I wil neuer beleuee there be any such, let *Dino* the father of *Clitarchus* that renowned writer say what he wil: who auoucheth for a truth, that they be in India, and that with their singing they wil bring folk asleep, and then fly vpon them and teare them in pieces. He that will giue credit to these fables, may euen as well beleuee, that dragons forsooth taught *Melampus* by licking his eares, how to vnderstand the language of birds when they chaunt and sing vpon trees, or cry and chirp in the aire. Likewise the tales that *Democritus* telleth, who nameth certain birds, of whose blood mingled together and suffered to corrupt, there is ingendred a Serpent, which whosoever eateth shall know what birds say one to another in their speech: and namely the strange things he telleth of the Lark about the rest. For verily without these fabulous lies, mens heads be occupied enough, and too much to, about the Auguries onely and pre-fages of birds, that they haue no need to busie & trouble their brains about those toies. *Homer* makes mention of certain birds called *Scopes*: but I cannot conceiue those satyrycal gesticulations of theirs like Antikes when they are perched, which so many men talke of, neither doe I think otherwise, but that these birds are out of knowledge now a daies. And therefore far better it is to write of those we know.

THEY of the Iland Delos began the cramming of Hens and Pullein first. And from them arose that detestable gourmandise and gluttonie to eat Hens and Capons so fat & enterlarded with their owne greafe. Among the old statutes ordained for to repress inordinate feasts, I find in one act made by *C. Fannius*, a Consul of Rome, eleuen yeres before the third Punicke war, an expresse prohibition and restraint, That no man should haue his table serued with any foule, vnlesse it were one hen, and no more, and the same a runner only, and not fed vp and crammed fat. The branch of this one statute was afterwards taken forth and inserted in al other acts provided in that behalfe, & went currant thorough all. Howbeit, for all the law so well set down, there was a starting hole found to delude and escape the meaning therof, namely, to feed Cocks & Capons also with a past foked in milk & mead together, for to make their flesh more tender, delicate, and of sweeter tast: for that the letter of the statute reached no farther than to Hens or Pullers. As for the Hens, they only be thought good and well ynough cramm'd, which are fat about the neck, and haue their skin plumpe and soft there. Howbeit, afterwards our fine cookes began to looke to their hind-parts about the rumpe, and chuse them thereby. And that they should make a greater shew in the platter, they slit them along the chine: and lay their legs out at large, that they might take vp the whole dresser board. The Parthians also haue taught our cooks their own fashions. And yet for all this fine dressing and setting out of meat, there is nothing that pleaseth and contenteth the tooth of man in all respects, while one loues nothing but the leg, another likes and praises the white brawne alone, about the breast bone. The first that deuised a Barton & Mue to keepe foule in, was *M. Lenius Strabo*, a gentleman of Rome, who made such an one at Brindis, where he had enclosed birds of all kinds. And by his example we began to keepe foules within narrow coups and cages as prisoners, to which creatures Nature had allowed the wide aire for their scope and habitation.

BVt in the relation and report of this argument, notorious aboue all the rest in our memorie is that platter of *Clodius Æsopus*, the plaier of Tragedies, which was esteemed worth * six hundred Sestertia. In this one charger he serued vp at the table all kind of birds that either could sing or say after a man: and they cost him six hundred Sesterces apeece. And surely it was no delight & pleasure that he sought herein to content the tooth, but only that he would haue the name to eat the resemblers of mans voice: without any consideration & regard that he had of all that great riches and reuenues of his owne, which himselfe had gotten by his tongue, and by counterfeiting the speech of others. A father verily worthie such a sonne, who as we said before, deuoured those precious pearles. And to speake a truth, it is hard to judge whether of them twaine plaid the beast more, the father or the sonne. But that it seemeth lesse pride and prodigalitie to swallow down the throat the greatest riches of Nature, than to chew and eat at a supper mens tongues, that is to say, those birds that could pronounce our language.

THE generation of birds seemes alwaies to be after one & the same manner. And yet therein is to be found some strange & extraordinarie worke. Like as there be four footed beasts known also to haue eggs, namely, the Chamæleons, Lizards, and such as we named among Serpents. Of foules, those that haue hooked claws and talons, are but barren that way, and lay few eggs. Only the Kestrell laieih foure at a time. And verily Nature hath well provided in all the kind of foules, That the mightier should be lesse fruitfull than the weaker and those that sic from the other. The Ostriches, Hens, Partridges, and Linnets, are great laiers. As touching the

the manner of their engendring, it is performed two waies: for either the female couche th downe, as doe our hens; or else stand vpon their feet, as doe the cranes. Of eggs, some be white, as those of Doues and Partridges; others, be pale and yellowish, as those of water-foule: some be spotted, as those of the Turkie-hens: others againe red; and such eggs Feafants lay, and Ketrils.

All birds eggs within the shell, are of two colours. In water-foules, the yolke is more than the white, and the same is more wan and dusky than in others. The eggs of fishes are of one colour, and therein is no white at all. Birds eggs are brittle shelled, by reason of their heat. Serpents eggs are more tough because of cold: but they of fittes are more soft and tender, for that they be so liquid. Those of fishes and such creatures as liue in water, haue round eggs ordinarily: others be long and pointed at one end in the top. Birds lay their eggs with the rounder end comming forward: their shell is soft whiles they be warm and a laying, but presently they harden by piecemeale as they come forth. *Horatius Flaccus* is of opinion, that the longer the egge is, the better tast it hath. The rounder egge prooues to be the hen commonly, the rest will be cockes. There is found in the * top or sharper end of an egge within the shell, a certaine round knot resembling a drop or a nautil, rising aboue the rest, which they call a Kinning.

CHAP. LIII.

¶ *The engendring of egges: the sitting of birds: and their manner of generation.*

Some birds there be, that tread all times of the yeare; and lay eggs but only two moneths in mid-winter: and of those, pullets lay more than old hens, but they be lesse, especially the first and last of one laier. So fruitfull they be, that some of them will lay threescore eggs ere they giue ouer: some euerie day; others, twice in one day: and some will ouer-lay, vntill they be so weary and feeble withall, that they will neuer lay more, but die withall. The little short legged grig hens, called Hadrianæ (that came from Hadria) are counted best. Doues lay, & conuey ten times in the yeare, some of them, eleuen: and in Egypt there are found that giue not ouer in the twelue months, euen at mid-winter in December. Swallows, Oufels, Quoits or Ringdoves and Turtles, lay and sit twice in the yeare: other birds ordinarily but once. Thrushes and Blackbirds build their nests of mud and clay, in trees and bushes one by another, so neere as if they were linked together: and lightly they engender in some corner out of the way. After the hen is trodden, within ten daies the eggs commonly knit within her bellie, are come to perfection & readie to be laid. Howbeit if hens haue some wrong done vnto them, or if a man chance to pluck a feather or quill from a pigeon at that time, or do them some such iniurie, it will be longer ere they lay.

All eggs haue within them in the mids of the yolke, a certaine drop as it were of bloud, which some thinke to be the heart of the chicken, imagining that, to be the first that in euerie bodie is formed, and made: and certainly a man shall see it within the verie egge to pant and leape. As for the chick, it taketh the corporall substance, and the bodie of it is made of the white waterish liquor in the egge, the yellow yolke serues for nourishment whiles the chick is vnatched and within the egge, the head is bigger than all the bodie besides: and the eies that be compact and thrust together, be more than the verie head. As the chick within growes bigger, the white turneth into the middest, and is enclosed within the yolke. By the 20 day (if the eggs be stirred) ye shall heare the chick to peepe within the verie shell: from that time forward, it beginneth to plume and gather feathers: and in this manner lies it within the shell, the head resting on the right foot, and the same head vnder the right wing, and so the yolke by little and little decreaseth and faileth. All birds are hatched with the feet forward, contrarie to other creatures. Some hens there be, that lay all their eggs with two yolkes; and of them be hatched two chickens otherwhiles, as *Cornelius Celsus* writeth, but the one of them is bigger than the other. Howbeit, others say, it is impossible that one egge should come to two chickens. Moreover, it is held for a rule, that where should not be put vnder a brood-hen aboue 25 eggs at one time to sit vpon. After the mid-winter, hens begin to lay and sit. The best brood is before the spring Equinoctiall. Those that be hatched after mid-summer, neuer come to their full and kind bignesse: and euermore the later the lesse.

CHAP.

CHAP. LIV.

¶ *The infirmities and impediments incident to brood hens, and the remedies.*

The best eggs that can be put vnder hens when they sit, are they that were laid ten daies before at the utmost; for neither old eggs, nor yet very new laid are good for that purpose.

After that a hen hath sitten 4 daies, take an egge from vnder her, hold it in one hand by the narrow end, and look between you and the light, with the other ouer it; if it be cleare through and of one colour, it is supposed to be naught, and will neuer proue a chicke, and therefore put another in place thereof. Another experiment there is by water: the addle egge will flote aboue

as empty, the found and good will sinke to the bottom: and such therefore being full are to be set vnder the hen. We ye would try whether an egge be good or bad in this case, our country wiues say, you must not shake them in any hand, for if the vital veins & parts be broken & blended together, they will neuer proue. Moreover, this is alwaies to be looked vnto, that ye begin to set an hen after the change of the moon, for if you set her in the wain, the eggs will be addle, and neuer come to be chickens. The warmer the weather is, the sooner will she hatch, & therefore it falleth out, that in summer ye shall haue her abroad with her brood vpon the nineteenth day, in winter many times it will be 25 daies first. If it thunder while she is broody the eggs will be addle; yea and if the hen chance but to heare an hawke cry they will be marred. The remedie against thunder, is to put an iron nail vnder the straw of the hens nest, or els some earth

newly turned vp with the plow.ouer and besides, there be some eggs that will come to be birds without sitting of the hen, euen by the worke of Nature only, as a man may see the experience in the dunghills of Egypt. There goeth a pretty yeast of a notable drunkard of Syracusa, whose manner was when hee went into the Tauerne to drinke, to lay certaine egges in the earth, and couer them with mould, and he would not rise nor giue ouer bibbing vntill they were hatched: To conclude, a man or woman may hatch eggs with the very heate only of their body.

CHAP. LV.

¶ *The Auguries and presages of Egges.*

Livia Augusta the Empreffe, wife sometime of *Nero*, when she was conceived by him, & went with that child [who afterwards proued to be *Tiberius Casar*] being very desirous (like a yong fine lady as she was) to haue a jolly boy, practised this girlish experiment to fore-know what she should haue in the end: she tooke an egge, and euery carried it about her in her warme bosome; and if at any time she had occasion to lay it away, she would conuey it closely out of her owne warme lap into her nurses, for feare it should chill. And verily this presage proued true, the egge became a cocke chicken, and she was deliuered of a sonne. And hereof it may well be come the deuice of late, to lay egges in some warme place, and to make a soft fire vnderneath of small straw or light chaffe to giue a kinde of moderate heate: but euermore the eggs must be turned with a mans or womans hand, both night and day; and so at the set time they looked for chickens and had them. It is reported besides of a certaine Poulter, who had a secret b. himselfe, whereby he could tell surely and neuer misse, which egge would be a cocke chicke, which a hen: also of many hennes that he kept, which was euery hens egge, if hee did but see it. We haue heard moreover, that when a brood hen chanced to die, the cocks that vsed to tread her, were seen to go about with the chickens one after another by turnes, and to do euery thing like to the very hen indeed that hatched them: and all that while to forbear once to crow. But aboue all it is sport alone to see the maner of an hen that hath sitten vpon ducks eggs and hatched them, how at the first she will wonder to haue a teem of ducklings about her, and not acknowledge them for her owne; but soone after shee will clucke and call this doubtfull brood to her very carefully and diligently: but at the last, when she perceiues them, according to their kind, to take the water and swim, how she will mourn and lament about the fish-pool, that it would pittie ones heart to see them what moane they will make.

CHAP.

CHAP. LVI.

¶ Which be the best hens.

A Man shall know a good and kindly hen by her comb, when it is strait and vpright: otherwhiles also double crested: also by the pinion feathers blacke, the vpper plume reddish. Such a hen will be red also about her head and bill, and haue an odde toe to her feet, yea and somtime that od one to lie crosse ouerthwart the other foure. In case of sacrifices and religious vse they are not thought good nor allowable that haue beck and feet yellow. For diuine seruice and secret mysteries celebrated in couert to the goddesse Ops, the black are allowed for good. There is also a dwarfish kind of hens, [*i. grig hens*] that are extraordinarie little, and yet fruitful, a thing not seen in any other kind of fowle: they lay and misse not, but seldom sit they on any eggs, and if they do it is hurtfull for them.

CHAP. LVII.

¶ The maladies that hens be subiect vnto, and the remedies.

That which troubleth all the kind of them is a certain distillation of a phlegmaticke humor, which causeth the pip, the most of all between haruest time and vintage. The cure is, to keep them hungry & long fasting: also to let them lie or perch in a smoky place, especially where the fume is made of Bay leaues and the herb Sauin. It is good moreouer, to draw a little quill or feather through their nostrills acrosse, and to remoue or shift it euery day. As for their meat, let it be some cloues of garlicke shred among their corne, or else let their meat bewell infused or steeped in water, wherein an owle hath washed and bathed her selfe; or else foddren with the seed of Bryonic or the wilde white Vine: besides such other medicines as are daily in vse.

CHAP. LVIII.

¶ The manner how fowles do conceiue, and what number of yong ones commonly they hatch.

Doues haue this propertie by themselves, to bill one another and kisse before they tread. They lay for the most part two eggs. Thus Nature hath disposed, that some should breed often and few: others should hatch many together at once. The Ringdoves or Quois, and Turtles, ordinarily lay three eggs; and lightly they sit and hatch but twice a yere: and that is, if their first brood come not to perfection, but miscarried and was not reared vp. And albeit they lay three eggs, yet they neuer hatch but twain: the third that is addle, they call in Latine *Vrinum*. The female Ringdove sits euer from noon vntill the next morning; the male makes vp the rest of the day. House-doues breed euermore one cock pigeon, and another hen. The male is hatched to day, and the female tomorrow. In that kind they sit both, the cock all day, and the hen by night: and vsually vpon the 20 day they hatch. They lay within fise daies after they be troden, and in summer time verily you shall haue them in the space of two months bring three paire of pigeons; for then they vse to hatch by the 18 day: and presently they conceiue again. So that a man shall oftentimes find new laid eggs euen amongst the young pigeons: and otherwhiles it is seen, that whiles some are ready to fly, others peep newly out of their shel: and these yong birds within fise moneths will lay themselves. Now the nature of these hen doues is (if they want a cock) to tread one another, and hereof they come to lay barren eggs, wherof nothing will be ingendred: and such the Greeks call Hypenemia, *i. wind-eggs*.

CHAP. LIX.

¶ Of the Peacocks and Geese.

The Pea-hen falls to lay and breed after she is 3 yeres old. In the first yere she begins with one or two eggs: the yere following she riseth to foure or fise: in the rest she reacheth to twelue and no more. When she layeth, her manner is to rest two or three dayes betwene euery egge. And thrice a yere she keepeth this order, namely, if her egges be taken from

A from her, and put vnder hens to be sitten vpon: for why, the Peacocks will break them if they can meet with them, because they canot misse and spare the Peahens company while they are broody and sitting: which is the cause they are wont to lay by night, or in some secret corner out of the way, and that from an high place where they perch: and then, vnlesse there be good heed taken that the eggs be latched in some soft bed vnderneath, they are soone broken. One Peacock is sufficient to go with fise wiues: for when there is but twain [*the villaine is so lecherous*] with ouermuch treading he hindereth their laying, and marreth the knot of eggs ingendred within them. The Peahen hatcheth in 28 daies, or in thirty at the farthest.

B Ganders and Geese ingender together in the very water. Geese lay ordinarily in the spring: or if they were troden about mid-winter, then ye shall haue them lay after the Winter Sunne: stead some forty daies or very neere. They haue vsually two laiters in the yere, namely, if hens hatched their former eggs. The most that they hatch at one sitting is sixteene, and the fewest fien. If a man steale their eggs from them they lay still, and neuer giue ouer till they be readid to burst with laying. No birds eggs but their own will they hatch. The most profitable way, is to set them vpon nine or eleuen. The females only sit, and that for the space of 30 daies, vnlesse it be warme weather, and then they will haue done by 25. If one of their Godlings be stung neuer so little with a nettle, it will die of it. Their owne greedy feeding also is their bane, for one while they will eat vntill they burst again; another whiles kill themselves with straining their own selues: for if they chance to catch hold of a root with their bill, they will bite and pull hard for to haue it, that many times they breake their owne neckes withall, before they leaue their hold. Against the stinging of nettles the remedie is, that so soone as they be hathed there be some nettle roots laid vnder their nest of straw.

CHAP. LX.

¶ Of Herons and Bittours, and the best way to keepe eggs long.

DOF Herons be three sorts, * Leucon, * Asterias, * and Pellon: these last ingender with much paine and difficultie; as for the males verily they cry againe for anguish, and the bloud starts out of their eies in the act of treading. And with as much ado and trouble do the females lay, after they be knit with eg. The Eagle and the most part of the greater fowls sit 30 daies, whereas the lesse continue but 20, as the Kite and the Hawk. The Kite vsually hatcheth but one at a time, and neuer aboue three: but that kind called *Egoliol* somtimes foure. The Rauens also now and then fise: and those couoe as many daies. While the female crow sits the male feeds her. The Piot ordinarily brings forth nine Piannets, the fig-pecker *Melanocoryphus* aboue 20, but euermore an od one: and there is no a bird that goeth therein aboue her. Lo how Nature is willing to multiply the race of little birds! The yong Swallowes are at the first blind, and so are all such as are hatched many in number. Wind-eggs, which we call *Hypenemia*, come either by the mutuall treading of hens one another, by an imaginarie conceit of the male, or else by dust. And such eggs not only Doues doe bring, but house Hens also, Partridges, Peahens, Geese, and Brants, or the female Barganders. Now these eggs are barren as it were, and neuer proue birds, lesse than others, not so pleasant in taste, and besides more moist. Some are of opinion that the wind will ingender them, for which cause also they are called *Zephyria* [*i. West-wind eggs*]. And verily such eggs are seen only in the spring, when that wind blows. Addle eggs, which some called *Cynosura*, are they that chill vpon the rest, when the hen is gone and giueth ouer sitting. Eggs steeped in strong vineger will come to be so soft, that they will passe and be drawn through the ring of a mans finger. The best way to keep egges is in beane meale or floure; and during winter in chaffe, but for summer time in bran. It is thought if they lie in salt their substance will waste and consume to nothing within the shell.

CHAP. LXI.

¶ What Bird alone bringeth forth a lining creature, and feedeth it with milke.

The Rere-mouse or Bat alone of all creatures that fly, bringeth forth yong aliue, and none but she of that kind hath wings made of pannicles or thin skins. She is the only bird that suckleth

* A Criell, or
dwarfe Heron.
Bittor.
* A Carion
Heron

suckleth her little ones with her paps, and giues them milk: and those she wil carry about her two at once, embracing them as she flieth. It is said also that she hath no more but one ioynt of the hanch, without any in the knee or feet: and that they take greatest delight to feed vpon gnats.

CHAP. LXII.

¶ Of Vipers: their manner of generation and bringing forth yong: and what land beasts do lay eggs.

Moreouer, among creatures of the land, serpents lay eggs: whereof as yet we haue not written. As they ingender together they clip and embrace, and so intangled they be and in-wrapped one about the other, that a man who saw them would think they were one serpent with two heads. In the very act of generation the male Viper thrusteth his head into the mouth of the female; which she (for the pleasure and delectation that she hath) gnaweth and biteth off. No land creature els but she hath eggs within her belly, of one colour and soft, like as fishes haue. Now after three daies they be quicke, and then come forth as they be hatched, but no more than one at once euery day: and so commonly she hath. When she is deliuered of the first, the rest (impatient of so long delay) eat through their dams sides, and kil her. As for other serpents they lay their eggs linked and chained together, and so sit vpon them on the land: but they hatch them not vntill the yeare following. Crocodiles sit by turnes, the male as well as the female. But I thinke it good to treat also of the generation of other land creatures.

CHAP. LXIII.

¶ The generation of lining creatures vpon the land.

Of all liuing creatures two footed, a woman onely bringeth forth her yong quicke. Men and women both, and none but they, repent at first the losse of their maidenhead. A very preface (no doubt) of a life to ensue full of trouble and miserie, that thus should begin with repentance. All other creatures haue their set times and certain seasons in the yeare when they ingender, as hath bin shewed before: but all is one with vs, and no houre of day or night comes amisse. Other creatures know when they haue enough, and rest satisfied: we only are insatiable that way, and cannot see to make an end. The Empreſse *Messalina*, wife of *Claudius Caesar*, thinking it the only victorie for a lady and queen to excell in this feat, chose the most gallant curtisan and commonest strumpet in all Rome, to try maisteries and to contend with for the best game: and in very truth shewon the prize; for in the space of 24 houres she out-went her [a beastly thing to be written] no fewer than 25 times. As for men, they haue deuised in the practise of this filthy act, even to abuse some parts against kind: and women (vnnatural as they be) haue the cast to destroy within them the vnripe and vntimely fruit of their own body. *Ceres* in this behalfe how much worse are we than the wild and sauage beasts of the field. *Hesiod* writeth, that men are more giuen to lust in winter than in summer, and women contrariwise. Elephants, Camels, Tigers, Onces, Rhinoceros, Lions, Hares, Connies, and generally all beasts which haue their genitall parts from-ward, turn taile to taile to the female in the act of generation. As for Camels, they go into the desert, or at lestwise seeke some corner when they would ingender; and dangerous it is for one to take them in the manner. They continue in this action one whole day together, and so do none els that are whole hoofed. In foure footed beasts the males are set into the heat of lust by senting and smelling. Dogs and Bitches, Seales & wolues likewise turn away, and in the mids of the action be tied one to another euen against their wils, and cannot help it. The females of most of these before named begin to ride the males first, for to prouoke their lust: but of the rest, the males leap the females at the first. Beares (as we sayd before) lie along both as man and woman. Hedge-hogs stand both vpright, and claspe one another when they ingender. The he Cat standeth on his feet, and the she lieth vnder him. Foxes ly vpon their sides, and so the Bitch embraceth the male Fox. Kine and Hindes cannot well endure the violence of the Bulls and the Stagges in this businesse, and therefore they are euer going when they doe engender. Stagges goe from one Hinde to another, and then come againe to the first; and this doe they in course. Lizards, as all other creeping creatures that haue no feet, wind one about another as they ingender. The greater that any beasts be, the lesse fruitfull

A fruitfull they are of their bodie. Elephants, Camels, and Horses, get but one at once, neither do the females beare any more at a time: whereas the Goldfinch or Linnet, a verie little bird, bringeth forth a dozen commonly at once. Such as bring most, are least while in breeding. The greater that any creature is, the longer time it requireth to be formed in the mothers wombe. And such as liue long, be longer also ere they haue their perfection and come abroad into the world. The growing age is not meet for generation. Beasts that are whole hoofed, neuer bring but one at a time: such as be clouen footed in twaine, may also haue twins. But as many as haue their feet parted and deuised into many toes, are fit to beare many at ones. And whereas all the former rehearsed, bring forth perfect creatures with all parts, some haue their young ones imperfect and but halfe made: in which number Lionesses, she Beares, bitch Foxes, are to bee reckoned: but especially the she Beares, whose whelpes are more vnshapen than the rest: and a rare thing it is to see them a whelping. Howbeit such females when they be deliuered of them, with their licking do chafe and heat them, and so by little and little bring them to some forme and fashion by this meanes. Such for the most part beare foure whelpes. As for bitches, Wolues, Panthers, and Thoes, kindle their young before they can see.

B Of Dogges and Bitches there be many kinds. They of *Laconia*, as well the male as the female, be apt to engender after they be eight months old. They be with whelp three score daies and three ordinarily. As for other Bitches, they goe proud at fixe moneths, and may be lined. They be all the sort of them, sped at the first lining, Bitches that go assaured and take the dog before the full time, namely when they be verie young, such bring a litter that will be longer ere they see: neither goe they: but all the whelps will not be blind so many daies. Dogs commonly when they be halfe yeare old, are thought to lift vp their leg when they pisse, and that is a signe they are come to their full strength and perfection: but bitches all that time pisse sitting vpon their buttocks. They haue twelue whelps when they bring most, but ye shall see them commonly with a litter of six or nine: and sometime they come with just one, but that it is thought to be a prodigious signe, as also if the whelpes be all Dogges or all Bitches. The first vsually that they whelp, be Dogs; for the rest, they be one with another, a Dog and a Bitch: namely, if they were lined in the due season, and at the just moneth. And commonly they goe proud fixe moneths after their former litter. The Bitches of *Laconia* ordinarily bring eight at a time. The Dogs of this race haue a propertie with them, that the more they be traueled, the more lustie and fresh they are, yea and the hotter after salt-bitches. They liue ten yeares, and the Bitches twelue. Of other kinds, ye shall haue them continue fifteen yeares, yea and otherwhiles twentie: but they engender not so long, but giue ouer commonly at twelue.

C Cats and Rats of *Inde*, called *Ichneumon*es, in all other respects follow the Nature of Dogs, saue that they liue but six yeares. Conies kindle euery moneth: and albeir they be bagged, yet will they take the bucke againe, and conceiue vpon it, like as the Hares also will doe the same: for as soon as euer they haue kindled, they go to bucke and are present ly sped: and say that the Leuerets or Rabbits lie sucking at them yet wil they be with yong. When they be new kindled, they cannot see.

D Elephants (as we haue already said) neuer bring but one at once, and that commonly is as big as a Calfe a quarter old. Camels goe a whole yeare. After they be 3 yeares old, they are sufficient for to engender: and commonly they come in the spring: and it is a yeare after before they be couered againe. As for Mares, if there be three daies betweene, or but one, after they haue soled, it is thought they may very well be couered againe; yea and they are brought perforce to the stallion for this purpose. It is supposed also, that the shee Asse within seuen daies after, will soonest conceiue. It is a rule, to share and clip a Mares maine, before shee will abide the couering of an Asse, so vile and base a beast: for so long as the haire of her maine is well growne, she is so proud and glorious, that she will not abide the Asse to come neare her. So soone as they be couered and sped, they run full into the South or North-wind, according as they be conceiued either with male or female: a thing that no other beasts besides, doth. And then, suddainly they change their colour; for their haire will be redder, or at leastwise fuller and deeper, what colour soeuer it be. By which signe it is knowne they are with sole, and then they will admit no stallions vnto them, would they neuer so faine. And say, that some of them haue soles running by their sides, they will doe their deed at worke neuertheless: nay when they be with sole, they will labour as well as they did before: in so much, as many times they

* Resembling our English mastiues.

Reale a soling, before their master beware that they are with sole. We haue read in Chr onicles, that *Echecraides* the Thesſalian had a Mare, which euen then when she was gone far with sole, woone the best game in the Olympian race. They that haue sought more narrowly into the secrets of Nature, say, That stone-Horses, Dogs, and Bores, desire the females in a morning: but Mares, Bitches, and Sows make meanes to the male after noone. Mares that are kept within house at rack and manger with hay and prouender, desire to be couered threescore daies before those that goe abroad in the heard. Swine alone of all creatures when they be brimming, froth and some at the mouth. And as for the Bore, if he heare the grunting of a Sow that seekes to be brimmed, ynlesse he may come to her, will forsake his meat, vntill he be leane and poore: and she againe will be so far enraged, that shee will be readie to run vpon a man and all to teare him, especially if his cloths be white. But this rage and woodnesse of hers is asswaged and allayed, only with bathing her share behind with vineger. Some thinke there be certaine meats will prouoke beasts to fleshly lust, namely, Opions giuen in meat to a beast; like as Rocket to a man or woman. Moreouer, it is supposed, that whatsoeuer is made tame, which by kind was wild, the same will not breed, as Geese and Ganders. In like manner, wild Swine & red Deere, if they be tamed; or if they doe, it is very long first: and such only as were brought to hand euen from the time that they were very yong. Finally, this one thing is strange and wonderfull, that all four-footed beasts, saue only the Mare and the Sow, if they find themselves to be with yong, driue the male from them. But the Connie and the Hare alone will conceiue again when they be gone with yong.

CHAP. LXIII.

¶ *The varietie in liuing creatures, as touching their comming into the world.*

Whatsoeuer haue quicke creatures within them, bring the same forth with the head forward. For when the time is come, the yong thing turns about a little before, which otherwise lay streight out at length in the bellie. Four-footed beasts, whiles their dams go with them, lie with their legs stretched along, close vnto their own bellies. An infant whiles it is in the mothers wombe, gathereth round into a ball, and hath his nose lying just betwene his two knees. As for false conceptions or Moone-calues (whereof we spake before) some thinke they are engendered of the womans seed only: namely, when she is not conceiued by a man, but by her selfe: and hereupon it is, that the said conception hath no vitall nor animall life, because it proceeds not of the conjunction of male and female birth. True it is, that it is endued with a certain vegetatiue power, to be nourished and to grow, like as we see intrees and many other plants.

CHAP. LXV.

¶ *The breed of Mice and Rats.*

Of all creatures that bring forth their young perfect, Swine only farrow one Pig and two Pigs at a time, yea, and sometimes a number of them. Also they alone contrarie to the nature of all those that either be whole-hoofed, or clouen-footed in twaine, bring a number of yong ones at one farrow. But about all, Mice and Rats for fruitfulness do passe. And therefore I cannot put off the discourse of them any longer: and yet therein I must follow *Aristotle* for mine Author, and the report withall of the souldiers that serued vnder *Alexander* the great. It is said that they engender by licking, without any other kind of copulation: and that one of them hath brought six-score at a time: also that in Persia there haue been young Mice found with yong, euen in the bellie of the old dam. And some are of opinion, that they will be bagged, if they tast but of a little salt. Why should wee then wonder any more how such multitudes of field-Mice and Rats should come to deuour whole fields of corne? Howbeit, the reason is not yet known, how such numbers of them should al of a sudden consume away & come to nothing. For neither bee they found lying dead about ground, neither can any man come forth and say, that he hath turned vp any one with his spade as he digged in the Winter. The country of Troas is mightily giuen to breed great store of them, insomuch, as they haue forced already the inhabitants to abandon the place and depart. Men say, that the season proper and

A and agreeable for their breeding in such abundance, is a great drought: also, that when they are toward their end, there be little wormes breeding in their heads that kill them. The Mice and Rats of *Aegypt* haue hard haire and prickly like to hedge-hogs. They go likewise vpriight on their hinder feet, and walk as if they were two footed, after the manner of those in the Alps. Moreouer, if beasts of diuers kinds ingender together, they may wel breed yong between them, in case they do agree and jump in the time that the females of both should go with yong. It is commonly thought and belceued, that among foure footed beasts the Lizard hath eggs within her, and deliuereth them at her mouth; but *Aristotle* flatly denieth it. Howbeit they fit not vpon them when they haue so done, as being forgetful where they laid them, so little or no memorie at all haue they. And therefore the yong Lizards of themselves breake forth out of the shell.

CHAP. LXVI.

¶ *Of a Serpent ingendred of the marrow of a mans back bone.*

I Haue heard many a man say, that the marrow of a mans backe bone will breed to a Snake. And well it may so be, for surely there be many secrets in Nature to vs vnknown, and much may come of hidden causes, as we may see euen among foure footed beasts.

CHAP. LXVII.

¶ *Of the Salamander.*

C. AS for example, the Salamander made in fashion of a Lizard, marked with spots like stars; neuer comes abroad and sheweth it selfe but in great shewres: for in faire weather he is not seen. He is of so cold a complexion, that if he do but touch the fire, he wil quench it as presently as if ice were put vnto it. The Salamander casteth vp at the mouth a certaine venomous matter like milke, let it but once touch any bare part of a man or womans body, all the haire will fall off, and the part so touched will change the colour of the skinne to the white morpew.

CHAP. LXVIII.

D ¶ *Of those that breed of others which neuer were ingendred. Also of those that being ingendred, yet breed not.*

SOME creatures there be that breed of those that neuer were ingendred themselves; and yet not according to those naturall means as others which wee haue shewed before; and such also as either the Summer or Spring, or some certain season of the yeare do breed. Among which some ingender not at all, as the Salamander: * for there is no more distinction of sex in them, than in Yeeles, and in all those which neither lay eggs, ne yet bring forth any liuing creature. Oisters likewise and all such creatures as cleaue fast either to rockes or to the shelles, are neither male nor female. As for such as come of themselves, if there be seene in them any distinction of male and female, something verily they ingender betwene them; but an imperfect creature verily it is, and not resembling them: neither doth that generation breed ought any more, as we see the flies that ingender certain little wormes. The experience hereof is better to be obserued in those creatures called Insects: whose nature is hard to be expressed, and yet I haue appointed a severall treatise for them apart. Wherefore I will go forward in the discourse begun already, and namely as touching the sence and vnderstanding of the forenamed Creatures, and then proceed to the rest.

CHAP. LXIX.

¶ *The outward senses of Liuing Creatures.*

F AN excelleth all other Creatures, first in the sence of feeling, and then of tasting: In the rest many beasts go beyond him. For the Eagles haue a clearer eie-sight, the Geires a finer smell; and the Moldwarps, notwithstanding they be covered ouer with earth (so haueie,

beaue, so thick and deafe an element as it is) yet their eare is far better than ours. Moreouer, albeit the voice of all them that speake about ground doth ascend vward still from them, yet heare the: when they talke, yea and if a man chance to speake of them, some hold that they vnderstand their speech, and thereupon do fly from them. A man, who at first lacketh his hearing, wanteth also the vse of his tongue: neither are there any deafe borne, but the same likewise be dumbe. A man would not think, neither is it likely, that the Oysters in the sea do heare, and yet vpon any noyse and sound their manner is to sink down to the bottome. And therefore when as men do fish for them in the sea they are as silent as they may be.

CHAP. LXX.

¶ *A discourse, That fishes both heare and also smell.*

Fishes verily haue no eares, ne yet any holes to serue for hearing; and yet plain it is that they doe heare, as we may daily see in certaine fish ponds and stewes where fishes be kept: for when those that haue the charge of them make a noyse with clapping of their hands, as wild as they be otherwise, they shall haue them come in great flocks to take their meat that is thrown in to them: and this are they wont to do daily: and that which more is, in *Casars* Fish-pooles a man may see whole skuls of fishes to repaire at their call: yea, and some wil part from the rest of their company, and come alone to land when they be named. Hereupon it is, that the Mullet, sea-Pike, Stock-fish, and Chronius, are thought to heare best of all others, and therefore liue very ebbe among the shelues and shallows. That fishes haue the sence of smelling it is manifest: for they are not all taken ne yet delighted with one kinde of bait: and this is obserued, that before they bite they will smell to it. Some also there be that lie in holes vnder rocks, and no sooner hath the fisher besneared and anointed the mouth and sides of the said rocks in the very entrance to their holes, but he shall see them come forth, as it were to auoid the sent of their own carion. Let them lie in the very deep, yet wil they resort to certain odors and smells, namely, to the Cuttill burnt, and the Polype, which for that purpose they vse to put into their nests. And verily they cannot abide the smell of the sinke and pumpe of a ship, neither wil they come neere vnto it: but about all things they may not away with the bloud of fish. The Pourcuttle hardly or not at all can be pulled from the rocks, so fast cleaueth he: howbeit come neer him with the herb Marjerome or Savorie, he will presently leape from the rocke and away, to auoid the sent thereof. Purples also be caught by means of some sinking bait. And for other creatures, who doubteth but they haue a perfect smell? Serpents are chased away with the sinell and perfume of the Harts horn; but about all, with the odor of Styax. And Pismires are killed with the very fume of Origon, Quick-lime, or Brimstone. Gnats loue all four things, and willingly will thither: but to any sweet meats they come not neare.

CHAP. LXXI.

¶ *That the sence of feeling is common to all lining creatures.*

There is not a lining creature throughout the world but hath the sence of feeling, though it haue none els: for euen oysters and earth-wormes, if a man touch them doe evidently feele. I would think also that there is none but tasteth as well as feelles. For what should the reason esse be, but some desire to tast this, others that? And verily herein is seene about all the singular workmanthip of Nature, in the frame of their bodies and the members thereof. Some ye shall haue to seise vpon their prey with their teeth, others snatch it with their talons and claws: some peck and pluck it with their hookt bills, others pudder into their food with their broad nebs. Some with the sharp point of their beaks worke holes into their meat; others lie sucking at it. Some lick, others sup in: to conclude, some chew, others swallow and deuoure whole as it is. As touching their feet, there is no lesse varietie in the vse thereof: in snatching and carrying away, in tearing and plucking a pieces, in holding fast, and in crushing their prey. Some ye shall haue to hang by their feet, and others neuer lin scraping and scratching the earth.

CHAP.

CHAP. LXXII.

¶ *What creatures liue of poison, and what of earth.*

ROE Bucks and Does, yea, and Quales (as we haue said before) will feede fat with poisons; and yet they are the most meeke and gentle creatures liuing. Serpents haue a great desire and loue to eggs, wherein the subtilty of Dragons is worthy to be considered. For either they swallow them downe whole (if their throat will receiue them) and after they be within their body, breake and squeeze them in pieces with rolling and winding themselves round together, and then cast vp the shels againe: or if they be but young ones yet, and not so strong as to gobble vp whole eggs, then they will winde about an egge with their taile by little and little, & bind it so hard, that the will cut off the crowne of it, as it were with a knife, and then sup off the rest which they clasp and hold fast between. In like manner deale they with birds. For swallow they will them whole downe the gullet, and afterwards straine and struggle so with themselves untill they disgorge againe the feathers and bones that were in their bellies.

Scorpions feede vpon earth. And Serpents againe, if they may come hand somly to wine, will make means to drinke their fill of it, how soeuer otherwise they haue but little need of any drinke. They eat no meat at all, or very little, when they be kept close within any thing: like as the spiders also, which otherwise naturally liue by sucking. And therefore you shall not lightly see any venomous creature die either of hunger or thirst. For neither haue they store of heat, nor plenty of bloud, ne yet of sweat: all which naturally prouoke a stomack, & giue an edge to appetite. And among these venomous creatures, those be euer more dangerous which haue eaten some of their own kind, before they bite or sting. Apes, Monkies, and Marmosets bestow and treasure vp the meat that is giuen them, or that they can come by, within their cheeks, as in a store-house. And when they be hungry, they get the same forth by little and little with their hands, & so sal to chew it. Thus practise they in making their prouision, for to serue them from day to day, and from one houre to another: which Pismires vsually do from yeare to yeare.

CHAP. LXXIII.

¶ *The meat and drinke of some creatures.*

OF all lining creatures that haue many toes in their feet, the Hare alone feeds vpon grasse and greene corae in the blade. As for those that be whole hoofed, they liue both of the blade, and also of the fruit thereof. Also of such as be clouen footed, Swine will eat all kind of food, yea, and liue of very roots. It is the property of whole hoofed beasts alone, to wallow and turn ouer and ouer. All that haue teeth indented in like saws, be naturally deuourers of flesh. Bears will feede of corn, brouse trees, eat grapes, liue of apples and other fruits, feede vpon bees, crefishes, and pismires. Wolues (as we said before) if they be very hungry, eat earth: sheep feede the better & grow fat, if they may drinke; and therefore salt is very good for them, because it makes them thirsty. Draught beasts, and such as are vsed for carriage, albeit they liue of corne and grasse, yet according to their drinke they do feed. Besides those mentioned hertofore, of wild beasts the red and fallow Deere both, doe chew cud when they be made tame and fed by hand: but all chuse rather in so doing, to lie than to stand, & in winter more than in summer, for seven months ordinarily. The rats and mice in the country of Pontus, namely, Hermins, & such like, after the same manner do chew cud and go ouer their meat again. What beasts soeuer are toothed like saw teeth, lap as they drinke. So do also our common mice and rats, although they be of another kind, and are not so toothed. They that haue broad teeth, plaine, and vniforme, as horses and kine, drinke supping and taking their full draught. Bears in their drinke do neither the one nor the other, but bite at the water and so let it down. In Affrick the more part of wild beasts drinke not all summer long, for want of raine water: which is the cause that the Rats and Mice of Ginnie which be taken if they drinke afterwards vpon so long disuse, die therewith. In the deserts of Affrick, where there is no water euer to be had, there is ingendred a certain wilde goat named Oryx, which as by the nature of the place it wanteth drinke, so it hath in her bodie a fouerain and singular remedy against drought and thirst. Which the common theues & robbers by the high way side in Getulia, knowing well enough, endure a long time with the helpe thereof.

thereof without drinke, for they vse to stanch and quench their own thirst, with a certain moist holefome liquour found in the bladders of the said beast. In the same Affricke the Leopards lie in await among the thickets of trees, hidden within the branches; and so seize vpon them that passe by, and make spoile euen from the place where fouls vse to perch. As for Cats, marke I pray you how silent they be, how soft they tread when they steale vpon the silly birds: how secret lie they in espiall for the poore little mice to leap vpon them. Their owne dounge and excrements they will rake vp and hide in the earth, knowing full well, that the smell thereof will bewray where they are.

CHAP. LXXIII.

¶ What beasts accord together, and which they be that disagree one from another.

H

Besides these outward fences abouenamed, euident it is also, that brute beasts haue other instincts of nature. For they entertain friendship and enmity one with another (which cannot be without affection and passion) ouer and besides those other wars and amities which wee haue obserued in their seuerall places. Swans and Eagles jar and war one with another: so doth the Rauens and the Witwall or Lorio, which seeke after one anothers eggs in the night. Likewise the Rauens and Kite: for the Rauens is euermore ready to catch the Kites meat from him. Crows and Owles are at mortall feud one with another. The roiall Eagle hateth the Wren, and why? because (if we may beleue it) he is named Regulus (i. the pettie king.) Howlets also cannot agree with other little birds. Again, foules make warre with foure-footed beasts. The Weasell and the Crow be at deadly debate. The Turtle with the Creckit (Pyralis) that liueth about the fire. The Ichneumons with Wasps: the Phalangia with other Spiders. And among water foules, Ducks and Drakes with the sea-gulls. The Seamews with the Buzzard Triorchis. As for the field Rats or Mice, and the dwarf-Herons, they seeke to prey one vpon the others little ones. The bird Egithus (the least in maner of all others) waiteth the Asse a shrewd turn; for when he rubbeth himself against the bushes to scratch where it itcheth, he therewith breaketh and ouerthroweth her nest; and therefore this silly bird is so much afraid of the Asse, that if she heare him but bray, she is ready to throw the eggs out of her nest, and those that be already hatched, will for very feare fall downe: then in reuenge of this wrong, she will flie vpon him, and with her bill peck where the skin is off and raw with rubbing, yea, and make holes euen to the very bone. Moreover, Foxes and the Yeoles of Nilus cannot abide one another, but are in continuall war. So be Wezils and Swine. There is an vnhappy bird called Esalon, and but little withall; yet will she squash and breake the Rauens eggs. And when she hath yong ones, they bee much troubled and annoied with Foxes: she again to be quit with them, will all to pinch & nip both the Fox and her cubs. The Rauens seeing that, come to aid (as it were) against a common enemy. The Gold-finch liueth among bushes and thorns, and therefore she also hates the Asse, because he eateth vp the floures that grow therupon. The bird Egithus, so far hateth another called Anthus, that men are verily persuaded the bloud of them both will not mingle together: and hereupon it is, that the forcerers and witches haue brought it into an ill name. The Thoes and the Lions do fouly jarre and disagree. In summe, the least creatures as well as the biggest quarrell and fight one with another. Rats and field Mice cannot abide to comeneere a tree that is full of Ant-nests. The Spider espying a Serpent lying along vnder the shade of a tree where she spinneth, slideth down vpon a fine thred to the head of the Serpent, and stingeth him so deep into the braine, that he falleth a hissing and grinding his teeth: he keepeth a winding and turning about, but hath not the power to breake the thred that hangeth aboue, ne yet to fly from the Spider: infomuch, as the Serpent lieth there dead in the place. Contrariwise, Peacocks and Houfe-doues be as friendly one to another: so be the Turtles and Popinjaies, the Merles and Turtles likewise. The Crow and the lesse Bitours also: for they ioine and band together against the common enemy the Fox. Likewise, the bird-Harpe and the Kite against the Buzzard. What will ye say? be there not tokens of affection euen in Serpents, the cruelllest and fellest creatures of all others in the world? I haue written already of the report or tale that goeth in Arcadia of a man, whose life was saued by a Dragon (that was brought vp by him) so soon as euer he knew him by his voice. As for the Aspis, Philarchus telleth a strange history of it.

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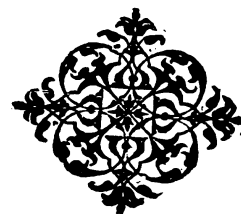
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A it. For he writeth, that in Egypt there was an Aspis vsed ordinarily to come to the table of a certaine Egyptian, and there tooke meat at his hand: which Serpent afterwards had yong ones, whereof one chanced to sting a son of the master of the house, that he died of it. Now when the dam (the old Aspis) came accordingly at the accustomed houre of repast for viuals, and perceived the deed committed by her little one, not onely killed it in satisfaction of the former fact, but also forbore the house, and was neuer knowne to repaire thither againe.

CHAP. LXXV.

¶ The sleepe of liuing creatures.

THE question, Whether liuing creatures sleep or no? is not very difficult, but soon decided: For plain it is, that of land creatures, all that winke and close their eies doe sleepe. As for those in the water, that they also sleepe (though but a little) euen they are of opinion who otherwise make doubt of the rest. And this they do not collect & gather by their eies (for lids they haue none to shut) but because they are seene to lie so still and quiet, as fast and sound asleep, stirring no part, but a little wagging their tailles, and seeming to start and bee affright at any sudden noise made in the water. As for the Tunnies, we may auouch more confidently of their repose: for they come of purpose to sleep vnder the banks or rocks. And flat broad fishes lie so still sleeping among the shelues, that oftentimes a man may take them vp with his hand. The Dolphins and Whales be heard to rout and snort again, they sleepe so soundly. Moreover, as touching Insects, no man need to doubt that they sleep, so quietly do they lie and make no noise: nay, if you bring a candle or other light, and set it euen before their eies; you shall not haue them to awake nor moue. An infant after it is borne, sleepeth for certaine moneths at the first, and in manner doth nothing els. But the elder hee waxeth, wakefull is he euery day more than other. Babes at the very beginning do dreame. For they will waken and start suddenly in a fright, and as they lie asleep, keep a sucking of their lips, as if it were at the breast heads. Some neuer dream at all. And if such chance contrary to this custome, for to dreame once, it hath bin counted for a signe of death, as we haue seene and prooued by many examples and experiments. And here in this place there offereth it selfe a great question, and very disputable *pro & contra*, grounded vpon many experiments of both sides: namely, whether the soule of man while the body is at rest, foreseeeth things to come: and how it should so do: or whether this be a thing of meere chance and altogether coniecturall, as many others be? And surely if we go by histories, we may find as many of the one side as the other. Howbeit all men in manner agree in this, That dreames either immediatly vpon drinking wine and full stomacke, or els after the first sleep, are vaine and of no effect. As for sleep it is nothing els but a retreat and withdrawing of the soule into the mids of it selfe. Euident it is, that Horses, Dogs, Kine, Oxen, sheep, and goats do dreame. Whereupon it is credibly also thought, that all creatures which bring forth their yong quick and liuing, do the same. As for those that lay egges, it is not so certaine that they dreame: but resolued it is, that they all do sleep. Now let vs passe and proceed to the treatise of Insects.





THE ELEVENTH BOOKE OF THE HISTORIE OF NATVRE, WRITTEN BY C. PLINIVS SECVNDVS.

The Proeme.

IT remaineth now to write of those liuing creatures, which are the most subtil of all others that Nature hath brought forth: forasmuch as some are of opinion, That they breath not, yet haue any bloud at all.

CHAP. I.

¶ Of Insects in generall.

MAny and sundry sorts there be of Insects, as well among land creatures as those that fly in the aire. Some are winged, as bees: some haue partly wings and partly feet, as Pismires: others want both, and neither flie nor go on their feet. And wel may they all be called *Insecta*: by reason of those cuts and diuisions, which some haue about the necke; others in the breast and belly; the which do go round and part the members of the body, hanging together onely by a little pipe and fistulous conueiance. There be of them, that haue not the body diuided entire, one part from the other by these incisures, cuts, and wrinkles; but they appeare only either vnder the belly, or vpon the backe aboue, and go no deeper, neither yet round the whole compasse of the body. But a man shall perceiue in them certaine rings or circles, apt to bend and wind to and fro, and those so plated and plaited one ouer another, that in nothing elswhere is more seen the workmanship of Nature, than in the artificiall composition of these little bodies.

CHAP. II.

¶ The industrie and subtiltie of Nature in framing these Insects.

IN boddes of any bignes, or at least-wise in those of the greater sort, Nature had no hard piece of work to procreate, forme, and bring all parts to perfection; by reason that the matter whereof they be wrought, is pliable and will follow as she would haue it. But in these so little bodies (nay pricks and specks rather than bodies indeed) how can one comprehend the reason, the power, and the inexplicable perfection that Nature hath therein shewed? How hath she bestowed all the five senses in a Gnat? and yet some there be, lesse creatures than they. But (I say) where hath she made the feat of her eyes to see before it? where hath she set & disposed the tast? where hath she placed and inserted the instrument and organ of smelling? and aboue all, where hath she disposed that dreadful and terrible noise that it maketh, that wonderfull great sound (I say) in proportion of so little a body? can there be deuised a thing more finely & cunningly wrought than the wings set to her body? Marke what long-shanked legs aboue ordinary she hath giuen vnto them. See how she hath set that hungry hollow concauitie in stead of a belly: & hath made the same so thirstie and greedy after bloud, and mans especially. Come to the weapon that it hath to pricke, pierce, and enter through the skinne; how artificially hath shee pointed and sharpened it? and being so little as it is (as hardly the fineness thereof cannot be seen) yet as if it were of bignesse & capacity answerable, framed it she hath most cunningly for a twofold vse: to wit, most sharpe pointed, to pricke and enter; and withall, hollow like a pipe for to sucke in and

Plinies Naturall History.

A and conuey the bloud through it. Come to the Wood-worme, what manner of teeth hath Nature giuen it, to bore holes and eat into the very heart of hard Oke? who heareth not the sound that she makes while she is at her work? For in wood and timber is in manner all her feeding. We make a wonder at the monstrous and mighty shoulders of Elephants, able to carry turrets vpon them. We maruell at the strong and stiffe necks of buls, and to see how terribly they will take vp things and tosse them aloft into the aire with their hornes. We keepe a wondering at the rauening of Tygres, and in the shag manes of Lions: and yet in comparison of these Insects there is nothing wherein Nature and her whole power is more seene, neither sheweth she her might more than in the least creatures of all. I would request therefore the Readers, that in perusing this treatise, they will not come with a preiudicate opinion, nor (because many of these silly flies and wormes be contemptible in their eyes) disdain, loath, and contemne the reports that I shall make thereof; seeing there is nothing either in Natures workes that may seeme superfluous, or in her order vnworthy our speculation.

CHAP. III.

¶ Whether Insects do breath, and whether they haue bloud or no?

DIuers haue denied that they breath at all; and vpon this reason they ground their position: Because they haue no arterie or wind-pipe annexed or reaching to any instrument within of respiration. And they be of opinion, that they liue indeed as plants, herbes, and trees: howbeit (say they) there is a great difference betwene hauing life, and drawing wind or vitall breath. And by the same rule they affirme, that they haue no bloud, which is in none that bee without heart and liuer. Neither do any things breath which want lungs. And from hence arise a world of other questions thereupon depending. For the same men deny flatly, that these creatures haue any voice: notwithstanding so great humming of bees, & singing sound of grasshoppers, and such other, whereof we will consider in due time & place, accordingly. Verily for mine owne part, the more I looke into Natures workes, the sooner am I induced to beleue of her euen those things that seem incredible. Neither do I see any inconvenience to thinke, that these Insects may as well draw wind and breath without lungs, as liue without such noble and principall parts as are requisite for life in other creatures: according as we haue already shewed in the discourse of fishes and such like, that liue in the sea; how soeuer the quantitie, depth, and heights of the water, may seeme to impeach and stop their breath. For who would easily beleue, that some creatures should flie at libertie, and liuing as they do in the mids of wind and aire, yet want wind and breath themselves? that they should haue a sense and care to seek their liuing, to engender, to worke, and to forecast for the time to come: and howbeit they haue no distinct members, to carry (as it were in a ship) their seuerall senses, yet that they should heare, smell, and taste, yea and be indued with other singular gifts besides of Nature, to wit, wisdom, courage, skill, and industrie. Indeed, confesse I must, that bloud they haue none: no more haue all creatures that liue vpon the land: howbeit a moist humor they haue, somewhat like vnto bloud, which serues them in stead thereof. Like as in Cuttels of the sea, there is found a certain blacke liquor in stead of bloud: and in all the sort of Purples and such shel fishes, that excellent iuice which staineth & dieth so as it doth. Semblably in these Insects, whatsoeuer humor it is, whereby they liue, the same may well enough go for bloud and so be called: all the while that euery man hath liberty to giue it what name he thinketh fittest. As for me, my purpose is not to judge and determine of these doubtfull quilllets, and their causes; but to set down and shew the nature of such things as be cleare and apparent.

CHAP. IIII.

¶ The substance of the body in these Insects.

THese Insects, so far as a man may perceiue, seeme not to haue either sinewes or bones, no chine nor gristle, no fat, no flesh, ne yet so much as a tender and brittle shell, as some Sea-fishes haue, nor that which may be truly called a skin, but a certain corporal substance of a middle nature between all these: for their body without, is like a dry thing, and yet more tender and soft than a sinew: whereas in all other parts the matter is to be accounted rather drie than

than hard. This is the very substance whereof they consist, and nothing haue they besides. For within there is nought, vnlesse it be in some very few, who haue a certaine pipe or conduit in stead of a gut, & the same wrapped and infolded together. Which is the cause, that if they be cut in two and pulled in pieces, yet they haue a speciall property to liue long, and each part asunder wil pant & stir by it selfe. The reason is, because the vitall vertue in them (whatsoeuer it is) is not seated in any one member, this or that, but spread and defused throughout the whole body, and least apparent in the head, of all other parts: for, that alone, vnlesse it be plucked away together with the breast, moueth not one jot. No kind of creatures haue more feet than these: and the more they haue, the longer liue they when they be diuided asunder; as we see by experience in the Scolopendres. Eies they haue, that is certain; & besides sight, they are not without the senses of feeling & tasting: some there be that smell, & a few that haue their hearing also. H

CHAP. V.

¶ Of Bees.

But among them all, Bees are principall, and by good right deserue especiall admiration, as being the only Insects ordained by Nature for mans vse. They gather hony, a most sweet, pleasant, fine, and wholefome liquor. They frame the hony combs, and work the wax, which serue for a thousand turns in this life. They indure pains continually, and dispatch their worke and businesse. They haue a policie and Commonwealth among themselves. They hold their seuerall counsels: and there is not a swarme or cast that they haue, without a king and captain of their owne: and that which is most admirable of all, there be ciuill fashions and customes among them. Moreouer, being as they are, neither tame and gentle, nor yet to be counted wilde and sauage, yet (see the wondrous worke of Nature!) by the means of so little a creature, nay, a shadow rather (to say a truth) of the least creature, she hath effected a thing incomparable: what strength of sinewes, what force and puissance is able to countervail this so great industry and effectual power of theirs? What wit and policy of man is answerable to their discret and orderly course? Beleue me, they passe them all, and in this one point surpasse, That all things are common among them, and nothing know they priuie and seuerall. What should we debate and make question any more as touching their breath? Why should wee dispute of their blood, which cannot chuse but be very little, in such smal bodies? Let vs rather consider henceforth their wit, and the gifts of their mind. K

CHAP. VI.

¶ The naturall order and regiment that is in Bees.

Bees all winter time keep close within their hives: and good reason; for how possibly should they indure hard frost and chilling snow? how should they abide the piercing blasts of the North winds? And verily it is the manner of all these Insects so to doe, but yet they keepe not in so long. For why? being nestled warm as they are within our houses, they sooner doe recover their vigor, & come abroad betimes. But as concerning Bees, either the times haue changed, & places altered their course, or els the writers beforetime of this argument haue greatly erred; They begin to retire themselves and take vp their wintering harbor, presently vpon the setting and occultation of the star Vergiliæ; and come not forth into the field againe, vntill after the rising and apparition thereof. So that Bees go not abroad at the very beginning of the Spring, as Writers haue set downe (for who seeth nor the contrary throughout all Italie) but remaine still close and secret, vntill that Beanes begin to bloom; before which time they scit not themselves to any worke or labour. But from thence forward, they lose not a day, they slack not their painful trauel, neither play they one jot, if the weather be faire & wil permit: the first thing they do, is to make their combs & wax, that is to say, their own habitations & store-houses. When they are prouided of lodging, they thinke vpon the multiplying of their owne kind: and finally, they gather and make both hony and wax: the substance whereof they sucke from the floures of trees and hearbes, from the gums also of trees which breed such gluiematter, and besides, out of the iuice, gum, and rosin of the willow, elme, and cane. With these and such like, they plaister all the hie within throughout, as it were with a coat or parget, intermingling

A gling withall other iuices that are more vnfauorie, gathered from the bitterest hearbs they can get: to the end that they might keepe out other little vermines that are greedy of their hony: as knowing full well, that they are about a peece of worke which is worthie to be desired and sought after. Of this gummy and glutinous substance they frame also their dores and entrie which are wide and large.

CHAP. VII.

¶ The proper termes belonging to their worke.

The first foundation of their worke, skilfull hony-masters do call Commosis: the second Pissoceros: the third Propolis, which lieth between those former coats and the wax of the hony-combe, whereof there is so great vse in Physicke. Commosis is the first coat or crust of a bitter tast. Pissoceros commeth next after it, as it were a thinner course of pitch or varnish and a weaker kinde of wax, made of the more liquid and mild gum of vines and poplars. But Propolis consisteth of a more solid matter, as hauing the strength of some floures withall: howbeit, as yet it is no ful and perfect wax, but the foundation and strengthening of the combs: and serueth as a good defence against cold, and to stop the passage of waspes and such hurtful creatures as would do iniurie to the bees, for stila strong sent it carrieth, as which, many men do vse in stead of Galbanum. After this munition done, then followeth the prouision of that which is called Erithace, some terme it Sandaracha, and others, Cerinthus. This must serue for the bees meat, whereof they are to liue whiles they worke: and found it is oftentimes, laid apart within the concavities of their combs, it being also of a bitter taste. Now this Erithace commeth of the * Spring-dew, and the moisture issuing out of trees in manner of gum: in lesse abundance euer, when the South-west wind blows: but when it is full South, more blacke: and in the Northerly constitution, far better and more red withall. Great store hereof, Bees meet with vpon Almond trees. Menecrates saith, That it is a floure foreshewing what haruest shall issue: * but no man saith so besides him.

* Rore vltra
or Sea-dew,
Rore marino,

* Being decel-
ued with the
Homonymie
of the word
Cerinthus,
which hath a
double signi-
fication.

CHAP. VIII.

¶ What flowers they be which Bees serue themselves most withall for their worke.

As for wax, Bees gather and make it of the floures of all trees, herbs, and plants, sauing the docke and * Goose-foot, which are two kinds of herbs. Some except also a kind of Broom called Spart, but vntuly: for in Spaine (where there be many places full of that shrub) the hony carrieth the strength thereof in the taste. I am besides of opinion, that they be deceived who thinke that bees gather not of Oliue trees. For we see it ordinary, that there be more casts and swarmes of Bees where Oliues grow in greater abundance. These pretty creatures hurt no fruit whatsoeuer. They will not settle vpon a floure that is faded, and much lesse of any dead carkasse. They vse not to go from their hie about their busines about 60 paces: & if it chance, that within the precinct of these limits they finde not floures sufficient: out goe their spies, whom they send forth to discover forage farther off. If in this expedition, before they come home againe, they be overtaken by the night, they couch vpon their backs for feare lest their wings should be overcharged with the euening dew, and so they watch all night vntill the morning.

* Chenopodq

CHAP. IX.

¶ Those that haue taken a speciall pleasure in Bees.

Such is the industrie of this creature, that no man need to wonder at those two persons who delighted so much in them, that the one (namely Aristomachus of Soli) for threescore yeares lacking but twaine, did nothing else but keep bees. and Philiscus the Thasian employed the whole time of his life in Forrests and Desarts, to follow these little animals: whereupon hee was surnamed Agrius. And both these vpon their knowledge and experience, wrote of Bees.

Ec

CHAP;

¶ *The order that they keepe in their worke.*

THe manner of their businesse is this. All the day time they haue a standing watch & ward at their gates, much like to the *corps de guard* in a campe. In the night they rest vntill the morning: by which time, one of them awaketh and raiseth all the rest with two or three big hums or buzzes that it giues, to warn them as it were with sound of trumpet. At which signall giuen, the whole troupe prepares to flie forth, if it be a faire and calme day toward, for they doe both foresee, and also foresee when it will bee either windie or rainie, and then will they keepe within their strength and fort. Now when the weather is temperate (which they foreknow well enough) and that the whole armie is on foot and marched abroad, some gather together the vertue of the floures within their feet and legges: others fill their gorge with water, and charge the downe of their whole body with drops of such liquor. The yonger sort of them go forth to worke, and carry such stuffe as is beforenamed, whiles the elder labor & build within the hieue. Such as carry the floures abovesaid, stuffe the inner parts of their legs behind (and those Nature for that purpose hath made rough) with the help of their forefeet: & those again are charged full by the means of their muffle. Thus being full laden with their prouision, they return home to the hieue, drawne euen together round as it were in a heap, with their burden: by which time, there be three or foure ready to receiue them, and those ease and discharge them of their lode. For this you must thinke, that they haue their seuerall offices within. Some are busie in building, others in plaistering and ouercasting, to make all smooth and fine: some be at hand to serue the workemen with stuffe that they need: others are occupied in getting ready meat and victuals out of that prouision which is brought in: for they feed not by themselves, but take their repast together, because they should both labour and eat alike, and at the same houre. As touching the maner of their building, they begin first aboue to make arch-work embowed, in their combs, and draw the frame of their work downward, where they make two little allies for euery arch or vault, the one to enter in by, the other to go forth at. The combs that are fastened together in the vpper part, yea and on the sides, are vnited a little, and hang all together. They touch not the hieue at all, nor ioine to it. Sometime they are built round, otherwhiles winding bias, according to the proportion of the hieue. A man shall find in one hieue hony combs sometime of two sorts: namely, when two swarms of bees accord together: and yet each one haue their rites and fashions by themselves. For feare lest their combs of wax should be ready to fall, they vphold them with partition wals, arched hollow from the bottom vpward, to the end that they might haue passage euery way to repaire them. The foremost ranks of their combs in the forefront, commonly are built void and with nothing in them, because they should giue no occasion for a theefe to enter vpon their labours. Those in the backe part of the hieue, are euer full of hony: and therefore when men would take out any combs, they turne vp the hieues behind. Bees that are employed in carrying of hony, chuse alwaies to haue the wind with them, if they can. If haply there do arise a tempest or a storm whiles they be abroad, they catch vp some little stony greet to ballance and poise themselves against the wind. Some say, that they take it and lay it vpon their shoulders. And withall, they flie low by the ground vnder the wind when it is against them, and keepe along the bushes, to breake the force thereof. A wonder it is to see and obserue the manner of their worke. They mark and note the slow-backs, they chastise them anon, yea, and afterwards punish them with death. No lesse wonderful also it is to consider how neat and clean they be. All filth and trumperie they remove out of the way: no foule thing, no ordure lieth in the hieue to hinder their businesse. As for the dounge and excrements of such as are working within, they be laid all on a heap in some by-corner, because they should not goe far from their worke: and in foule weather (when otherwise they haue nought to do) they turn it forth. Toward euening, their noise beginneth to slacke and grow lesse and lesse: vntill such time as one of them flieeth about with the same loud humming, wherewith she waked them in the morning, and thereby giueth a signal (as it were) and commandement for to go to rest: much after the order in a campe. And then of a sudden they are all husht and silent.

¶ *Of the drone Bees.*

THe houses and habitations that Bees build first, are for the Commons: which being finished, they set in hand with a pallace for their king. If they foresee that it will be a good season, and that they are like to gather store of prouision, they make pavilions also for the Drones. And albeit they be of themselves bigger than the very bees, yet take they vp the least lodgings. Now these drones be without any sting at all, as one would say vnperfect bees, & the last fruit of such old ones as are weary and able to do no more good; the very later brood & increase, and to say a truth, no better than slaues to the right bees indeed. And therefore the others as master Bees ouer them, haue them at their commandment: if any drudgery or such like businesse is to be don, out are they sent first: make they but slow haft in that they are set about, sure they are to pay for it, and to be punished without mercy. And not only in their ordinarie worke they serue them in good stead, but also they help them to multiply: for the hotter that the place is, the more hope there is of a greater increase. Certes, this is found by experience, That the better the hieue is peopled with a number of bees, the Cast when time comes will bee the greater, and the oftner will they swarme. But after the hony is growing once to maturity and perfection, then begin they to driue these drones out of doores: nay, ye shall haue many bees set vpon one poore drone, and kill him out-right. So that a man shall not lightly see any of that kind but in the Spring time.

If one pluck off the wings from a drone, and put him again within the hieue, he will neuer lin vntill he haue done the like by all the rest of the same kind. As touching the roiall pallsaces for the kings and captaines that shall be, built they are all most stately, great of receit, in shew magnificent, seated by themselves apart, and like citadels raised vpon some high knap or tuft of a mountaine. If one of these castles chance to be pressed or crushed, there will no more come of that princely race. All the lodgings and roomes where the bees abode is, are six cornered, according to the number of feet employed in that worke. None of all this is done at any set time or day appointed: but they take the opportunity when they can espie faire weather to fit their businesse, and so do these things by snatches. And surely within a day or two at the most, they fill their store-houses with honic.

¶ *The Nature of Hony.*

THis pleasant and sweet liquor which we call hony, is ingendered naturally in the aire, and especially by the influence and rising of some starres: but principally during the seruent heat of the canicular daies, euen when the Dog-star is in his full power and force: neuer before the appearing of the star Virgilie, but alwaies before day. For so about the day breake betimes in the morning, the leaues of trees are found bedewed with hony: and looke whosoever they are, that haue occasion to be abroad in the aire about the dawning of the morrow, they may euidently perceiue their cloths wet with a clammy humor of hony, yea, & their hairs glewed therewith together, if they go bare headed. Be it what it will, either a certaine sweat of the skie, or some vnctuous gelly proceeding from the stars, or rather a liquor purged from the aire when it purifieth it selfe, would God we had it so pure, so cleare, and so naturall, and in the own kind refined, as when it descendeth first, whether it be from skie, from star, or from the aire. For euen now such as it is, passing as it were through so many hands: namely, falling from a region so high and remote from vs, and in the way as it commeth catching much filth: and namely, infected with the grosse vapour of the earth which it meeteth in the fall: moreover, sucked and drunke (as it is) by the Bees from the leaues of trees and grasse, and so gathered and laid vp in their little bellies or bladders (for at their mouth they spew and cast it vp again: corrupted also and sophisticated with other humors drawn out of floures: finally, so long soking within the hieues, and suffering so many alterations: yet for all the sorrow, a great resemblance it carrieth still with it of a most pleasant, sweet, and celestiall liquor.

CHAP. XIII.

¶ The best kinde of Honie.

THe best hony is euer there, where the best floures are, within the receptacles whereof, it lieth. As we may see in the country about Athens, which carrieth the name for honey: also in Sicilie within those territories about Hymettus and Hybla: and lastly, in the Isle Calydna. Now this hony, whereof we treat, is at the first cleare and thin as water; and for certaine daies in the beginning, it workes and boiles like to new wine, and so purgeth it selfe. By the 20 day it getteth a certaine consistence and thicke substance, and soon after gathers a thin cream or skin ouer it: which in the very heat of working, is raised of a scum, and so thickneth. The best simply that bees can sucke, and least infected with the corruption of 3 branches, is that which they get out of the leaues of Oke, Tilia [i. Linden tree] and Canes.

CHAP. XIII.

¶ The sundry sorts of hony, according to diuers regions.

Honie (as we said before) is better or worse, according to the region where it is gathered; and that in many respects. For in some place ye shall haue goodly combs: howbeit, more commendable for wax than the hony in them: as in the Pelignians country, and Sicily. In others, and namely in Candie, Cypres, and Africk, the combs yeeld more hony than wax. Some countries there be, especially in the North parts, where the combs passe for bignesse: in so much as in Germany there hath bin a hony-combe seene eight foot long, and blacke all within. But in what region soeuer it be that hony is found, three kinds there be of it. First, the Spring hony made of floures only, like as the comb also: and thereupon the Greeks call it Anthinon, which is as much to say as the Floure-hony. Some would not haue this to be once touched, but to serue for nourishment of the young bees, that the swarms or casts may be more strong and lustie. Others againe leaue for the bees of none lesse than of it: by reason of the great plenty like to follow, at the rising of those notable stars in the Summer ensuing. Moreover, the combs are in their principall beauty about the Sun-stead in summer, when daies be longest, at what time as the Vine and Time do begin to floure. Also, in taking forth of the hony combs, needfull it is to be well aduised in ordering the matter for the prouision of food for bees. If they be cut short and destitute of their meat, they either despaire and die for want, or els depart and flie away. Contrariwise, if you leaue them too much, plenty breeds idlenesse, that they will not labour: neither deigne they to feed of Erithace, their ordinarie food, but fall to the good hony. They therefore that be well experienced in these matters, thinke it good to leaue them the twelfth part of this store and vintage, if I may so say, which is gathered in the combs. And verily, it seemeth that Nature hath ordained a certaine set day for to begin this vintage, if men would take knowledge thereof, and marke it well; namely, the 30 day, after the bees swarmed and went forth: and usually it falleth out, that this gathering commeth within the moneth of May. A second kind of hony there is, which we call Summer hony, and is named also Horæum, of that principall season wherein it is made, namely, in the very midst of dog-daies, when the star Sirius is in his full strength: and that commonly is 30 daies after the Sun-stead. And I assure you, Nature hath shewed her admirable and excellent power to men ward in this behalfe: in case their fraud and deceit would suffer her works in their entire and proper nature without corruption and sophistication, which marreth all, and maketh nothing but confusion. For vpon the rising and apparition of any star, and especially of those that be more excellent than the rest, or after that a rainbow is seen about the earth, and no showers of rain presently follow, but a drizzling dew warmed with the raies and beams of the Sun: ye shall haue that which falleth, not to be bare hony, but a very medicinable thing, euen a celestiall gift, singular good for eies and vicers, yea, and comfortable to the principall noble parts within the body. And if this happen to be at the rising of the dog-star, and it chance withall, that vpon the same day (as oftentimes it falleth out) Venus, Iupiter, or Mercury bee Orientall, then shall yee haue so heavenly a sweet liquor, that no one thing in the World may bee comparable to it for the curing of all our maladies, and euen to reduce and recouer vs backe from death vnto life, like vnto that celestiall

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CHAP. XV.

¶ The markes of good hony.

More plenty of hony is gathered in the full of the Moone, than at any other time: and if therewith the weather be faire, the same wil be more vnctuous and fattie. In all kinds, the best hony is that, which runneth of it selfe as new Wine and Oile; and called it is, Acedon, as a man would say, gotten without care & trauell. All Summer hony is red, as being made in the driest season of the yere. The hony which commeth of Time, is held to be the best and most profitable; in colour like gold, in taste right pleasant; euident to be knowne by the little leaues therein: and the same is likewise fattie. That which is made of Rosemary, or within the aire and vapour of the sea, is thick: and such verily as is thus candied, and will not run like life-hony, is nothing commendable. As for Time hony it will not thicken: and if a man touch it, rope it wil and draw small slimie threads after it: which is a principall signe of the weight and heavinesse thereof. If hony be short in the handling, and soon breake, and that the drops part one from the other, it is thought to be a token of the worst and coursest of all. Another triall there is besides of good hony, namely, if it be fragrant and odoriferous to smell vnto, sweet in taste, & biting withall, or quick at the tongues end, glutinous and cleare. As touching the druing of hiues for summer hony, *Thasius Dionysius* is of opinion, that the tenth part therof should be left for the bees, namely, if they were full: if not, then according to the proportion: but if they were but light and very thin, he would not haue them to be touched at all. The Athenians goe by this rule, and do obserue duly the Caprificial day, which is kept wholly vnto *Vulcan*: for then they euer begin to driue their hiues for this kind of honie.

CHAP. XVI.

¶ Of a third kinde of Honie: and how a man should know good Bees.

THere is a third sort of wild hony, which the Greeks call *Ericurum* [i. Heath or Ling hony] and is of least reckoning. It is gathered after the first rain in Autumne, when the heath and lings only bloom in the woods, wherupon it seems as if it were sandy. This kind of hony is ingendred for the most part after the rising of *Arcturus*, much about the Ides of September. Some there be that continue in gathering Summer hony to the rising of *Arcturus*: betwene which and the Autumne Equinoctial are 14 daies; & from thence vnto the setting of *Virgilie* (namely, for the space of 48 daies) the said heath is most in his blooming time. This shrub the Athenians call *Tetralix*; the Eubœans name it *Sifara*: & they repute it to be a floure most pleasant to bees, haply, because at that time there is no plenty of other floures. This gathering of hony is about the end of vintage, & the occultation of the *Virgilie*: & commonly ends by the Ides of Nouember. In druing of the hiues for this hony, by good reason, two [third] parts therof would be reserued for the bees: & especially those corners of the combs, which haue in them the prouision called *Erithace*. From the mids of winter to the rising of *Arcturus*, for 60 daies bees are nourished only with sleep, without any other food. But from that time vnto the spring equinoctial, and namely, where the weather is more warm, they are awake. Howbeit, they lie still in their hie, & then fall to their victuals which they had laid vp in store against that time: but in Italy they do the like indeed after the rising of the star *Virgilie*: howbeit, till then they do nothing but sleep. And there verily, men vse when they take the hony forth of the hiues, to weigh the combs, and so by weight dispense & set out how much they will leaue them for their food: hauing this opinion, that they are bound to deale in justice & equity euen with the very bees: in so much, as it is commonly said, if they be defrauded of their due in this society & part-taking, and find falshood in fellowship, they wil die for grieve: & so both the old stock will be lost, and the hony also of a new increase. In the first place therefore, this is a rule, that such folk only be set about this businesse to driue the hiues, who are neat & clean. A theefe & a woman whiles she is in her month ly sickness, they abhor. In the taking out of hony, the best means to driue away the bees, is to smoke them out of the hie: lest that you anger them, or that they deuoure the honie themselves with more greedines. Moreover, when they grow to be idle, perfuming & smoking

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of them thus now and then, maketh them more fresh to go about their worke. For when they lie still and doe nothing, they make their combs looke dead and blackish. Again, if they be ouermuch smoked, they will be the worke for it; and surely, the very hony soon catcheth the hurt hereof, for so tender and weake will it be, that with the least dew that is, you shal haue it to turne and wax foure. And therefore in all kinds of hony they obserue and keepe that which is called *Acapnon* [i. without smoke.] The hony gathered of both sorts of Thyme, called thereupon *Bithymum*, is not white: howbeit, very good it is for eyes and to cleanse vlcers.

Now as touching the generation of Bees, and how they multiply and increase, much dispute there hath bin among the learned, and a nice question this is. For first and foremost, bees were neuer seen to ingender one with another: and therefore most men haue bin of opinion, that yong bees must needs be made of floures fitly and hand somely laid together and composed, according to Natures lore. Others say, that one master Bee which is the king in euery swarme, doth beget them all: and that he forsooth is the only male; bigger also than the rest and more strong, because he should not faint and faile in the action: for without such an one, we see there is no breed: and him all the other bees attend vpon, not as their leader and captain, but as the female follow the male. Certes this was a good coniectural opinion, and sounding to a truth, but that the breed of these Drone-bees aforesaid, doth checke and ouerthrow it cleare: for what reason is there that one and the same maner of procreation, should bring forth some perfect & others vnperfect? The former opinion yet might seeme more probable, but for another difficulty and inconuenience that crosseth it too; for otherwhiles in the vtmost edges and sides of the combs, there are seen to breed the bigger kind of bees, which chase and driue the others away: and this vermin is called *Oestrus* [i. the gad-bee or horse flie.] Now if those little wormes or grubs from whence the bees come, were made of floures, which they themselves formed and brought into fashion, how commeth this gad-bee, and whereof is he made? This is certaine, that bees couvy and sit as hens do: and that which is (after a sort) by them hatched, seemeth at the first to be a little white grub or magot, lying crosse ouerthwart the hony, and so fast sticking thereto, as if it seemed to feed thereupon. The king that shall be, at the very first is yellow, and of the colour of hony: as if he were made of the most choise and excellent floure of all the rest: nothing like to a grub as the other, but presently hath wings. The rest of the multitude, when they begin to take some shape, are called Nymphs: like as the Drones at the beginning, be termed Sirenes or Cephenes. If a man take their heads from either sort, before they be winged, it is a most pleasant and excellent meat for the old dams. In proceesse of time as they grow bigger, the old bees distill and drop meat into their mouths, as they sit vpon them: then they keep most humming (as some thinke) for to set combs into an heat, which is requisite and necessarie for the hatching of them: and thus they continue, till the little pellicles or membranes be broken: within which, euery one lieth by it selfe, as eggs: and then they break forth all together and shew themselves accomplished bees. The manner and experiment hereof, was seene vpon a time in a ferme neere vnto Rome, belonging to a nobleman of Rome who sometime had bin Consul: for he caused his hives to be made of lanterne horns that a man might see through into them. These yong worms be 45 daies before they come to their perfection.

There is found in some combs, a certain bitter thing and hard like to wax, which the Latines call *Clerus*. This is as it were the abortiue and vntimely fruit of the bees, to wit, when either by maladie or idlenesse, or rather vpon some barrennesse and vnfruitfull disposition by nature, bees are not able to bring the same to perfection.

As for the yong bees, they are not so soon abroad, but they begin to labor with their mothers; and are trained by them to learn how to gather hony. This yong people haue a yong king also: vnto whom they make court, and whom they follow. And many such kings are bred at first, for feare lest they should want: but when the bees are grown big, they all agree with one accord and voice, to kill those that be most vntoward among them, for feare they should make diuisions, factions, and siding to parts. These kings be of two sorts: those that are red all ouer, be better than the black or partie coloured. All the race of them be very faire and goodly to see to: and twice as big as the rest: their wings shorter, their legs streight: in their port and manner of march, more stately: carryiug, in their front a white star, like a diadem or coronet: far brighter also and more neat they be than the common sort.

CHAP.

CHAP. XVII.

¶ The regiment of Bees, and their government.

What shall a man now dispute about *Hercules*, whether there was but one of that name or many? Likewise as touching the Sepulchre of Prince *Bacchus*, where and which it is? As also trouble his head in many other such like antiquities, buried by long continuance of time. For behold, in one small matter that is daily seene in our country houses, in a thing annexed to our fermes, and whereof there is such store, all Authors who haue written of Agriculture are not yet resolved: namely, Whether the king of Bees alone hath no sting, and is armed only with majestie? or, whether Nature hath bestowed a sting vpon him, and denied him only the vse thereof? For certaine it is, that this great commander ouer the rest, doth nothing with his sting: & yet a wonder it is to see, how they all are readie to obey him. When hee marches abroad, the whole armie goes forth likewise: then they assemble together, and enuiron him round about; they are of his guard, & so close they keep vnited together, that they wil not suffer him once to be seene. At other times, when all his people are busie in labor, himselfe (as a right good captaine) ouerseeth their workes, goes about from one to another, encouraging them in wel doing, and exhorting them to plie their businesse: himselfe only exempt from all other trauell & pains taking. About his person he hath a certaine guard euer attendant: he hath his Lieutors & officers alwaies in readinesse, in token of majestie and princely port. He neuer sets forward, but when the whole swarme is prest likewise to goe forth: and in truth, long time before a man may perceiue that they be about a voiage and expedition; for, many daies together there is an extraordinarie humming and noise within, whiles they prepare to dislodge, trussing vp as it were their bag and baggage, and expecting only a faire day of remoue. And suppose that the king haue in some battaile lost one of his wings, yet will not his hoast forsake him and flie. When they be in march, each one desires and striues to be next the prince, as taking a joy and pride to be seene of him, how lustily they performe their deuoir. If he begin to be wearie, they support him with their shoulders: if he be tired indeed and faint outright, they carry him full and whole. If any one of their owne companie chance to faile for very wearinesse, and doe drag behind, or stray aside and wander out of the way, it will yet endeavour to follow the armie only by the smell and sent. Where the king once settles and takes vp his resting place, there they all pitch downe their tents and encampe. And I assure you, herein lieth a matter of great weight and importance; as touching the Auguries and prelages gathered by the manner of their settling, prognosticating both to publicke states and also to priuat persons, something to ensue of much moment, either for good or otherwise, according as they haue been obserued to hang together in clusters like bunches of grapes, either at mens houses, or on the temples of the gods. By occasion whereof, folke had recourse to their deuotions and sacrifice, for to appease the heauenly powers: and yet oftentimes such foretokens haue not bene expiat without some strange euents in the end. There was a swarme of Bees rested vpon the very lips and mouth of *Plato*, when he was but a very babe & infant; foreshewing (no doubt) that singular eloquence of his, and sweet vtterance that afterwards he had. Another cast of Bees settled within the very camp of General *Darius*, the very same day, when he obtained that notable victorie at *Arbalo*. By which examples we may see, that this coniecturall skill and learning of these Soothsayers holds not alwaies, nor proues euer true: for they forsooth suppose this to be euermore a portentous signe of some fearfull euent and misfortune. To returne againe to our captaine Bee: if he chance to be entrapped and surprized by the enemie, the whole armie is sure withall to be taken with him. If he be defeated & slain, the field is lost: all the rest be scattered, and seek their fortune to serue some other prince: for without one king or other, line they cannot. Sometime they are driuen to kill those of the kings race, and namely when there be many kings together: but this they doe perforce and full against their wills: and before they will so do, they chuse rather to ruinate and pul down the houses wherein they were bred; especially when there is some feare of scarstie, by reason of the vnkind season: and at such a time also, they chase and driue away the drone bees. And yet I see some doubt made of them: for diuers be of opinion, that they be a kind of Bees by themselves, and that the rest do set against them as very reeues. The biggest they are of all others, but blacke and broad bellied: good reason therefore that they should be

be called Theeues, because they come stealing and eat vp their honey. Certaine it is, that these drones be killed by the other Bees: and surely, king of their owne they haue none. But how they should be naturally without a sting, there is some question, & the same as yet not determined. This is well known, that in a moist and rainie spring, Bees multiply better: but if it be drie weather, there will be more increase of hony. Now if it happen, that the meat in one hiue be spent, the Bees belonging thereto will assaile their next neighbors, with intent to rob & spoile them of their prouision. But they on the contrarie side, put themselves in battell array, with full intent to take them againe. And if there chance to be a keeper by, to see the combat, that part which perceiues him to fauor their side, will not once make at him for to sting him. Other causes there are besides, which make them often to go together by the ears, & then shall ye haue feuerall captaines to arange their battalions one against another. But most of all they brawle and jar vpon occasion of gathering and carrying floures, whiles they call each one to his owne companie, for to come forth and take part. But all this great fray is soon parted and dispatched, either by casting vp some dust among them, or by making a little smoak & perfume vnder them. And reconciled soone they be againe, with setting before them a messe of milke, or honied-water.

CHAP. XVIII.

¶ *Of the sundrie sorts of Bees in generall: and what things be contrarie and hurtfull vnto them.*

There is a kind of rusticall and wild Bee: and such are more rough and hideous to see to: much angrier also and curst than the rest: howbeit, more laborious and painfull by farre. Of domestical and tame house-Bees, there are two sorts. The best be those that are short, well trust vp and round, and withall, painted with sundrie colours. The long ones be the worse, and such as resemble waspes: and yet the worst of all others, be those that are hairie all ouer. Within the kingdome of Pontus there be white Bees, and those make honey twice in euerie moneth. Moreouer, along the riuer Thermoodon, there be two sorts more. The one, gathers hony in trees: others, within the ground, and bring great increase thereof: for they frame their combs with a threefold course and ranke. The sting that Nature hath giuen vnto Bees sticketh within their bellies. Some are of opinion, that with the first pricke they giue with it, they die presently. Others hold, that they die not withall, vnlesse they thrust it forth so far, that some of the gut follows after: may howsoeuer it be, they become afterwards no better than drones: neither gather they any more honey, as if they were gueldd of their vigor and strength: so as they cease to doe good and harme both at once. We find it written in Chronicles, that horses haue been stung to death by them. Filthie stinking fauors they cannot abide, and namely, such as be contagious; and from them will they flie farre enough. Nay more than that, sure they will be to haunt & sting them that smell as they go of sweet pomanders and odoriferous ointments, notwithstanding they be otherwise themselves subiect to the injuries of most liuing creatures. For first and foremost, they are molested and assailed by those of their owne nature, but yet degenerate and of bastard breed, to wit, Wasps and Hornets: also by a kind of Gnats called Mutiones, Swallows, Martins, and some other birds, make foule worke among them, and are their mortall enemies. The Frogs lie in wait for them as they come to drink: which is the principall worke they haue to doe, when they be about to multiply and breed yong. And not those Frogs only which keep in standing pooles and running riuers, but those land-Frogs of a Todes kind will come of their owne accord from out of the brambles and briers where they keep, and leap vp to the very dore and entrance of the hiue; were they wil blow and breath in vnto them: and when the Bees come flying forth thither, to see what the matter is, soone are they snapt vp and deuoured. And as for Frogs, all the sort of them are supposed not to feele the pricke of their sting. Sheep also are no friends of theirs: for if they be once intangled within their wool, hardly can they get out again. Seeth but Crab-fish neer to their hiues, the very aire & smell thereof will kill them. Ouer and besides, Bees naturally are many times sick; and that do they shew most euidently: a man shall see it in them by their heauie looks, & by their faintnesse in their busines: ye shall mark how some will bring forth others that be sicke and diseased, into the warme sun, and be readie to minister vnto them & giue them meat. Nay, ye shall haue them to carie forth their dead, and to accompanie the corps full decently, as in a solemne funerall. If it chance that

A the king be dead of some pestilent malady, the commons & subiects indurh, they take thought and grieue with heauy cheere and sad countenance: idle they be, and take no ioy to doe any thing: they gather in no prouision, they march not forth; onely with a certaine dolefull humming they gather round about his corps, and will not away. Then requisite it is and necessarie to seuer & part the multitude, and so to take away the body from them, otherwise they would keep a looking at the breathlesse carcasse, and neuer go from it, but stil moan and mourn without end. And euen then also they had need be cherished and comforted with good victuals: otherwise they would pine away & die with hunger. To conclude, a man may soon know when Bees be well in health, by their cheerfulness and fresh hue that they carry.

CHAP. XIX.

Diseases of Bees.

Here be diseases also and imperfections in their worke: and namely when they fill not their combs, or bring not to perfection their yong Bees. The first is called Cleros, like as the other Blapsgonia. Moreouer, the sound made by reuerberation of the aire, which men call Eccho, is hurtfull vnto them, for they feare mightily that resounding noise comming with a double stroke. Mists & fogs also trouble them much: as for spiders, they be their greatest enemies of all others, in case they can preuaile so much as to enter into the hiue & weaue a copweb within it: for they kil all the Bees, and there is no remedie against it. Againe, that Moth or Butterfly which vseth to fly about the snuffe of a candle burning, (a poore silly flie otherwise, and of base account) here doth much hurt, and that in diuers sorts; for not only it self eateth and gnaweth the wax of their combs, but also doth blow and leaue behind them such excrements as afterwards proue other moths. Also, wheresoever he goes and flies within the hiue, he leaues behind him a certaine substance, comming most from the dusty downe of his wings, with which he thickneth the threds as it were of copwebs. There breed likewise euen in very wood certain worms, which aboue all things make means to eat the combs. What should I speake of their owne greedy feeding and glutting themselves with too much liquour of the floures, in the Spring time especially? whereupon ensueth a dangerous flux and loosenesse of their belly. As for oile, it is not bane to Bees only, but also to all other Insects: especially if a man dip their heads in it, and then let them be in the Sun, for presently they will die of it. Many times Bees are causes of their own death, with getting a surfet by excessiue deuouring of hony, namely when they see it ready to be taken out of the hiue: for otherwise they are very thrifty ouer-great sparers, and such, as at other times will driue out those that wast prodigally, and be gluttinous, no lesse than such as be idle larks, and slow at work. Nay, euen their own hony doth them hurt; for if they be anointed therewith in their hinder parts, they will die vpon it. Lo how many enemies this creature, so liberall and bountifull, hath! see how many casualties it is subiect vnto! and yet what be these I haue already rehearsed, in proportion and comparison of those which are omitted. Their remedies will we speake of in conuenient time and place: for this present content I will my selfe to treat only of their natures.

CHAP. XX.

¶ *How to keepe Bees to the hiue: and the manner of repairing them.*

Bees ioy in the clapping of hands, and ringing of brasen basons: at the sound thereof they will assemble and come together: wherby it is plain, that they haue the sence of hearing. When they haue done their taske of worke; when they haue brought forth their young ones, and fully accomplished all their deuoir, then they perform a solemnitie of exercise: wherein after they haue flown abroad in the open aire at libertie, fetched their compasse about on high, gathered into rings and rounds in manner of tournament for their pleasure: then at last when it is time of repast they return home again. The longest time that they can liue (say that they passe through all dangers, and no misfortune light vpon them, but euery thing that is aduerser fall out well and happily) is not aboue seuen yeares. And neuer was it knowne or heard of, that an hiue continued aboue ten yeares. Some Writers be of opinion, That dead Bees if they be kept within a house all a Winter, and when the Spring is come be laid forth in the hot Sunne

Sun to fry, and one whole day be kept covered all ouer with fig tree ashes, they will reuiue and be quick again. But suppose they be not only dead, but their bodies also lost and gon, some say they may be repaired, and a new swarm ingendred, by laying the fresh panches of oxen or kine newly killed, with the dung, garbage and all, within a dunghill there to putrifie. *Virgil* affirms, that the carcasses of any yong steers will do the same: like as dead horses will bred waspes and hornets: and Asses carrion turne to be Beetle flies, by a certain metamorphosis which Nature maketh, from one creature to another. And yet there be none of all these but are seen to engender: howbeit the manner of their breed is much after the nature of Bees.

CHAP. XXI.

¶ Of Wasps and Hornets.

Wasps vse to build them nests on high of earth and clay, and therein make their roomes and cels of wax. Hornets, in caues and holes vnder the ground. All these verily haue their chambers made with six corners, and yet their nests consist of some barke and substance like cobwebs. And as they be a barbarous and sauage kind of creatures, so their yong is not vniforme: one is ready to fly abroad, while another is but yong & not fledge, and a third a mere worrne and grub still. All these breed in Autumne, and neuer in the spring. When the Moone is in the full they increase maruellously. As for the little waspes, called *Ichneumon*es (and lesse they be than others) they vse to kill one kind of spiders, called *Phalangia*, and carry them into their nests: they besmeare them all ouer with a liniment, sit ouer them, and so procreate their own kind. Moreouer, all the sort of these liue vpon flesh, contrary to the manner of Bees, which will not touch a dead carcasse. But waspes hunt after the greater flies, and when they haue whipt off their heads, carry away the rest of their bodies for their prouision. The wild Hornets vse to keep in hollow trees: all winter time, like other Insects, they lie hid, and liue not aboue two yeres. If a man be stung with them, hardly he escapes without an ague: and some haue written, that 27 pricks of theirs will kill a man. The other Hornets which seeme to be the gentler be of two sorts: the lesse of body do worke and trauell for their liuing, and they die when winter is come; but the greater sort of them continue two yeres: and those also are nothing dangerous, but mild and tractable. These make their nests in the spring, and the same for the most part hauing foure dores or entries vnto them, wherein the lesser labouring hornets aboue said are ingendred. When those are quick, brought to perfection, & gotten abroad, they build longer nests; in which they bring forth those that shall be mothers and breeders; by which time those yong hornets that worke be ready to do their businesse and feed these other. Now these mothers appeare broader than the rest, and doubtfull it is, whether they haue any sting or no, because they are neuer seen to thrust them forth. These likewise haue their drones among them as well as Bees. Some think, that toward winter these all do lose their stings. Neither Hornets nor Wasps haue kings or swarms, after the maner of Bees, but yet they repaire their kind, and maintaine their race by a new breed and generation.

CHAP. XXII.

¶ Of Silk-wormes: the *Bombylius*, and *Necydalus*. And who first inuented silke cloath.

A Fourth kind of flie there is breeding in Assyria, & greater than those aboue named, called *Bombyx* [i.e. the Silke-worme.] They build their nests of earth or clay, close sticking to some stone or rock, in manner of salt; and withall so hard, that scarcely a man may enter them with the point of a spear. In which they make also wax, but in more plenty than bees: and after that, bring forth a greater worrne than all the rest before rehearsed. These flies ingender also after another sort; namely, of a greater worrne or grub, putting forth two hornes after that kind: and these be certain canker-wormes. Then these grow afterwards to be *Bombylij*; and so forward to *Necydali*: of which in six moneths after come the silke-wormes *Bombyces*. Silk-worms spin & weaue webs like to those of the spiders, and all to please our dainty dames, who thereof make their fine silks and veluets, forme their costly garments and superfluous apparell, which are called *Bombycina*. The first that deuised to vneueaue these webs of the silke-worme,

A worrne, and to weaue the same againe, was a woman in Coos named *Pamphila*, daughter of *Laton*: and surely she is not to be defrauded of her due honor and praise, for the inuention of that fine silke, *Tiffanie*, *Sarcener*, and *Cypres*, which in stead of apparell to couer and hide, these women naked thorough them.

CHAP. XXIII.

¶ Of the Silke-worme in Coos.

It is commonly said, that in the Isle Coos there be certaine Silkwormes engendred of floures, which by the meanes of rain-showers, are beaten downe and fall from the Cypres tree, *Terebinth*, *Oke*, and *Ash*, and they soone after doe quicken and take life by the vapor arising out of the earth. And men say, that in the beginning, they are like vnto little Butterflies naked; but after a while (being impatient of the cold) are ouergrown with haire; and against the winter, arme themselves with good thick-clothes: for being rough-footed, as they are, they gather all the cotton and downe of the leaues which they can come by, for to make their fleece. After this they fall to beat, to felt & thicken it close with their feet, then to card it with their nailes: which done, they draw it out at length, and hang it betweene branches of trees, and so kembe it in the end to make it thin and subtile. When al is brought to this passe, they enwrap & enfold themselves (as it were) in a round bal and clew of thread, and so nestle within it. Then are they taken vp by men, put in earthen pots, kept there warme, and nourished with bran, vntill such time as they haue wings according to their kind: and being thus well clad and appointed, they be let go to do other businesse. Now as touching the wooll or fleece which they haue begun, men suffer it to relent in some moisture, and so anon it is spun into a small thread, with a spindle made of some light Kex or Reed. This is the making of that fine Say, wherof silke cloth is made; which men also are not abashed to put on and vse, because in summer they would go light and thin. And so far do men draw back now a daies from carying a good cosset & armor on their backs, that they think their ordinarie apparell doth ouer-lode them. Howbeit, hitherto haue they not medled with the Assyrian Silkworme, but left it for the fine wines and dames of the city.

CHAP. XXIV.

¶ Of Spiders, and their generation.

It were not amisse to joine hereunto a discourse of Spiders, for their admirable nature, which deserues a speciall consideration. Wherin, this is first to be noted, that of them there be many kinds, and those so well known vnto euery man, that needles is to be particularize & stand much vpon this point. As for those which be called *Phalangia*, their stinging and biting is venomous, their bodie small, of diuers colors, and sharpe pointed forward; and as they go, they seeme to hop and skip. A second sort be black, and their feet are exceeding long. All of them haue in their legs, three joints, The least of this kind, called *Lupi*, spin not at all nor make any webs. The greater, stretch forth their webs before the small entries into their holes within the ground. But the third kind of Spiders, be they which are so wonderfull for their fine spinning and skilful workmanship: these weaue the great and large cobwebs that we see; & yet their very womb yeeldes all the matter and stuffe wherof they be made. Whether it be, that at some certain season naturally their belly is so corrupt (as *Democritus* saith) or that within it there is a certain bed (as it were) which engenders the substance of silke. But surely whatsoeuer it is, so sure and steadie nailes the Spider hath, so fine, so round, and euen a thread the spinnes, hanging thereunto her selfe, and vsing the weight of her owne bodie in stead of a wherue; that a wonder it is to see the manner thereof. She begins to weaue at the very mids of the web, and when she hath laid the warpe, brings ouer the woofe in compasse round. The meshes and marks she dispenses equally by euen spaces; yet so, as euery course growes wider than other, and albeit they do increase still from narrow to be broader, yet are they held and tied fast by knots that cannot be vndone. Mark, I pray you, how artificially she hides the snares in that net of hers, made into squares, to catch the poore flies. A man would not thinke (who sees the long yarne in her web wrought serce-wisely, smoothed and polished so cunningly, and the verie manner of the woofe so glewly and clammie as it is, of it selfe) that all were to any purpose, and serued for that which she

she intends. See withall, how slacke and hollow the net is made to abide the wind, for feare of breaking; and thereby so much the better also to fold and enwrap whatsoeuer comes within her reach! What a craft is this of hers to leane the vpper part thereof in the front vndone, as if she were wearie (for so a man may guesse, when he can hardly see the reason) and (as it is in hunters net and toile) that so soone as those nets be stumbled vpon, they should cast the flies headlong into the lap and concauitie of the net? To come now vnto her nest and hole: Is there any Architecture comparable to the vault and arched frame? And for to keep out the cold, how is it wrought with a longer and deeper nap than the rest! What subtiltie is this of hers, to retire into a corner so far from the mids, making semblance as though she meant nothing lesse than that she doth, and as if she went about some other businesse! Nay, how close lies she, that it is impossible for one to see, whether any bodie be within or no! What should I speak of the strength that this web hath to resist the puffs and blasts of winds; of the roughnesse to hold and not breake, notwithstanding a deale of dust doth weigh and beare it downe? Many a time ye shall see a broad web reaching from one tree to another: and this is when she learns to weaue & begins to practise and trie her skill. Shee stretches a thread, and warps in length from the top of the tree downe to the very ground; and vp again she whirles most nimble by the same thread: so as at one time, she spins and winds vp her yarne. Now if it chance that any thing light into her net, how watchfull, how quick sighted, how readie is she to run? Be it neuer so little snared euen in the very skirt and vtmost edge thereof, she alwaies skuds into the mids; for so by shaking the whole net, she intangles the flie or whatsoeuer it be, so much the more. Looke what is slit or rent therein, she presently doth mend and repaire, and that so euen and small, that a man cannot see where the hole was derved and drawne vp again. These Spiders hunt also after the yong Lizards: first they enfold and wrap the head within their web: then, they catch hold and tweek both their lips together, and so bite and pinch them. A worthy sight and spectacle to behold, fit for a king, euen from the stately Amphitheatres, when such a combat chanceth.

Moreover, there be many presages and prognostications depend vpon these Spiders: for against any inundations and ouerflowings of riuers, they weaue and make their cobwebs higher than they were wont. In faire and cleare weather, they neither spin nor weaue, vpon thicke and cloudie daies, they be hard at worke: and therefore many cobwebs be a signe of raine. Some thinke, it is the female that spins and weaues, and the male, which hunts and gets in the prouision for the familie: thus ordering the matter equally in earning their liuing, as man and wife together in one house. Spiders engender together with their buttocks; & little worms they do lay like eggs. For, considering that the generation of all Insects besides, in a manner can be declared and shewed no otherwise, I must not deferre the relation thereof, it being so admirable as it is. Well then, these eggs they lay in their webs, but scattering here and there, because they vse to skip and leap when they thrust them forth. The Phalangius only sits vpon the eggs within the very hole, and those in great number: which begin not so soon to peep, but they eat the mother, yea and oftentimes the father likewise, for he helps her also to cooue. And these kind of Spiders bring commonly 300 at a time: whereas all the rest haue fewer. They sit ordinarily thirtie daies. As for yong Spiders, they come to their full growth and perfection in foure weekes.

CHAP. XXV.

¶ Of Scorpions.

SEMBLably, the land Scorpions do lay certaine little worms or grubs in maner of eggs: and when they haue so done, perish likewise for their labour, as the Spiders. Their stings be as venomous and dangerous, as those of serpents: and albeit there ensue not thereupon so present death, yet they put folke to more paine a great deale; insomuch as they languish and lie drawing on three daies before they die. If a maiden be stung with one of them, she is sure to die of it: other women also for the most part catch their death thereby, and hardly escape. Yea and men also find their poison to be mortall & deadly, if they be stung in a morning by them when they creep newly out of their holes, fasting, & before they haue discharged their poison by pricking one thing or other first. Their sting lies in their tails, and readie they are with it alwaies to strike. There is not a minute of an houre but they practise and trie how they can thrust it forth, (so malicious they be) because they would not lose and misse the first opportunity presented vnto

A vnto them. They strike both sidelong or byas, and also crooked and bending vpward, with their taile. The poison that comes from them, is white, as *Apollodorus* saith, who also hath set downe 9 sorts of them, and distinguishing them by their colours, which me thinks, was but superfluous, and more than needed; considering that a man cannot know by his discourse, which of them he would haue to be least hurtfull and noisome. He affirmeth, that some haue double stings, and that the males are more curst and cruell than the females: for he auouches, that they do engender together, and that the males may be knowne by this, That they are long and slender. Moreover, that they be all of them venomous about mid-day, when they be enshaded and set into an heat, by the scalding and scorching sun: also when they be drie and thirstie, they cannot drinke their full and quench their drought. This is well known, that those which haue seuen joints in their tailles, be more fell than the rest: for it is ordinarie in them to haue but six. In Affrick, this pestilent creature vses to flie also, namely, when the Southerne winds blow, which carrie them aloft in the aire and beare them vp as they stretch forth their armes like oares. The same *Apollodorus* before named auouches plainly, that some of them haue very wings indeed. The people called *Plylli* (who making a gainfull trade and merchandise of it, to bring in hither vnto vs the poisons of other countries, and by that meanes haue filled Italie with forrein venomous beasts) haue many times assaied to bring them hither; but neuer would they abide so much as the aire of Sicilie, nor liue in that tract. Howbeit we see of them now and then in Italie, but harmlesse they be all: like as in many other places besides, and namely about *Pharus* in *Egypt*.

C In * *Scythia* they be so dangerous, that they kill their hogs; which otherwise be creatures that can eat such poisons, and yet liue and do full well. And if it be true that is said, the black swine die more speedily, especially if after they be stung, they goe into the water and drench themselves. If a man be stung with a Scorpion and drinke the powder of them in wine, it is thought to be present remedie. Men hold, that nothing is more contrarie vnto them than oile, if they be dipped therein: as also to the *Stellions*, which are made like Lizards, and do no hurt to them only, because they are without blood. Like as the Scorpions also are said to be harmlesse to anything that is bloodlesse. Some are of opinion, that they likewise deuoure their young, saue only one who is more slie and craftie than the rest, who gets upon the rumpe behind of the mother, and there sits, being assured that hee is safe enough in that place, both from sting of taile and tooth in mouth. This Scorpion reuenges the death of his other brethren and sisters: for in the end he skips vpon the backe of father and mother both, where he gnaweth and eateth them to death. To conclude, Scorpions vsually do breed eleuen young ones at a time.

CHAP. XXVI.

¶ Of Stellions and Grasshoppers.

THE *Stellions* after a sort be of the nature of *Chamaeleons*, liuing only vpon dew and Spiders. *Grasshoppers* liue also much after the same manner. And they be of two sorts, namely, the lesser, which come first, and die last; but those be mute. The latter breed, seldome or neuer flie: and those likewise are of two kindes. Such as sing aloud be named *Echetæ*; and the lesser sort of them *Tettigoniae*: but those other are more shrill, and chant full merrily. The male *Grasshoppers* in both kinds, do sing: the females are silent. The people of the East countries make their food of them: euen the very *Parthians*, who otherwise abound in wealth. The hee *Grasshoppers* are the sweeter meat before the time of engendering; and the shee *Grasshoppers* afterward, by reason of eggs knotted within them, and those be white. They engender with their bellies vpward. They haue a certain roughnesse vpon their backs, which is very sharp, and therewith they worke a hollow gutter in the ground, as a nest to lay their eggs and breed in. At the first, appeareth a little worne or maggot; whereof comes afterward that which they call *Tettigometra*, as one would say, the mother of *Grasshoppers*, or the great *Grasshopper*. For about the Sunstead in Summer, the vtmost crust or case thereof breaketh, and then out they flie, and alwaies in the night. At the first, blacke they be and hard withall. Of all creatures that are known to liue, the *Grasshoppers* alone haue no mouth: in stead whereof, they haue a certaine sharp pointed thing in their breast (like vnto their tongues that carrie stings in their mouthes) and with it they sucke and licke in the dew. Their breast is full of little pipes, from whence cometh that ringing noise of the *Echetæ* which we do heare, as I haue aboue said. Moreover, their bellie is

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emptie

* Or rather in Caria.

emptie and hath nothing in it. When a man raifeth them, fo as they be thereby forced to flie, G they yeeld forth a certaine humor : which is the onely argument that they be nourished of the dew. They haue moreouer this one marke from all other liuing creatures, namely, no concan-
 rie of their bodie to be feene wherby to void out any excrements. So dimme. fighted they be, that if a man chance to come neare vnto them, plucking in and stretching out his finger before them, they will prefently leape vpon it, fupposing that it is fome leafe that waggeth. Writers there be, that make two more kinds of them, namely, the greater, which appeare at the first
 I spring and budding of trees ; wherupon it is called Surcularia : and a lesser, which some name Frumentaria, others Auenaria. For this sheweth it selfe when the corne is ripe and begins to die in the straw.

CHAP. XXVII.

¶ Places wherein there be no Grasshoppers : also where they are mute.

I N countries bare and naked of trees and wood, there breed no Grasshoppers: and therefore ye shall haue them at Cyrene, about the towne, but not in the plaines and fields thereof. Neither shall a man meet with them in woods that be cold and full of shade. It seemes also, that they take a liking to some one quarter more than another : for in the region of the Milefians, few places there be that haue them : but in Cephalenia, there is a riuer that doth limit and bound them : for of the one side there be plentie of them, and on the other, few or none. In the territo-
 I rie of Rhegium they be all mute. Passe the riuer once and come into the Locrians countrey ye shall heare them chaunt lustily. Wings they haue like to those of Bees, but larger, to the proportion of their bodies.

CHAP. XXVIII.

¶ The wings of Insects, and sundrie kinds of Beetles.

O F Insects, some carie two wings about them, as the flies : others foure, as Bees. As for Grasshoppers, they flie with wings made like pellicles or fine skins. In summe, all Insects which be armed with a sting in their bodie or taile, haue foure apeece : and none againe haue about twaine that carrie their offensiue weapon in their mouth. To the former, Nature hath giuen it for to reuenge ; to the other, only to feed themselves, and content their appetite. K Moreouer, plucke from any of them their wings, there will neuer come new in the place. None that haue a sting in their taile, be double winged. Some Insects there be, which haue growing a certaine husk or cod ouer their wings, for the safegard and defence thereof, as the Beetles: and the wings of such be thinner and more brittle than others. Sting they haue none, but a certaine kind of the great ones be armed with two long hornes boking out before them, and two forked they be and toothed like Pinsons, in the top, which (when they list) they can bring together and make them meet, and so nip and bite withall. These Beetles, folke vse to hang about the necke of young babes, as present remedies against many maladies. Such Beetles, *Nigidius* calleth Lu-
 L canes.ouer and besides, there is another sort, which tumbling vpon their back in dung, do roll it into great round balls with their feet, & therein do make nests for to bestow their little grubs (which are their young) against the cold of winter. Some there be that vse to flie vp and down, and where euer they go, make a great buzzing noise as if they lowed. Ye shal haue others again that keepe in medowes ; yea and Creckets that haunt the earth and stocke of chimnies, where they make many holes, and lie cricking aloud in the night.

The Glo-wormes, are named by the Greeks Lampyrides, because they shine in the night like a sparke of fire: and it is no more but the brightnes of their sides and taile: for one while as they hold open their wings, they glitter; another while when they keep them close together, they be shadowed and make no shew. These Glowbards neuer appeare before hay is ripe vpon the ground, neyer after it is cut downe. Contrariwise, the flies called Blattæ, liue and be nourished in darknesse : light is an enemy vnto them, and from it they flie. They breed commonly in
 M baines and stoues, of the moist vapors that be there. Of the same kind there be other great Beetles red in color, which work themselves holes in the drie earth, where they frame certaine receptacles like vnto Bees combs, little and small, full of pipes resembling hollow sponges; and

all

A all for a kind of bastard honey, whereof yet there is some vse in Physicke. In Thrace neare to Olynthus, there is a little territorie or plot of ground ; where this one creature (among all o-
 ther) cannot liue; whereupon the place is called Cantharolethus. The wings generally of all In-
 sects, be whole, without any slit: and none of them hath a taile but the Scorpion. Hee alone hath not only armes but also a sting in the taile. As for the rest, some of them haue a sharp pricked weapon in their muzzle, as namely, the Breefe or great Horle-flie, called in Latine *Astus* or *Tabanus*, whether you will. Likewise Gnats also, and some kind of flies. And these prickes serue them in good stead both for mouth and tongue. Some of these are but blunt, & not good for to pricke, but only handsome to sucke withall, as flies, which haue all of them a tongue, bee-
 B ing evidently fistulous and like a pipe. And none of all these haue any teeth. There bee Insects with little hornes proaking out before their eyes, but weake and tender they bee, and good for nothing ; as the Butterflies. And there be againe, that are not winged, and such be the Sco-
 lopendres. All Insects that haue legges and feet, goe not directly, but bias and crooked. Of which, some haue the hinder legges longer than the former, and such bend hooked outward ; as the Locusts.

CHAP. XXIX.

¶ Of Locusts.

T He Locusts lay egges in Autumne, by thrusting downe into the ground the fistule or end of their chine, and those come forth in great abundance. These egges lie all winter long in the earth; and at the end of the spring the yere following, they put out little Locusts, black
 C of colour, without legs, and creeping vpon their wings. Hereupon it commeth, that if it be a wet spring and rainie, those egges perish and come to no good : but in a drie season, there will be greater increase and store of Locusts the Summer ensuing. Some writers hold opinion, that they lay and breed twice a yere : likewise that they perish and die as often. For they say, that when the star Vergilia doth arise, they breed: and those afterwards about the beginning of the Dogdaies, die; and others come in their place. Others say, that they engender and breed againe their second litter, at the full or setting of Arcturus. True it is indeed, that the mothers die so
 D soone as they haue brought forth their little ones, by reason of a small worme that presently breeds about their throat, which chokes them. And at the same time, the males likewise mis-
 carrie. See what a little matter (to speake of) brings them to their death ! and yet a wonder it is to consider, how one of them when it list will kill a serpent : for it will take him fast by the chawes, and neuer lin biting till he hath dispatched him. These little beasts breed no where but in plain and champion countries, namely, such as be full of chinks and creuises in the ground. It is reported, that there be of them in India, three foot long : where the people of the country vse their legs and thighs for sawes, when they be thoroughly dried. These Locusts come by their death another way, besides that aboue-named: for when the wind takes them vp by whole
 E troupes together, they fall downe either into the sea, or some great standing pooles. And this many a time happens by meer chance and fortune; and not (as many haue supposed in old time) because their wings are wet with the night dew. For euen the same Authors haue written, that they flie not in the night for cold. But little know they, that it is ordinarie with them to passe o-
 uer wide and broad seas, and to continue their flight many daies together without rest. And the greater wonder is this, that they know also when a famine is toward: in regard whereof, they seek for food into far countries: in such sort, as their coming is euer held for a plague of the gods, proceeding from their heauie wrath and displeasure. For then commonly they are bigger to be
 F seen, than at other times : and in their flight they keepe such a noise with their wings, that men take them for some strange fowles. They shade and darken the very Sunne as they flie, like vn-
 to a great cloud: in so much, as the people of euery country behold them with much feare, least they should light in their territorie, and ouer-spread the whole countrey. And verily their strength is such, that they hold out still in their flight: and as if they had not enough of it to haue flowne ouer seas, they giue not ouer to traueserle mightie great countries in the continent. And looke in what place soeuer they settle: they couer whole fields of corne with a fearefull and terrible cloud: much they burne with their very blast, and no part is free but they eat and gnaw euen the very dores of mens dwelling houses. Many a time they haue been known to take
 Ff 2 their

their flight out of Affrick, and with whole armies to infest Italie: many a time haue the people of Rome, fearing a great famine and scaritie toward, been forced to haue recourse vnto Sybils books for remedie, and to auert the ire of the gods. In the Cyrenaicke region within Barbarie, ordained it is by law, euery three yeares to wage war against them, and so to conquer them: that is to say, first to seeke out their nests, and to squash their eggs; secondly, to kill all their yong; and last of all, to proceed euen to the greater ones, and vtterly to destroy them: yea, and a greuous punishment lieth vpon him that is negligent in this behalfe, as if he were a traitor to his prince and country. Moreouer, within the Island Lemnos there is a certaine proportion and measure set down, how many and what quantitie euery man shall kill; and they are to exhibit vnto the magistrate a iust and true account thereof; and namely to shew that measure full of dead Locusts. And for this purpose they make much of Iaies, Dawes, and Choughes, whom they doe honour highly, because they flie opposite against the Locusts, and so destroy them. Moreouer, in Syria they are forced to leue a warlike power of men against them, and make rid-
 dance by that meanes. See in how many parts of the world this hurtfull and noisome vermine is disperfed and spread: and yet in Parthia they are taken for very good meat. The voice that they haue (such as it) seemes to come from the hinder part of their head: for about that place where the jointure is of the shoulders to the nape of the neck, they are thought to haue certain teeth, which by grating and grinding one against the other, doe yeeld a kind of crashing noise: and namely, about the time of both the *Æquinoctials*: like as the Grasshoppers at midsummers Sunstead, Locusts engender after the manner of all other Insects which do engender: to wit, the female carries the male; and she lying vnderneath, bends vp the very end of her taile against the other: and thus they continue a good while ere they part asunder. To conclude, the males of all this kind be lesse than the females.

CHAP. XXX.

¶ Of the ordinarie Pismires of our country in Italie.

Most part of Insects do breed a grub or little worme. For euen the very Ant in the Spring time doth bring forth such wormes like egges. These filie creatures labor and trauell in common, as the Bees do: this only is the difference, that Bees do make their owne meat, whereas these fore vp only their food and prouision. As touching their strength, if a man would compare the burdens that they carie, with their own bodies, he wil find and confesse, that there is not a creature againe in the world, for that proportion, stronger. And how doe they carrie them? euen with their very mouthes. Howbeit, if they meet with any greater load than they can bite betwene their chawes, then they set their shoulders to it, and with their hinder legs also make meanes to driue it forward. They haue among them a certaine forme of Common-wealth: they remember: they are not without care and fore-cast. Looke what feedes or graines they do lay vp for prouision, sure they will be to gnaw it first, for feare they should sprout and take root againe, and so grow out of the earth. If a corne or seed be too big for their carriage, they diuide it into peeces, that they may go with it more easily into their house. If their seeds within, chance to take wet, they lay them abroad, and so drie them. They giue not ouer worke by night, when the Moone is at the full: but when she is in the change, they rest and play them. When they are at worke, how painfull are they? how busie, how industrious? And for as much as they make their puruicance in diuers places, and bring from al parts, without knowledge one of the other: they keepe among them certaine market daies, for a mutuall enteruiew and conference together. And verily, it is a world to see, how then they will assemble; what running, what greeting, what entercourse and communication there is between them, whiles they are inquisi-
 tiue, as they meet one with another. What newes abroad: euen like merchants at a Burse. Their waifare is so ordinarie and continual, that we may see the very hard flint and pebble stones worn with their passage too and frome may see (I say) a very path-way made where they vse to goe about their worke: whereby, let no man doubt of what force and power continuall vse is, of any thing whatsoeuer, be it neuer so little. Of all liuing creatures, they only and men, doe enterre and burie their dead among them. To conclude, thoroughout all Sicilie a man shall not see a flying Ant.

CHAP.

CHAP. XXXI.

¶ Of Indian Pismires.

IN the temple of *Hercules* at Erythra, there were to be seen the horns of a certain Indian Ant, which were there set vp and fastned for a wonder to posteritie. In the country of the Northern Indians, named *Darda*, the Ants do cast vp gold about ground from out of the holes and mines within the earth: these are in colour like to cats, and as big as the * wolues of *Ægypt*. This gold before said, which they worke vp in the winter time, the Indians do steale from them in the extreme heate of Summer, waiting their opportunitie when the Pismires lie close within their caues vnder the ground, from the parching Sun. Yet not without great danger: for if they happen to wind them and catch their sent, out they go, and follow after them in great hast, and with such fury they fly vpon them, that oftentimes they teare them in pieces; let them make way as fast as they can vpon their most swift camels, yet they are not able to saue them. So fleet of pace, so fierce of courage are they, to recouer gold that they loue so well.

CHAP. XXXII.

¶ The diuers generation of some Insects.

MAny Insects there be that breed after another sort than the former about specified: and principally of dew which settles vpon the radish leafe in the beginning of the Spring. For being made thicke, and hardned with the heate of the Sun it growes to the bignes of the grain of Millet. From it ariseth a little grub, and three daies after it becomes a kind of canker-worme: and so in processe and tract of time it groweth bigger without mouing at all, and gathereth an hard husk or case about her: only if a man touch the webby panicles wherein the said worme lieth inwrapped, it will seem to stir. This is called *Chrysalis*: and after some time, when the kex or husk is broken, he proueth a faire flying butter-fly.

CHAP. XXXIII.

¶ Of Insects that breed in wood, and of wood.

Semblably there be some Insects ingendred of raine drops standing vpon the earth, and others also of wood: for not only the ordinarie wood-wormes breed in timber, but also certain Brees and horse-flies come of it, yea, and other such like creatures, whensoever the wood happen to be dotted with ouer-much moisture. Like as within one of our bodies there haue bin found broad wormes of 30 foot in length, yea and sometimes longer. Also there haue bin seen in dead carions many worms: and the very flesh of liuing men is apt to breed such vermin: and so is the haire of the head to harbor lice, of which filthy & loathsome creatures both *Sylla* the Dictator, and also *Alcman* (one of the most renowned Greeke Poets) perished. Moreouer, birds are much infested and troubled therewith. And as for Feasants, they will dy thereof vnlesse they bestrew themselves with dust. Of such beasts as carry haire, it is verily thought that the Ass alone and sheepe are free from this kind of vermin. Some kind of cloath likewise is apt to ingender lice, and especially those which are made of wooll that sheepe bare which were worried of wolues. Our and besides, I find in some writers, That there is some water will ingender this vermin if we do but waile therein. For euen in wax there will breed mites, which are thought to be of all creatures that haue life, the very least. Also ye shall haue others again ingender of filthy dry dust, namely fleas, which vse to skip and hop with their hinder feet lustily like these tumblers and vaultors. Last of all, there be that come of a certaine moist powder in canies of the ground, and those be our ordinarie little flies.

CHAP. XXXIV.

¶ Of one kind of creature that hath no passage to void excrements.

THere is a creature as foule and ill-fauoured as the rest, which hath euermore the head fast sticking within the skin of a beast, and so by sucking of bloud liueth, and swells withall: the only liuing creature of all other that hath no way at all to rid excrements out of the bodie.

body: by reason whereof when it is too full, the skin doth crack and burst, and so his very food is cause of his death. In Horses, Asses, and Mules these do neuer breed: in Kine and oxen they be common, and otherwhiles in dogs, who are pestered not only with these ticks, but also with all other vermine aboue named. And in Sheepe and Goats a man shall finde none other but ticks. It is as strange a thing also to see, how the horse-leeches which be nourished in standing waters of fens, are thirsty after bloud: for these will thrust their whole head into the flesh, for to draw and suck out bloud. Finally, there is a kind of flies that plagueth dogs and none else: they are busie commonly about their eares, where they will bite and sting them shrewdly; for there they cannot come by them with their teeth to snap and kill them.

CHAP. XXXV.

¶ Of Moths and Gnats.

Wool and cloth when they be dusty breed moths, especially if a spider also be gotten within them. For the Spider is very thirsty; and by reason that he drinketh vp all the moisture of the cloth or wool, he increaseth the driness much more. In paper also they will ingender. A kind of them there is which carry their coats and cales with them, as cockles and snails do; but they haue feet to be seen. If they be turned out of their coats or husks, they presently die. If they grow still they wil proue to be Chrysalides. The wild fig tree breeds certaine Gnats called Ficarij. As for the Cantharides or French Greene Flies, they be bred of little wormes in Fig trees, Peare trees, wilde Pines, or Pitch trees, the Eglantine Brier, and Roses. A venomous vermin this is, howbeit medicinable in some sort. The wings be they that are good in physick: cast them away, & the rest is deadly. Moreouer, there be other gnats that soure things will ingender. And no maruell, seeing there be some wormes found in snow, which are white, if the snow be but thin and new fallen. But in case it haue lien long, and bee deep, a man shall find in the mids within those which are red (for snow also if it be old waxeth red) rough and hairy, greater also than the rest, and dull of motion.

CHAP. XXXVI.

¶ Of the fire-fly called Pyralis, or Pyrausta.

The fire also, a contrary element to generation, is not without some liuing creatures ingendred therein. For in Cypres, among the forges and furnaces of copper, there is to be seen a kind of four-footed creature, and yet winged (as big as the greater kind of flies) to flie out of the very midst of the fire, and called it is of some Pyralis, of others Pyrausta. The nature of it is this: so long as it remaines in the fire it liues: but if it chance to leap forth of the Furnace, and fly any thing farre into the aire, it dieth. There is a riuer in the kingdome of Pontus called Hypanis, which about the summer Sunstead vseth to bring down the streame thin pellicles or bladders like to grape kernels: out of which there breaks forth and issueth a foure footed flie, like vnto those aboue named; and it liueth not aboue one day, whereupon it is called Hemerobion [*i. a day-fly.*] All other Insects of like sort may continue and liue a seuen-night. The Gnat and the little wormes three weeks: but such as bring forth their yong aliue, may endure a full moneth. As for the metamorphosis of these creatures from one forme to another, it is most commonly performed in three daies, or foure at the most. All the rest of the winged kind lightly die in Autumne: among which, the breees and horse-flies are ordinarily blind first. To be short, those flies which haue bin drowned, and so come to their death, if they be laid and kept in hot cinders or ashes, will come again to themselves and reuiue.

CHAP. XXXVII.

¶ A discourse Anatomicall, of the nature of liuing creatures part by part, according to their particular members.

The head.

It remaines now to treat of the seuerall parts of the body, and ouer and aboue the former description, to particularize and set down the story of one member after another. First therefore this is generall, that all liuing creatures whatsoeuer hauing bloud, haue also heads: and few

A few of them haue cops or crested tufts vpon their heads, vnlesse it be birds, and those be of diuers forms and fashions. The Phœnix is adorned with a round plume of feathers, out of the midst of which growes another little pennache. Peacocks carry vpon their heads a tuft (as it were) of little hairy trees: and the Stymphalides a lock of crisped and curled haire. Peasants haue feathers standing vp like hornes. The pretty Titmouse or Nonett is filleted or coifed vpon the head: and in lieu thereof, the Lark hath a little peruke of feathers, whereupon at first it was called Galerita, but afterwards after the French word Alanda, and of it one of the Roman legions tooke the name, because of their pointed Morions. We haue written alreadie of the Ginny or Turkey cocks and hens, vpon whom Nature hath bestowed a folding crest, lying from the very bill, ouer the midst of the head, vnto the nape of the necke. She hath giuen also vnto all the sort of Seamewes, Fen ducks, and Moore-hens, certain cops and crisped tufts to the Woodpeck also and Balcare crane. But aboue all others, the house dunghill cocks carry vpon their heads the goodliest ornament of their combe, and the same consisting of a masse and fleshy substance, indented besides like a saw. And yet we may not properly say it is either flesh, gristle, or callositie, but composed of some particular matter by it selfe, which cannot well be named. As for the crests of dragons, I could meet with no man hitherto that euer saw them.

To come now to Hornes, there be many fishes, as well of the sea as fresh waters, and also Serpents, that haue horns in diuers and sundry sorts. But to speak a truth and properly, they be no hornes indeed, for those pertain only to four-footed beasts. As for *Aëdon* and *Cippin*, of whom we read in our Latine story that they had hornes, I take them to be meer fables and no better. Certes in nothing more hath Nature taken her pleasure than in this, as if she had meant to delight and sport her selfe in these armes and weapons of beasts. For in some she hath made them knagged and branched, as in Deere, both red and fallow: in others plain and vniforme without rines, as in the Spitters, a kind of Stag, which thereupon be called Subulones in Latin, for that their hornes be like a shoemaker's * Nall blade. There be againe which haue broad hornes, and plaited like a mans hand, with fingers standing out of them: whereupon the beasts that beare them be called Platycerotes, [*i. broad horned.*] Roe bucks haue by nature branched heads, but they are small: and these do not mew and cast them yearely, as the stag and bucke. All the sort of rams be armed with crooked hornes, turning and winding with certain revolutions as if they were gantlets or whorle bats, giuen them by nature to thumpe and jurre withall. Bulls hornes be strait and vpright, ready alwaies to do a mischief. The females of this kind, to wit, Cowes, are horned as well as Bulls: whereas in many others, the males only be in that wise armed. The wild Goats, called Roch-goats, haue their hornes turning backward, whereas in fallow Deere they bend rather forward. There is a kind of Roe-buck called in Africke Addace, which the Greeks haue named Strepsiceros, and they haue vpright hornes: but they are furrowed and wreathed round about as if they were ribbed like the backe of a lute; or rather chamfered like the ridge of a land, and alwaies sharp pointed with a tip. Ye shall haue droues and herds of beasts, namely Kine and Oxen in Phrygia, which wil stir and wag their hornes like eares: and those in the kingdome of the Troglodites, carry their hornes pendant directly to the ground, which is the cause, that as they eat they are forced to beare their necks awry, and looke at one side. Some haue but one horne apiece, and that either in the midst of the forehead, as the Oryx; or else in the nose and muffle, as the Rhinoceros, whereof we haue written before. In sum, there be that haue strong and hard hornes to butt with: others to strike and gore withall: some crooking forward, others bending backward. In some, they are good only to tosse and fling, and that in diuers manners. For there be of them that giue back, others turn one against another, and some euen ioyned and meet together: but all run vp sharp pointed in the end. A kind of beasts there is that vse their hornes in stead of hands to scratch their body when it itches: and others serue the turn to found the way before them, as certain shell-Snails and Winkles. And these hornes giuen for this purpose are some of them of a fleshy substance, as those of the serpents called Cerastræ: and otherwhiles one alone without a fellow. As for the Periwinkles and Snails aforesaid they are neuer without twain apiece: and at this passe they haue them, to put out and draw in as they list. In Buffles hornes the barbarous people of the North parts vse to drinke: and ye shall haue the hornes of one Buffle head to hold full two measures called Vrna, which is about 8 gallons. In some countries men head their speares and jauelins with horne. With vs in Italy they be cut into thin plates, and serue for lanterns: and surely they are so transparent and cleare, that they make

make the candle within inclosed to cast the greater light, and farther off. Nay, they are good for many other toies of delight and pleasure: inso much as some paint and die them with sundry colours, others vernish and anneile them: and ye shal haue men to make thereof their fine inlaid works in Marquetrie of diuers colours, called thereupon Cerostrata. All horns in manner be hollow, saue that as they grow toward the pointed tip, they be solid and massie: onely Deers both red and fallow are found and entire throughout: and euery yere they fall off. Husbandmen in the country, when they see their Oxe hooves surbatted and worn too neere the quick with ouermuch trauell, anoint their hornes with sweet grease, & that is the way to make them grow again. And in very truth the hornes of these beasts are of so pliable a substance, and easie to be wrought, that as they grow vpon their heads, euen whiles the beasts are liuing, they may with boiling wax be bended and turned euery way as a man will: yea, and if they be cut when they break new forth out of the skin, they may be easily writhed to grow seuerally in sundry parts, so as euery head may seem to haue foure hornes. For the most part, the hornes of Cowes are more tender and thinner than the other; like as we see it is in the females of smaller beasts: * Ewes haue none at all: ne yet Hinds and Does: no more than the beasts that haue feet clouen & diuided into many toes: or those that be whole hoofed, except the Indian asse, who is armed with one horne and no more. Beasts clouen footed in twaine haue likewise two hornes: but none at all haue they which are toothed in the vpper mandible. They that make this reason, because the matter of their teeth runs al into the horn, and so contrariwise, are deceived, and soon conuincid by this, That Hinds & Does are toothed, no more than Stags and Bucks, and yet are not horned. In other beasts the hornes grow to the very bone of the head, in Deere only they come out of the skin, and are grafted no deeper. Fishes of all liuing creatures haue the biggest heads for the proportion of their bodies, haply because they might the better diue vnder water and sink to the bottom. No kind of Oisters haue any head at all, no more than Spunges, or any other in manner, which want al their senses but only feeling. Some haue heads indeed, but within their body, and not diuided apart from it, as Crabs and Creifishes.

Mankind of all liuing creatures hath most haire on the head, euen men as much as women, as we may see in those countries where they neuer cut their haire, but let it grow. And namely in Sauoy, Dauphine, and Languedoc about the Alps, where men and women both weare long haire, and thereupon that part of France is called Comata. And yet this is not for general, but that the nature of some land and soile may make some alteration and varietie. For the Myconians naturally haue no haire at all: like as the Caunians be all subiect to the disease of hard and swelling spleens, euen from their mothers womb. Some reasonlesse creatures likewise are by nature bald, as Ostriches, and certain * water Rauens, which of the Greeks are named thereupon Phalacrocoraces. Seldom downen shed their haire clean, and become bald: but neuer was any gueldded man knowne to be bald: nor any others that be pure virgins, and haue not sacrificed vnto Venus. The haire growing beneath the ventricles of the brain, & vnder the crown of the head, like as also about the temples and eares, falls not off quite. Man alone of all creatures groweth to be bald, I speake not of those that are so by nature. Men, women, and horses wax gray haired. Men and women both begin at the forepart of their heads to be grislic, and afterwards behind. Men and women alone be double crowned.

Some creatures haue the bones of their skull flat, plain, thin, and without marrow, and the same vnited or ioined together by certain sutures or seams indented & toothed on either side, which run one into another. The ruptures and cracks of the brain pan cannot be consolidated and fauded perfectly again: but if the spels and pieces be gently taken out, and but smal, there is no danger of death: for in their place there will grow a certaine callous cicatrice or fleshie substance that will supply in some sort that defect. Bears of all others haue the tenderest sulcs, and Parrats the hardest, as we haue said before in place conuenient.

Moreover, all liuing creatures that haue blood haue likewise brains: yea, & those in the sea which we call Soft-fishes, although they haue no blood at all, as namely the Pour-cuttes or Polypes. But man for his bignes and proportion hath most braine of all other, and the same is the moistest & coldest part he hath within his body. Infolded it is within two tunicles or kels, both aboue and beneath: whereof if the one be pierced and wounded [to wit, *Piamater*] there is noway but present death. Also, men commonly haue more braines than women. And both of them haue neither blood nor veines therein: as for that which is in other creatures, it wanteth

A wanteth all kind of fat. The learned Anatomists, who haue searched diligently into the nature of things, do teach vs a difference between the brain & marrow of bones: for, brains in the boyling and seething, wax hard. In the midst of the braine of all creatures there be certaine little * bones. Man alone in his infancie hath his brain to pant and beat: and fully settled it is not, nor confirmed, before that he begins to speak. Of all parts necessary for life, it is placed highest, and next vnto the cope of head and heauen both: without flesh, without blood, without filth & ordure. And in truth, it is the fort and castle of all the senses: vnto it all the veines from the heart do tend: in it they all do likewise end. It is the very highest keep, watch-tower, and sentinell of the mind: it is the helme and rudder of intelligence and vnderstanding. Moreouer, in all creatures it lieth forward in the front of the head: and good reason, because all our senses bend that way just before our faces. From our braine comes sleepe, from thence proceedeth our nappes, our nods, our reeling, and staggering. And looke what creature fouer wanteth braine, the same sleepeth not. Stags (by report) haue within their heads twentie little wormes, to wit, in the concavity vnder their tongue, and about that iointure where the head is grafted to the chin bone.

Man alone hath not the power to shake his eares. Of flaggie, long, and hanging eares, came the surnames first of the *Flacci* (families & houses in Rome.) There is no one part of the bodie costeth our dames more than this, by reason of their precious stones and pendant pearls thereat. In the East countries, men also as well as women, think it a great grace and brauery to weare earrings of gold. As touching their proportion, some creatures naturally haue bigger or lesser than others. Deere only, the fallow as well as the red, haue them slit and as it were diuided. In Rats and mice they be hairy. To conclude, no creature hath ears but those that bring forth their yong aliue: and none of them are without, saue onely Seales, Dolphins, Vipers, and such fishes as were called Cartilaginous and gristly. And these all in stead of ears, haue certaine holes, or conduits, except the foresaid gristly fishes, & the Dolphins: and yet manifest it is, that they do heare wel enough. For delighted they be with musick: and vpon some great noise and sudden crack they are astonished, and then easily taken. But maruel it is how they should heare as they do: neither can I comprehend the reason and means thereof, no more than I am able to shew how they do smell: for no Organs and Instruments haue they thereof to be seene, & yet there is not an hound vpon the land sents better, nor hath a finer nose than they. Of all fouls, the Like-owle and the Otus alone, haue feathers like eares: the rest haue only holes to heare by. And after the same manner scaled fishes and serpents. In Horses, Mules, & Asses, and all such as serue either pack or saddle, the eares are tokens of their courage more or lesse, and will shew what stomach is within them. If they be tired and weary, they hang down flaggie: be they afraid, you shall perceiue them to wag too and fro: in heat of fury they stand pricking vp: in sicknes they lie downe.

Man only of all creatures hath a Face and Visage: the rest haue either muzzles and snouts, or else bills and beakes. Other creatures haue Foreheads also as well as men: but in mans alone we may see & reade sorrow & heauinesse, mirth and joy, clemencie and mildnesse, cruelty, and seuerity; and in one word, guesse by it, whether one be of a good nature or no?

In the ascent or rising of the forehead, man hath Eie-brows set, like to the eaves of an house, which he can moue as he list, either both at once, or one after another: and in them is shewed part of the mind within. By them we denie, by them we grant. These shew most of all others, pride and arrogancie. Wel may it be that pride doth appeare and settle in some other part, yet here is the seat & place of residence. True it is, that in the heart it begins, but thither it mounteth and ascendeth, here it resteth and remaineth. No part can it find in the whole body more eminent and haughty, and withall more steepe than the browes, wherein it might rule and raigne alone without controlment.

Next vnder the browes is the Eie, the most precious member of the whole body; which by the use of sight makes difference between life and death. Yet hath not Nature giuen eyes to all creatures: Oisters haue none: and for some other shel-fishes, it is hard to say whether they haue any or none. As for Scallops, if a man stir his fingers against them as they lie gaping open, they wil shut, as if they saw. And the shel-fishes called Solenes, giue backe if any edge-toole come neere vnto them. Of foure-footed creatures, Moldwarps see not at all: a certaine shew and forme

* With vsitis
otherwise.

Haire.

* Or rather
Alpine.

Brain pan.

Braines.

Eardis.

Face or Visage.

Forehead.

Eie-browes.

The Eie.

forme they haue of eies to be seen, if a man take off the skin that lieth ouer the place. Moreover, among fouls of the aire, those of the Herons kind, which are called Leuci, for that they be white, want (by report) one eie. And for certaine, in case of Augurie, if these birds flie either into the South or North, it is holden for an excellent good presage, for they assure men that peril is past and promise securitie. *Nigidius* affirmeth, That neither Locusts nor yet Grasshoppers haue eies. As for snailles and such like, the two little horns that they put forth, serue them in stead of eies, as they sound or trie the way before them. The earth-mads and all the sort of worms & grubs, are without eies. Men alone of all liuing creatures haue eies of diuers colours, some of one, and some of another. For all other creatures of one and the same kind, are eied alike. Howbeit, some horses there be that extraordinarily haue *red eies. But in men it is hard to set down the infinit variety and difference in them: for some haue great glaring eies: others againe as little & as pin-king. Others also there be that haue them of a moderate and reasonable bignesse. Some be goggle eied, as if they would start out of their heads, and those are supported to be dim-sighted: others be hollow eied, and they are thought to haue the best and clearest sight: like as they who for colour haue goats eien. Moreover, ye shall haue some men, who can discern a far off: others againe that see not but neere at hand. Many there are, whose eiesight dependeth of the Sunnes light: for let the day be ouercast and cloudy, or the Sun gon downe, they see just nothing: and others contrariwise there be, that all the day time haue but a bad sight; yet in the night season they see better than any others. As concerning 2 balls or apples in one eie, as also who they bee that can bewitch and hurt folk with their very eie, sufficient hath bin said already. *Gray eies commonly in the dark see more cleare than others. It is reported of *Tiberius Caesar* the Emperor to haue had this property by himself, that if he were awakened in the night, for a while he could see euery thing as well as in the cleare day light; but soon after, by little and little, the darknesse would ouercast and shadow all againe: a gift that no man in the world was euer known to haue but himselfe. *Augustus Caesar* of famous memory, had *red eies like to some horses; and indeed wall-eied he was, for the white thereof was much bigger than in other men: which also was the cause, that if a man looked earnestly vpon him, and beheld him wistly (and a man could not anger him worse) he would be displeased, & highly offended. *Claudius Caesar* had a fleshy substance about the corners of his eies, that tooke vp a good part of the white, and many times they were very red and bloud shoten. *C. Caligula* the Emperor, his eies were euer set in his head, and stiffe againe. *Nero* had a very short sight; for vnlesse he winked (as it were) and looked narrow with his eies, he could not well see ought, were it neuer so neere. Twentie couple of professed masters of fence and sword-plaiers there were in the fence-school, that *C. Caligula* the Emperor maintained: & among therest two there were & no more, whom a man could not make to winke, or once to twinkle with their eies: present before them what weapon he would, or make offer to strike, so steady & firm were they: and therefore they euermore carried the prize, & were inuincible. So hard a matter is it for a man to keep his eies from twining: and many men naturally cannot chuse but be euermore winking and twinkling with their eies: but such are holden for fearful and timorous persons. None haue their eyes all of one color: for the bal or apple in the midst is ordinarily of another color than the white about it. Neither in any one part of the body are more signes and tokens to be gathered of the affection and disposition of the heart, than in the eie, of man especially about all other creatures. By it we may know whether one be modest, staied, sober, gentle, mild, pittifull or no. It sheweth malice, hatred, loue, heauinesse, sorrow, and joy. In the cast also of the eie there is as much variety, for some haue a furious, cruell, terrible, fierce, sterne, and fierie looke: others shew grauitie and constancie in their eie. Some haue an ouerthwart regard with them, others looke askew and awry. One while a man looks atone-side, and bath a wanton sheeps eie: another while he casteth his eie downe, and looks heauily: and when he list againe, hee can giue one a pleasant and merry looke. In briefe, the Eies are the very seat and habitation of the minde and affection. For one while they be ardent and fierie: otherwhiles they be bent and fixed vpon a thing: one while they twinkle, another time they winke close and say nothing. From them proceed the teares of compassion: When wee kisse the eie, we thinke that we touch the verie heart and soule. From hence commeth our weeping: from hence gush out those streames of water that drench and run downe the cheeks. But what might this water and humour be, that in the hearts grieve issueth in such plentie, and is so ready to flow? Where may it lie at other times, when we are in joy, in mirth, and repose? it cannot

A cannot be denied, That with the Soule we imagine, with the minde we see, and the Eies as vessels & instrumens receiuing from it that visuall power and faculty, send it soon after abroad. Hereupon it commeth, that a deep and intentiue cogitation blinds a man so, that he seeth not; namely, when the sight is retired far inward. Thus it is, that in the Epilepsie or Falling-sicknes the eies are open and yet see nothing: for why? the mind within is darkened. Moreover, Hares haue this qualitie, to sleep open eied: and so do many men besides them: and this the Greekes do expresse by the terme *apocarni*. Nature hath framed and compounded the eie of many thin membranes or skins. As for those tunicles without-forth, they are rough and hard *like horn, to withstand the iniuries of heat and cold: and those she hath ordained eftsloones to be clenfed and purified with the moisture of teares; to the end that they should be slipperie and moueable, for to turne quickly and to shift from all that may offend. As for the middle part & membrane of the eie, she hath set in a ball, like a window made of transparent horne [or rather of a grape:] the little compasse whereof containeth all the sight of the Eie, and sufficeth it not to wander and roll here and there, but directeth it as it were within a certaine pipe or small conduit: by which means also (to note by the way) the apple being gathered into so narrow a circle, doth easily auoid all inconueniences that are incident vnto it, for to annoy the same. This ball and point of the sight is compassed also round about with other circles of stidry colors, black, blewish, tawny, russet, and red: to the end that by this medley and temperate mixture of colors enuironed with the white besides, the light might be let in & represented to the Optick-sinew: and also by a temperat reuerberation and beating backe from those other colours; it should not dazle or offend the apple with the exceeding brightnesse thereof. In sum, this mirror or glasse-window, is so perfect and so artificially contriued, that as little as the ball of the sight is, a man may see himselfe full and whole in it. And this is the cause that many fouls, from a mans fist are ready to peck at the eies aboue all other parts, for that they would gladly sort and draw vnto their owne representation and image, which they see in the eies, as vnto that which they naturally affect. Certain sumpter-horses and mules, & such like beasts of carriage only, are troubled with sore eies, and diseased that way at euery change and increase of the Moon. But man alone, in the catarrha & suffusion of the eie, by voiding from it a certain humor which troubled the sight, doth recouer and see againe. There haue bin many known blind 20 yeares and more, & yet afterwards inioied the benefit of their eies. Some haue bin borne blinde, without any fault or defect of their eies. Diuers men likewise haue suddenly lost their sight by some secret accident and no outward offence knowne to giue occasion thereof. Many right skilfull masters in Chirurgerie, and the best learned Anatomists are of opinion, That the veins of the eies reach to the braine. For mine owne part, I would rather thinke that they passe into the stomacke. This is certain, I neuer knew a mans eie pluckt out of his head, but he fell to vomiting vpon it, & the stomack cast vp all within it. We that be citizens of Rome, haue a sacred and solenne manner and vse among vs, To close vp their eies that lie a dying, and are giuing vp the Ghost; and when they be brought to the Funerall fire, to open them againe. The reason of this ceremonious custom, is grounded hereupon, That as it is not meet for men aliuie to haue the last view of a mans Eie in his death, so it is as great an offence to hide them from heauen, vnto which this honor is due, & the body now presented. Man alone is subiect to the distortion & depraued motion of his eies. Hereof are come the surnames of certain families in Rome, *Sirabones* & *Patti*: for that the first of those houses were squint-eied, and had rolling eies. Those that were borne blink but with one eie, our countrymen called *Codites*: as also them that were pinke-eied and had very small eies, they termed *Ocelle*. As for such as came by those infirmities by some iniurie or mischance, they were surnamed *Lucini*. Moreover, we see that those creatures which ordinarily do see by night (as Cats do) haue such ardent and fierie eies, that a man cannot indure to look full vpon them: The eies also of the Roe-bucke and the Wolfe are so bright, that they shine againe, and cast a light from them. The sea-calues or Seales, and the Hyenes, alter eftsloones their eies into a thousand colours.ouer and besides, the eies of many fishes do glitter in the night, when they be drie: like as the putrified and rotten wood of some old trunk of an oke or other wood. We haue said before, that those winke not nor shut their eie-lids, who cannot roll their eies atone-side, but are faine to turne their whole head withall when they would see a thing that is not iust before them. The Cham-eleons (by report) rol their eies all whole euery way as they list, vp and downe, too and fro. Crabs looke awrie And yet such fishes as are inclosed within a brittle

brittle and tender shell, haue their eies inflexible & stiffe. Lobsters and Shrimpes for the most part, haue their eies standing out very hard, albeit they be couered with the like shells. Those that haue hard eies, are not so well sighted as those that haue moist. It is commonly said, that if a man pluck the eies out of the heads of yong serpents, or yong Swallows, they wil haue new again in their place. All Insects and other creatures that lie within hard shells, stir their eies as four-footed beasts do their ears: but in those that haue tender shells, their eies be hard. And all such, as also fishes & Insects, haue no lids to their eies, and therefore couer them not. But there be none without a thin membrane or pellicle ouer them, which is cleare and transparent like glasse.

Men and women haue haire growing on the brims of both Eie-lids: but women do colour them euery day with an ordinarie painting that they haue: so curious are our dames and would so faine be faire & beautiful, that forsooth they must die their eies also. Nature ywis gaue them these hairy eie-lids for another end, namely, for a palaisade as it were & rampier of defence for the sight, yea and to stand out like a bulwark for to keep off and put by all little creatures that might come against the eies, or what things fouer els should chance to fall into them. Some write, That the haire of the eie-lids will shed and fall away, but not without some great injury, and namely, in such persons as be ouermuch giuen to lecherie. No other liuing creatures haue these haire, but such as otherwise be clad all ouer their bodies with haire or feathers. But, as four-footed beasts haue them in the vpper lid only, so Fouls haue none but in the nether: like as those serpents which are tender skinned and four-footed, as Lizards. The Ostrich is the onely foule which hath haire on the vpper eie-lidde. The Ape hath on them both as well as man. Moreover, all fouls haue not eie-lids, and therefore such do not winke, namely, those that bring forth liuing creatures. The greater and heauier foules, when they would close their eies doe it with drawing vp the nether lid. The same also twinkle by means of a pellicle or skin coming from the corners of their eies. Doves and such like birds wink with both eie-lids: but four-footed beasts that lay eggs, as Tortoises and Crocodiles, vse the nether lid only, without any twinkling at all, because their eies be very hard. The vtmost compasse or edge of haire in the vpper lid, the Latines called in old time *Cilium*, and thereof came the name of the brows, to be *Super-cilium* in Latine. This brim of the eie-lid, if it be diuided by any wound, cannot be drawne together againe: like as some few parts besides of mans body.

Vnder the eies, are the balls of the Cheeks, which men and women only haue; which in old time they called *Genae* in Latine. And by the law of the twelue Tables, women were expressly forbid not to reare, rent, or scratch them in any case with their nails. This is the feat of bashfulness and modesty: heare appeareth most of all the rednesse of blushing. Vnder them, are the hollow pits of the cheekes, wherein mirth and laughter do lodge and inhabite.

Man only hath his Nose standing forth aloft, which now adays they dedicate to flie scoffing and derision, inso much as they attribute that terme do dry mockers and flowters. And verily there is not a creature besides, that hath his nostrils so bearing out. [As for birds, serpents, and fishes they haue holes only to smel at, without any other nostrils to be seen:] & hereof come the surnames of *Simones* and *Silones*, whereof the former haue flat noses, the other are hooked and camoise nosed vpward. Infants haue bin known many times when they are seuen moneths old, to want the holes and passages both of nose and eares.

Then follow the Lips: some men there be that put them far out, by reason that they are gag-rooted or tut-mouthed, and those are called *Brocci*. Others againe who are blabber-lipped, are named in Latine *Labeones*.

As for the mouth, all creatures haue it that bring forth their yong aliue: and either it is gentle and pliable, or else hard and vnruely, as we see horses; that either willingly receiue, or else refuse the bit. By which also we giue to men, the tearme either of modest and good countenance, or else of shamelesse and vntoward. But in stead of mouth and lips both, Nature hath giuen to all foules sharpe Bills of an horny substance, and as many of them as liue vpon rauin and prey, haue them hooked inward: but such as gather and pecke onely, they haue strait beakes. As for those that either graze, roor, or pudder in mud, like to swine, they are broad and flat billed. As for horses, mules, and such like, they vse their mouthes in stead of hands, to gather in their food as they either feed in pasture, or be at racke and manger. And the wider mouthes haue they that liue of killing and denouring other beasts.

No

A No creatures liuing, but man and woman, haue Chins and Iaws. The riuer Crocodile alone moueth the vpper iaw: the land Crocodiles chew as other creatures do, but only bias.

Of Teeth, there be three sorts: for either they be framed like saws, or els set flat, euen, and leuell: or last of all, stand gabbing out of the mouth. The saw teeth run one betweene another, as if two combs grew together, because they should not weare if they met one with another, as we see in serpents, fishes, and dogs. Horses & men haue their teeth of one euen leuell. The bore, the water horse, and the Elephants, haue their tusks and fangs sticking forth. Of those teeth which are smooth and meet just one against another, such as diuide and cut the meat, be broad edged, as the fore-teeth: those that grind and chew, be double, and stand within the chaw: but such as seuer and part the meat in the mouth, be sharp pointed: and we call them our eie-teeth; the Latines *Caninos*, or Dog-teeth. And these are they, that of saw teeth be the longest. Euen and leuel-ranged teeth, be either in both chaws alike, as in an horse; or els they be wanting before in the vpper chaw, as in Kine, Bulls, Oxen, Sheep, & all such as chew cud. Goats haue none aboue but the 2 foreteeth. None haue gabbed tusks standing forth of the mouth, whose teeth are fashioned like a saw. The females of them that haue those fangs & tusks, if haply they haue the like (for seldome they are seen with such) make no offense vfe of them at all: for whereas the Bores do strikewith them, the Sows only do but bite. No horned beasts hath such tuskes: But all those haue hollow teeth, whereas in all the rest, they be found & solid. All fishes be toothed like saws, saue only the guilt-head Scarus; for this only of all creatures liuing within the water, hath an euen course of teeth. Furthermore, many fishes be found to haue their mouth, yea and their tongue, couered and beset all ouer with teeth: to the end, that by the means of many wounds (as it were) they might make soft their meat, which otherwise they could not possibly chew and teare. In many the teeth stand in the pallat and roofof their mouth, yea and in their very taile. Moreover, some there be that haue them crooking inwardly to the mouth, that the meat might not fall out againe: as hauing no other means to hold it in. Also, the Aspides, and Serpents are likewise toothed, but they haue aboue, both on the right side & the left, two teeth that be very long, and those are hollowed within after the maner of smal pipes, like to the stings of Scorpions, by which they discharge their phison. The best writers who haue searched most curiously into the secrets of Nature, do hold, That the venome of Serpents is nought els but their gal; and that by certain veins vnder their ridge bone, the same passeth along to the mouth.

D Some say, that a Serpent hath but one venomous tooth; which because it is crooked, therefore he turneth and bendeth it vpright when he would sting or bite withall. Others affirme, that at such a time the same falls out, and a new cometh vp againe and groweth in the place: for easie it is to be driuen or shaken out: and we see some of them handled and carried in mens bosomes, without that tooth. It is said moreover, that the Scorpions haue the like tooth in their taile, and most of them three together. Vipers teeth are couered and lie hidden within their gums. This Serpent being full of poison, redoubleth her pricke, and at euery bit letteth in poison into the wound. No flying foule hath teeth, saue only the Bat or winged-mouse. Of all creatures which beare no hornes, the Camell onely hath no fore-teeth in the vpper chaw. Such as be horned, haue no saw-teeth. Snailles likewise haue teeth: witnesse the leaues and tendrils of vines, which the very least of them all do gnaw and eat away. But for sea-fishes, that those which liue in shells or be gristly, should haue their foreteeth, and namely, that the sea-Vrchins, a piece; I cannot but wonder how men could come by the knowledge. Insects in stead of teeth, haue a sharp pricke to sting withal. Apes haue teeth euen as men. An Elephant hath foure teeth within to chew with (besides those that stand out) which in the males turne and bend vpward, but in the female they are streight, & shur directly downward. The fish also called *Musculus Marinus*, which goeth before the Whale or Whirlpoole as his guid, hath no teeth at all; but in stead thereof, his mouth all within, his tongue also and pallat, is rough againe with certaine bristles. The lesse four-footed land-beasts, haue the two fore teeth of either side, longer than the rest. As for all other creatures, they bring their teeth with them into the world: man only is born without them, and at the 7 month they commonly breed. In all other creatures they continue still and stick fast; except Men, Lions, Horses, Mules, Asses, Dogs, and such as chew cud, for these change their teeth: but Lions and dogs cast only the eie-teeth, called *Canini* in Latine. The eie-tooth of a Wolfe (so it grow on the right side of the head) is thought to doe strange matters. The great grinders which stand beyond the Eye-teeth, in no creature whatsoeuer doe fall

Gg

out

The Chin & Iaw.
The Teeth.

out of themselves. As for the farthest cheek-teeth in a mans head, which be called *Genuini*, [the Wit-teeth] they come about the time that he is 20 yeares old, and in many at 80 yeares of age. Sure it is, that those teeth fall from women in their old age, and soone after come againe: such women I meane, as had no children in their youth. And *Mutianus* hath reported, That hee saw one *Zandel* a citizen of Samothrace, who had new teeth comming vp after he was an 104 yeares old. Moreouer, males ordinarily haue more teeth than the females: as we may see in mankind, Sheep, goats, and Swine. *Timarchus* the son of *Nicoles* the Paphian, had a double course of teeth in either jaw. He had a brother also who neuer cast his foreteeth, and therefore hee wore them before to the very stumps. We reade in Chronicles of one man that had a tooth growing out of the very pallat of his mouth. As for the eye-teeth, if they be lost by any mischance, there neuer grow again any other for them. In horses only, of all other creatures, teeth wax whiter by age: for in the rest, they turne to be browne and reddish. The age of Horses, Asses, and Mules, is knowne by a marke in the teeth: a horse hath in all 40. At the end of 30 moneths, hee loseth his fore teeth of either chaw, as well aboue, as beneath: the yere following as many, euen those that be next, namely at what time as they put out those which be called the cheek teeth. At the beginning of the fifth yere, he loseth other two, but there come vp new in the place in the sixth yere. By the seuenth yere he hath all, as well those that should come in others place, as those which are firme and neuer change. A gelding neuer casts his teeth, no nor his sucking teeth, in case he were gelded before. Asses in like manner begin to shed their teeth at the 30 moneth of their age; and so forward from 6 moneths to 6 moneths: and if they sole not before they haue shed their last teeth; they are for certaine to be holden barren. Kine and Oxen, when they be two yeres old, do change their teeth. Hogs or Swine neuer haue any teeth to fall. Now when as these marks are gon out, which shew the Age of Horses, Asses, and such like, yee must (to know their age) go by the ouergrowth & standing out of the teeth, the greiness of the haire ouer their brows, and the hollow pits thereabout: for then are they supposed to be 16 yeares of age. As touching men, some are thought to haue venome and poison in their teeth: in so much, as they be shewed bare and naked against a cleare mirror or looking glasse, they wil dimme the beauty thereof, yea, and kill yong pigeons whiles they be calow and vnplumed. But forasmuch as we haue spoken sufficiently of teeth, in our treatise as touching the generation of Man, wee will passe ouer the rest, and proceed vnto other parts, saue onely that this is to be obserued and noted, How children be sicke when they be about breeding of their teeth. And to conclude, of all other creatures, those are most dangerous with their Teeth, which haue them framed like sawes, and closing one betwene another.

The Tongue.

Now as concerning Tongues, we obserue much diuersitie in them: for all creatures are not tongued alike. First and formost, Serpents haue very thin tongues, and the same three-forked; blacke of colour, itching, and ready to pierce; and if a man take them forth, very long. Lizards haue tongues two-forked and full of haire: so haue the Seales or Sea calues a double tongue: but the tongues of these before named, are as small as haire: as for the rest, their tongues serue them to lick their muzzles and lips all about. Fishes haue their tongues for the greater part therof, cleaving fast to their pallat; and in Crocodiles they are so, cleane throughout. But as well fishes as other creatures of the water, haue a fleshy palat, which serues them in stead of a tongue to tast withall. Lions, Libards, and all of that sort, yea and Cats, haue their tongues rough and vneuen, made like a file with many small edges lapping one ouer another: in such sort, as that with licking it wil weare the skin of a man so thin, that their spittle and moisture when it cometh neare vnto the bloud and the quick, will driue oftentimes into rage and madnesse, those whom they so lick, yea although otherwise they be made tame and gentle to come to hand. As touching the tongues of Purple fishes we haue written already. Frogs haue their tongues in the forepart fast to the mouth: the hinder part within toward their throat, is free and at liberty, whereby they keep that croaking which we heare at one season of the yere; namely, when the males cal to the femals for to ingender; & then they be called *Olalygones*: for at that time they let down their nether lip somewhat vnder the water, that they gargle with their tongue leuell to the water, which they receiued into their throat: and so while their tongue quauereth withall they make that croaking noise abovesaid: he that would looke then aduisedly vpon them, should see their specks so swoln and stretched out full, that they will shine againe: he should perceiue, their eyes ardent and ferie with paines that they take thus with the water. Those creatures that haue

A haue pricks and stings in their hin-parts, are furnished also with tongue and teeth. As for Bees, their tongue is very long, and the Grasshoppers put it forth a good way. They that haue a fistulous sting or pricke in their mouth, are provided neither of teeth nor tongue. In some Insects, (as namely Pismires) the tongue lieth close within. Elephants, aboue all other beasts, haue a large and broad tongue. All creatures haue their tongue loose and at liberty at all times, each one in their kind: man only is oftentimes so tongue-tied, that needfull it is to cut certain strings and veines for to ease it. *Metellus* the high priest and chiefe sacrificer at Rome, had such a swelling and flaming tongue (by report) that against he should dedicate the temple of the goddess *Opifera*, he labored so with his tongue for vtterance, for certaine moneths together, & took such pains, as if he had bin vpon the racke. All children, by that time that they be seuen yeres old at the farthest, speake readily, so as they be not by some vnnatural cause impeached. But some men there be, which haue their tongues so at commandement, and so artificially they can handle it and their throat together, that they are able to counterfeit the singing of all birds, and the voice of any other creature, that one cannot know and discern them afunder. As touching Taste, which is the iudgement of meats and drinks, to wit, What smack and tallage they haue: all other liuing creatures find it at the tip of their tongue only: but man tasteth as well with the pallat or rooffe of his month. The spongy kernels, which in men be called *Tonsils*, of the Almonds, are in swine named the Glandules. That which betwene them hangs down from the inmost part and rooffe of the mouth, by the name of the *Vvula*, is to be found in man onely.

Vnder it, there is a little tongue (which the Greekes call *Epiglottis*) at the root of the oesophagus. The flap Epiglottis. C and the same is not to be found in any creature that layeth eggs. A twofold vse it hath, lying as it doth between the two pipes. Whereof, that which beareth more outward, and is called The rough Arterie, or the Windpipe, reacheth vnto the lungs and heart. And as a man doth eat and swallow downe his meat, this foresaid little flap doth couer it, for feare lest as the spirite, breathing and voice passeth that way, the meat or drink (if it should go wrong to the other conduit or passage) might indanger a man and put him to great trouble. The other is more inward, called properly the Gullet, or the Wezand, by which we swallow down both meat and drink, and it is open to the stomacke first, and so to the belly. This also the said flap doth couer by turns, to wit, as a man doth either speake or draw his breath, lest that which is already passed into the stomacke, should come vp againe, or be cast vp vnseasonably, and thereby impeach a man in his speech: the D Windpipe consisteth of a gristly and fleshy tunicle: the Wezand of a membranous or sinewie substance and flesh together.

There is no creature hauing a necke indeed, but it hath also both these pipes. Wel may they haue a gorge or throat, in whom there is found but the gullet only: but nape of neck behind they can haue none. As for those vpon whom Nature hath bestowed a neck, they may with ease turn their head about too and fro euery way, to looke about them, because it is composed of many spondyles, or turning round bones, tied and fastened one vnto another by ioints and knots. The Lion only, together with the Wolfe, and the Hyæna, haue this necke bone of one entire and straight peece, and therefore stiffe that it cannot turne. Otherwise it is annexed to the chine, and the chine to the loines.

E This Chine likewise is a bony substance, but made round and long, and fistulous within, to giue passage to the marrow of the backe, which descendeth from the brain. Learned men are of this opinion, That this marrow is of the same nature that the braine is: and they ground vpon this experience, That if the thin and tender skin that incloseth it be cut through, a man cannot possibly liue, but dieth immediatly. All creatures that be long legged, haue likewise in proportion as long necks. So haue also water-fowls, although their legs be but short. But contrariwise, yee shall not see any birds with long necks, that haue hooked tallons. Men onely and Swine, are troubled with the swelling bunch in their throats: which many times is occasioned by corrupt water that they drinke. The vpper part or top of the Wezand, is called the Gorge, or the gullet: the nether part or the extremitie thereof, is the Stomacke. There is another fleshy concauitie of this name, vnder the windpipe, annexed to the chine-bone: long it is and wide, made in fashion of a bottle, flagon, or rather a gourd. Those that haue no gullet, are also without a stomack, a necke, and a wezand, as fishes: for their mouths and bellies meet. The sea Tortoise hath neither tongue nor teeth: with the edge of his muffle (so sharpe it is) he is able well enough to chew all his viuals.

G g 2

Vnder

The Stomack

Vnder the Atterie or wind-pipe, is the mouth of the stomacke, of a callous or gristly substance, thicke toothed, with prickles in manner of a bramble, for the better dispatching of the meat, and these orches or plaits grow smaller and smaller, as they approach neerer to the belly: so as the vtmost roughnesse thereof in the end is like vnto a Smiths file.

The Heart.

Now are we come to the Heart, which in all other liuing creatures is scituate in the very midst of the breast in man only it lies beneath the left pap, made in maner of a pearce, & with the pointed and smaller end beareth out forward. Fishes alone haue it lying with the point vprward, to the mouth. It is generally receiued and held, that it is the first principall part which is formed in the mothers wombe next vnto it the braine, and the eies last of all. And as these be the first that die, so the Heart is last. In it (no doubt) is the most plenty of heat, which is the cause of life. Surely it neuer moueth and panteth, like as it were another liuing creature by it selfe: covered it is within forth with a very soft, yet a strong tunicle, that enwrappeth it: defended it is besides with a strong murd of ribs, and the breast bone together: as being it selfe the principall fortress and castle, which giues life to all the rest. It contains within it certaine ventricles and hollow receiues, as the chiefe lodgings of the life, and bloud, which is the treasure of life. These in greater beasts are 3 in number: & none there is without two. This is the very seat of the mind and soule. From this fountain there do issue 2 great vessels, master-veins or arteries, which are diuided into branches: & being spread as wel to the fore-part as the back parts of the body, into smaller veins, do minister vitall bloud to all the members of the body. This is the only principall part of the body that cannot abide to be sick, or languish with any infirmity: this lingereth not in continuall pain: no sooner is it offended, but death insueth presently. When all other parts are corrupt and dead, the Heart alone continueth aliue. All liuing creatures that haue an hard & stiff heart are supposed to be brutish: those that haue small Hearts, be taken for hardy and valiant: contrariwise they are reputed for timorous and fearfull, which haue great Hearts.

And the bigger Heart, in proportion of the body, haue Mice, Hares, Asles, Deere, Panthers, Wicels, Hyenas, & in one word, all creatures either by nature fearefull, or vpon feare hurtfull. In Raphlagonia, Partridge haue two Hearts. In the Hearts of Horses, Kine, Bulls and Oxen, are other while bones found. The Heart in a man groweth yerely two drams in weight, vntill it be 50 yeares of age, and from that time forward it decreaseth from yere to yere as much: whereupon he is not able to liue above 100 yeares, for want of Heart: as the Egyptians be of opinion; whole manner is to preserue the dead bodies of men spiced and embalmed. It is reported of some men, that they haue hearts all hairy: and those are held to be exceeding strong and valiant.

* In three kind dry battels.

Such was Aristomenes the Messenian, who slew with his owne hands * 300 Lacedæmonians. Himselfe being sore wounded and taken prisoner, saued his owne life once, and made an escape out of the caue of a stone quarrie, where he was kept as in a prison: for hee got forth by narrow Fox-holes vnder the ground. Being caught a second time, while his keepers were fast asleep, he rolled himselfe to the fire, bound as he was, and so without regard of his owne bodie, burnt in funder the bonds wherewith he was tied. And at the third taking, the Lacedæmonians gaused his brest to be cut and opened, because they would see what kind of Heart hee had: and there they found it all ouergrown with hair. Moreouer, this is obserued in perusing the inwards of beasts, That when they be wel liking, and do presage good, the Heart hath a kind of fat in the vtmost tip thereof: howbeit, this would be noted, That according to the Soothsaiers learning, their Heart is not alwaies taken for a part of the bowels or intrails: for after the 123 Olympias when Pyrrhus king of Epyrus was departed out of Italy, what time as L. Posthumus Albinus was king sacrificer at Rome, the Soothsaiers and Wisards began first to look into the heart, among other inwards. That very day when as Cesar Dictator went first abroad in his roiall purple robe, and tooke his seat in the golden chaire of estate, he killed two beasts for sacrifice, & in both of them the intrails were found without any Heart: whereupon arose a great question and controuersie among the Augures and Soothsaiers, How it could be, that any beast ordained for sacrifice should liue without that principall part of life: or whether possibly it might lose it for that present only: Ouer and besides, it is held for certaine, that if any dye of the trembling and ache of the heart, or otherwise of poison, their heart will not burne in the fire. And verily, an Oration there is extant of Vitellius, wherein he challengeth Piso, and chargeth him directly with Poysoning of Germanicus Cesar, vpon this presumption, for he openly protested and proued, That the heart of Germanicus would not consume in the funerall fire, by reason of poyson. But contrariwise,

A riwife, Piso alledged in his own defence the foresaid disease of the Heart called Cardiaca, whereof as he said Germanicus died.

Vnder the Heart lie the Lights, which is the very seat of breathing: whereby we draw and deliuer our wind. For which purpose, spongyous it is and full of hollow pipes within. Few fishes, as we said before, haue any Lungs: other creatures also that lay eggs, haue but final, and the same full of froth, and without bloud: wherupon they be not thirsty at all: which is the cause likewise that Seales and Frogs can diue so long vnder the water. The Tortoise also, albeit he haue very large Lungs, and the same vnder his shell, yet there is no bloud therein. And verily, the lesser that the lungs be, the swifter is the body that hath them. The Chamaeleons lights be very big, for the proportion of his body, for little or nothing els hath he within it.

The Lights or Lungs.

Next followeth the liuer, which lies on the right side. In that which is called the head of the Liuer, much varietie and difference there is. For a little before the death of Marcellus (who was slaine by Annibal) as he sacrificed, there was found a Liuer in the beast, without that head or fibres aforesaid: and the next day after, when he killed another for sacrifice, it was seen with two. When C. Marius sacrificed at Vtica, the same was likewise wanting in the beast, being opened. Semblably, when prince C. Caligula the Emperor sacrificed vpon the first day of Ianuarie, at his entrance into the Consulship, the Liuer head was missing but see what followed! in that yere his hap was to be slaine. Moreouer, his successor Claudius within a month before he died by poison, met with the like accident in his sacrifice. But Augustus Cesar, late Emperor of famous memory, as he killed beasts for sacrifice, the very first day that he entred vpon his imperiall dignity, found in 6 of them 6 liuers, which were all redoubled & folded inward, from the nethermost lobe or skirt beneath: wherupon answer was made by the Soothsayers, That within one yere he should double his power and authority. The foresaid head of the Liuer, if it chance to be slit or cut, presageth some euill hap, vnlesse it be in case of feare and pensiuenesse: for then it betokeneth good issue, and an end of care and sorrow. About the mountaine Briletum and Tharne, also in Chersonesus neere vnto Propontis, all the Hares ordinarily haue two Liuers: and (a wonderous thing it is to tell) if they be brought into other countries, one of the said Liuers they loofe.

The Liuer.

Fast to the Liuer hangeth the Gall; yet all creatures haue it not. And about Chalcis in Euboea, the sheep are quite without Gall. But in Naxos they all haue two Gals, and the same very big. The strangers that come into both those parts, think the one as prodigious & monstrous as the other. Horses, Mules, Asles, Deere both red and fallow, Roe-bucks, Swine, Cammels, and Dolphins haue no Gall. Some Mice and Rats there be which haue it. And few men there are without, howbeit, such are of a stronger constitution, more healthfull, & longer liued. Howbeit some are of opinion, That all horses haue Gall, not annexed to their liuer, but within their bellie: and as for the Deere aforesaid, it lieth (as they think) either in their taile, or els their guts: which (by their saying) are so bitter, that hounds and dogs by their good wils would not touch them. Now this Gal is nothing els but an excrement purged from the worst bloud: & therefore bloud is taken to be the matter thereof. Certain this is, that no creatures haue Liuers, but such as likewise haue bloud. And in truth, the Liuer receiueth bloud from the heart, vnto which it is adioined, and so conueigheth and distributeth it into the veins. Black choler lying in the Liuer causeth fury and madnesse in man: but if it be all cast vp by vomit, it is present death: hereupon it commeth, that we terme furious and raging persons by the name of cholericke, or full of Gall: so great is the venome of this one part, if it reach once to the seat of the mind, and possesse it. Nay more than that, if it be spread and dispersed ouer all parts of the body, it infecteth it with the yellow jaundice, yea, and coloureth the very eies, as it werewith Saffron. Let it out of the bladder or bag wherin it is, ye shall see it stain vessels of brasse, yea, they wil become black againe, and lose their brightnesse if they be touched therewith. No maruell then if the venome and poison of serpents, proceed from the Gall. They that vse to feed of worme wood growing in Pontus, commonly haue no gall. Rauens, Quails, and Feafants, haue their gall ioining to their kidneys, or rather to their guts, of one side and no more: and some to the guts only, as Pigeons, Hawkes, and Lampreies. Few birds there be that haue gall in the Liuer. As for Serpents and Fishes, they haue the greatest gals of all others, for the proportion of their bodies. Most of them haue their gall along their guts throughout, in manner of the Hauke and the Kite. Moreouer, in all Whale fishes their gall is fastened to the liuer: and so, we see it lieth in the Seales, whose

The Gall.

whose Gall is singular good for many purposes. Oxe Gall in limning giueth a golden colour: G
The Soothsaiers haue dedicated it to *Nephtis*, & the mighty power of water. *Augustus* the Emperor found two Galls in a beaft that he killed for sacrifice, vpon that very day whereon he obtained that famous victorie at Actium. Some say, that the lobes or fibres in the smal Liuers of certaine Mice and Rats, are commonly found to be as many as the Moone is daies old in euery moneth: and looke how many daies you reckon of her light, so many may you count the fibres aforefaid. Also, that their liuer groweth at mid-winter, when daies be at shortest. In the kingdoms of Grenada and Andalusia in Spaine, Conies are many times found with double Liuers. The land Frogs of Toads kind, haue one lop or lappet of the liuer, which Ants will not touch, because of the poison therein, as is supposed. Liuer of all things may be kept and preferred longest: and we reade in chronicles, that there haue bin found in some cities long besieged, Liuers in salt or powder, which had continued a 100 yerres. Serpents and Lizards haue long Liuers. In that sacrifice which *Casina Volaterranus* killed, Dragons were seen to issue from among the Entrails and the Liuer; and this turned to be a lucky presage. And verily, why should wee think this report or any other in sacrifices, to be incredible? considering that vpon the very day that *K. Pyrrhus* was slain, the heads of the beafts being slain for sacrifice (notwithstanding they were cut off from the bodies) moued forward vpon the ground, and licked vp their owne blood.

The Midriffe The vpmost inwards of a man, to wit, the Heart and Lungs, are diuided from the other entrails beneath, by certain pellicles or rims of the Midriffe, which the Latines call *Præcordia*, (because they are drawne and set before the Heart as a defence:) and the Greeks *Phrenes*: true it is, that Nature in great prouidence hath inclosed all the noble and principal parts within several skins and coats of their owne, which might serue in stead of sheathes and cases for their better defence: but in this partition of the Midriffe, shee had a more particular regard to the propinquitie of the Stomack and Belly, lest that the vitall parts being so neare, should be oppressed and suffocated with the streams and vapors of the meat therein boiling. To this parr are we beholden for our quick wit, this membrane of the Midriffe we may thank for our ready conceit and vnderstanding: to which effect, charged it is with no flesh, but composed of fine & subtil sinews. The same likewise is the very especiall seat of mirth: as we may perceiue euidently by tickling vnder our armpoles, vnto which it reacheth: and as in no place of mans body the skin is more fine and tender, so it taketh as great pleasure to be tickled and lightly scratched there. And herupon it is, that in solemne combats of sword-fencers at vtterance with the sharp, as also in field battels, we haue many a time seen men wounded and thrust through the Midriffe, to die laughing.

The Bellie or Pannch, with the Guts. *Aristotle* saith foure fold. To proceed in our Anatomy, all creatures hauing a Stomack or Read, are not without a belly vnder it. As many as chew cud, haue the same * double or two fold, the rest one and no more: and looke who want blood, are without it also. For some there be that haue one entire gut, that beginneth at the mouth, and by a certaine way redoubleth and returneth backe againe thither, and namely, the Cuttill and the Polype. In man it is annexed to the bottome of the Stomack, like as in a Dog. And in these twaine onely, narrower it is in the lower part: which is the cause that none but they do vomit; for when their bellies be full, the streight passage beneath keeps the meat from descending, and so it returneth vward: which cannot happen to them that haue it wide and large, whereby the meat is sooner sent downe into the guts beneath. Next to the bag of the Stomack, men and sheep haue the small guts called *Lactes*, through which the meat passeth: in others it is named *Ile*. Next vnto which are the greater guts, that reach into the Paunch: and in man they are full of windings and turnings: which is the reason, that as many as haue a great space between the Stomacke and the Paunch, are more hungry and greedy of meat than others. And those who haue the fattest and most greasest bellies, most commonly are the grossest of capacity and vnderstanding. Some fouls likewise haue a two-fold receptacle for their meat: the one is the gizzer, craw, or gorge, wherein they bestow at the first their meat when they take it new: the other is the true stomacke indeed; into which they send out of the former, the victuals already altered, prepared, and in good forwardnes of concoction. And such be Hens and Pullet, Coists or Stock-doues, House-doues, or Pigeons, and Partridges. All the rest in manner want the said gizzer, but in stead thereof haue a wider gorge, where-through the meat passeth into the stomack, as *Choughes*, *Raucens*, and *Crowes*. Some againe there be that haue

A haue neither one nor other, but be far different from the rest, and these haue their bellie hard to their gorge: and especially such as haue long neckes and narrow, as the bird *Porphyrus*. The paunch or bellie of those beafts which are whole hounded, is hard and rough. And in land beafts, it is in some thicke toothed, and set full of sharp prickles: in others it is framed rugged likewise, plaited crosse in manner of lattice, readie to catch and bite what focuer. Those which haue not teeth in both chawes, nor yet chew cud, do in this bellie concoct and digest their victuals, and out of it they send the meat into the paunch where the guts lie. This member, in the mids, is in all creatures fastened to the nauill: and in man it is like vnto that of a swine, hauing toward the neather part, a great gut named Colon: and this is it, which giues occasion to the intollerable paine of the colique. This Gut in dogs, is very streight and narrow, whereupon they haue much adoe to discharge it, and lightly they doe not skummer, but with great paine and difficultie. B Those creatures of all others be counted most vnstatable, whose meat passeth immediatly out of their bellie into the straight gut Longaon, or the Tiwill: as among foure-footed beafts, the Wolfe, engendred betwene the Hind and a hee-Wolfe: and in foules, the Cormorant. An Elephant hath foure bellies or paunches: all other parts within, be answerable to those in Swine. Their lungs be foure times as big as those in an Oxe. The gorge or craw, and the stomacke or gizzer in birds, is the thicke and fleshie. In the maw or stomack of Swallows young birds, there be some certaine little white stones, or else of a reddish colour, called therupon *Chelidonij*: and they be in great request in Art-Magicke, namely for charmes and enchantments. Likewise in the second bellie or paunch of yong Heifers, there is found a small, black, and grauelly stone round as a bal, and light withall: a singular remedie (as it is thought) for women that haue hard labour and be deliuered with much paine & difficultie, so it be taken before that euer it touch the ground. C The Stomacke and the Guts, are kept within a fat and thin cawle, in all creatures but those that lay eggs.

The Cawle or Kell.

Vnto this Cawle, is fastened the Spleene on the left side of the belly just against the liuer. D And otherwhiles these two shift their places, and one lies where the other should; but that is euer held as a prodigious token. Some are of opinion, that those creatures which lay eggs haue a Splene, but it is very smal: as also the Serpents. And surely such an one appeares plainly in the Tortoise, Crocodile, Lizards, and Frogs. Certaine it is, that the bird *Agoccephalus* hath none at all, no more than others that want blood. This member hath a propertie by it self sometimes, to hinder a mans running: whereupon professed runners in the race that be troubled with the spleene, haue a deuise to burne and wast it with an hot yron. And no maruell: for why? they say that the Splene may be taken out of the bodie by way of incision, and yet the creature liue neuer the lesse: but if it be man or woman that is thus cut for the Splene, hee or shee loseth their laughing by the means. For sure it is, that vntemperate laughers haue alwaies great Splenes: In *Scythia* (a countrey of Asia) the sheep haue very small Splenes, and from them were deuised the remedies to cure the disease thereof, and to wast their excessiue greatnesse.

The Spleene.

E But about Briletum and Tharne (the hills abouenamed) the Deer haue foure Kidnies apeece: whereas on the contrarie side, neither feathered fowle nor skalie fish, haue any. Moreover, the Kidnies sticke close vnto the bones. The right Kidney in all creatures is the bigger, lesse fat, dryer of the twaine: howbeit in both of them, there is a fat issueti out of the mids, faue only in Seales. All liuing creatures are fattest about the raines of the backe: and sheepe may be so far ouergrowne with fat, that they will die thereof. Sometime there be little stones found within them. All four-footed beafts that bring forth their yong quick, haue kidnies. And of such as lay eggs, the Tortoise alone, which also hath all other entrails. The Kidnies of a man, be like to those of Kine and Oxen, as if they were composed of many together.

Kidnies.

F Nature hath imbarred the Breast-parr (wherin lie the vitall members) with ribs round about: but toward the belly (which needs must grow and stretch) shee hath not so done, but hath giuen it libertie: for no liuing creature hath bones to compasse the panch. Mans Breast only is broad and square: in all others it is framed otherwise, like the keele of a ship: which is more euidently to be seene in birds and in water-fowles most of all others. As for Ribs, man only hath eight that be full and whole: Swine haue ten: horned beafts thirtene: Serpents thirtie.

Brest & ribs.

Vnder the belly and paunch in the fore-part of the bodie, hangeth the bladder: which no creature laying eggs hath, save only the Tortoise. It is found in none but such as haue a paire of lungs, and the same with blood: neither in any creeping creature without feet. Betwene it and the

The Bladder.

the belly be certaine canals or arteries, reaching to the groine, which by the Greeks are named *Gilia* [i. the Flanks.] In the bladder of a Wolfe, is found a little stone called *Syrites*. But in some mens bladders, ye shall see otherwhiles certaine grosse haire to engender, like to bristles; also grauell and stones, which put them to intollerable paine. This bladder consisteth of a certaine tunicle or skin, which if it be once wounded, cannot again be consolidated; no more than those fine pellicles or rinds that enwrap the braine and the heart. For you must thinke, that there be many sorts of these membranes or filmes seruing to sundrie vses.

The Matrix

As for women, their inward parts are answerable to mens in all these respects abouesaid: and besides, they haue by themselves adioyning close vnto the bladder, another little bag or purse; whereupon it is called in Latine *Uterus*: and it hath another name beside, to wit, *Loco*; which we call the Matrix, the Mother, or the Wombe: and in other creatures it is tearmed *Vulua*. In Vipers, and such as hatch their eggs within them it is double. In those that lay eggs, it lyeth fast to the Midriffe. In women, it hath of either side two chombers or concauities. If at any time it chance to be peruerted and turned the wrong way, or take aire into it, it is deadly, and riseth vp to stop the wind. If Kine be with Calfe, men say, they carrie not their yong but in the right cell or receptacle thereof, yea, although they goe with two Calues at once. Our fine-toothed giutons do find a better tast in a Sows wombe that slips and casts her Pigs and it together, or is cut out of her belly, than if the dam bringeth forth her fruit at full time. The one forsooth is called *Ejecticia*, the other, *Porcaria*. And the best is that of a yong Sow that neuer farrowed before: and contrariwise, of old Sows and such as haue giuen ouer to farrow. After she hath pigged, vnlesse she be killed the same day, the same hath a dead color, and is but leane. And yet that of a young Swine is not greatly commended, vnlesse it be of her first Pigs. Howbeit, those of old Sows also be in request, so they haue not giuen ouer breeding: and namely, if they be taken either within two daies before they should pig, or within two daies after they haue pigged, or at leastwise, the very same day. The next to the cast-wombe abouesaid, is that of a Sow killed a day after she hath pigged. The paps and teats of such a Sow, newly hauing farrowed, is counted excellent good meat, so that it be taken before euer the Pigs sucked them drie: but those of a Sow which hath cast her pigs before time, is held for the worst of all. In old time they called this morcell in Latine *Abdomen*, and before it was growne hard and brawnie, they neuer were wont willingly and wittingly to kil Sows, * euen vpon the point of their farrowing, and being readie to Pig [as our monstrous gluttons doe now adaies, because they would haue the teats soft, tender, and full of milke.]

Ancientes

Tallow and greafe.

All horned beasts hauing teeth growing but in one jaw, and pasterne bones about their feet, do beare tallow or sewer, and feed fat. Those that be clouen-footed, or otherwise haue feet deuided into many toes, and beare no horns, haue no tallow, but greafe or fat. The tallow or sewer growes to be hard, and when it is thoroughly cold, is brittle and apt to crumble and breake; and is euer found in the edge and extremities of the flesh: contrariwise, the seam or greafe is entered larded betweene the flesh and the skin; liquid it is, and easie to melt. Some creatures there bee that will neuer be fat, as the Hare and Partridge. Generally, whatsoeuer is barren, be it male or female, will soone feed fat. Sooner grow they to be old which are ouer-fat. No liuing creatures there are but haue a certain fat in their eies: & the tallow in any thing whatsoeuer, is senslesse: for neither hath it Arteries nor Veines. The fat also & greafe in most of them, is without fence. And hereupon it is, That some affirme, how Mice and Rats haue gnawne and eaten fat Hogs whiles they were aliue, and made them nests in their backs: yea, and *Lucius Apionius* sometimes Consul, had a sonne so fat that he could not goe, so heauiue was he laden with greafe; in so much, as he was faine to take some of his greafe forth of the bodie, and so discharge himselfe and become lighter.

Marrow.

Marrow seemeth to be much of the same natre: in youth it is red, and in age waxeth white. This is neuer found but in hollow bones: and yet not in the legs of Horse, Ass, Mule, or Dog. And therefore if they chance to be broken, they will not fowder and vnite againe, which happens when the Marrow runs out to the place of the fracture. In those that carrie greafe or sewer, fattie it is and greafe: but in horned beasts it resembles Tallow. Sinewie it is, and that onely in the ridge of the backe of as many as haue no bones, as namely, in all fishes. Beares haue none at all. A Lion likewise hath but very little, to wit, in some few bones of his thighes & butts behind, and also of his legs before vnder his shoulders. For his other bones are so hard, that they will strike

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A strike fire, as it were an hard flint. The Marrow is hard in them that gather no greafe, but rather tallow.

The bones of Asses legs are good to found shrill, and to make pipes of. Dolphins haue verie bones, and not prickie chines: for they bring forth their yong aliue. Serpents haue only prickie ridges. Fishes that be soft haue no bones: but their bodie is bound with certaine hoopcs or circles of flesh, as the Cuttill or Calamarie. Neither haue Insects any bones at all. Those fishes which be not soft, but gristly, haue a kind of marrow in their ridge bone. Scales haue gristle, and no bone: The eares and noethrills of all creatures, if they beare vp but a litle, haue a soft tender gristle apt to bend and wind: such is the goodnesse of Nature, providing that they should not breake. A gristle if it be broken, will not close together and be found. Neither will bones, if ought be cut from them, grow againe: vnlesse it be in horses and such beasts of carriage, and namely, betweene the house and the pasternes.

Bones and Gristles.

Growth.

A man Groweth in height and length vntill hee be one and twentie yeares of age: then begins he to spread and burnish in squarenesse. As well men as women-kind, shute vp most and vndoe the knot that hindered their growth, when they are come to fourteene yeares of age, and be vndergrowne: and most is this seene, if some sicknesse happen about that time.

As for the Sinewes, Ligaments, and Cords, which take their beginning at the heart, be couered (as it were) with a certain white and glutinous substance, and the like cause and nature they haue. These in all bodies, are tied to the slipperie bones: the knitting of the bones together, which be called joints, they fasten and bind together, some by comming betweene, others by clasping round about, & others again, by passing crosse ouer: in one place they be twined round, in another broad, according as the figure of each part doth require. Be they cut a two, as they cannot knit againe, so they put a man to no paine: prickie or wound them, a wonder to see, what extremitie of paine will thereupon ensue. Some creatures be without nerues and sinewes, as namely fishes, for they stand much vpon Arteries, and yet ye shall haue neither the one nor the other in soft fishes. Look where there be Sinews, Cords, and Ligaments, those that lie more inward and vnderneath, stretch out the part and giue libertie: whereas the vppermost that lie ouer them, draw the same in as much.

Sinews, Cords, & Ligaments

Among these are hidden the Arteries, that is to say, the passages of the spirit and life. And ouer them ride the Veines, euen the very conduits and channels that carie the blood. The Pulse or beating of Arteries, is most euident in the extremities or ends of any members; and for the most part bewraies hidden diseases. *Herophilus* that renowned Poet and interpreter of Physick, hath with marvellous skill reduced the order thereof into an art: he hath set downe most artificially, the certaine measures and times, the compasse, the metricall lawes thereof, according to euery age: when they strike euen and steadie, when too fast, when too slow. But the skill herof is little exercised, and his inuention in that behalfe neglected: because it seemed ouerwittie, subtile, and curious. Howbeit, the obseruation of the strokes, either comming thick & fast, or slow and softly, giueth a great light to iudge of the strength of Nature, that gouerns our life. Arteries want fence, and no maruell, for they be without blood. Neither do they all containe within them vitall spirit. For there haue bene knowne some of them cut in twaine, and yet that part of the body onely is mortified, which receiued the offence. Birds haue neither Veines nor Arteries. Likewise, Serpents, Tortoises & Lizards, haue but very little blood. The Veines dispersed at the last into most fine and small threadie fibres vnder all the skin, grow at the length to bee so slender that the blood cannot possibly passe thorough them, nor any thing else: saue a thin humor or moisture, which thorough infinite small pores of the skin doth breath forth, and stands there like a dew, and is called Sweat. The place where all the Veines doe meet in a round knot together, is the Nauell.

Veines and Arteries.

CHAP. XXXVIII.

F Of Blood, as well that which soonest waxeth drie, as that which will not thicken at all. Also, which is the grossest blood, and heauiest, which the lightest and thinnest: and last of all, what creatures liuing haue no blood at all.

Those that haue much blood, and the same fat and grosse, are angrie and chollericke. The blood of males is commonly blacker than that of females: yea, and more in youth than in old

old age : and the same in the bottome and lower part, setleth fatter and grosser than above. In blood consists a great portion and treasure of life. When it is let out, it carries with it much vital spirit : howbeit, senselesse it is, and hath no feeling. The strongest creatures be they which haue the thickest blood : but the wisest, those that haue thinnest : the more fearefull, that haue least : but dull and blockish altogether which haue none at all. Bulls blood of all other soonest congealeth and waxeth hard, and therefore poison it is, to be drunke especially. The blood of Bores, red and fallow Deere, Roe-buckles, and all Buffles, will not thicken. Asses blood is most fatty and grosse : and contrarily, mans blood is thinnest & finest. Those beasts which haue more than 4 feet, are bloodlesse. Those that be far haue small store of blood, because it is spent in farnesse. Man only bleeds at the nose : some at one nostrill alone, others at both : and some againe void blood downward by the Hemorrhoids. Many there be that cast vp blood at certaine times, ordinarie, by the mouth : as not long since *Macrinus Viscum*, late pretor of Rome : and vsually euerie yeare *Volusius Saturninus*, Prouost of the citie ; who notwithstanding liued vatill hee was above fourescore and ten yeres old. Blood is the only thing in the body that increaseth presently. For so we see, that beasts killed for sacrifice will bleed most freshly & in greater abundance, if they dranke a little before. Those creatures that lie hidden in the earth at certaine times, (as we haue said before) haue no blood in all that while, vnlesse it be some few, and those very small drops gathered about their hearts. A wonderfull worke of Nature, that it should be so : as also that in a man it should alter and change euer and anon, so as it doth vpon euery small occasion : and the force and strength thereof varie, not only for defect and want of matter to disperse abroad, but also for euery little motion and passion of the minde, as shame, anger, and feare. For one while it sheweth pale, another while red, more or lesse, in much varietie of degrees. In case of anger it wil shew one color : of shame and bashfulnesse appearing in another. In feare, doubtlesse it retires and flies backe, in such sort, as a man knowes not what is become of it : so as many in that fit haue ben stabbed and run thorough, and yet bleed not at all one drop : but this suddaine change of colour happens to men only. For in other creatures, which (as we haue said) do alter their hue, it is an outward colour that they take from the reflection of certain places neer vnto them, man alone hath this change from within himselfe. To conclude, all maladies and death especially, consume the blood.

CHAP. XXXIX.

¶ Whether in Blood resteth the souerainetie or no? Also of the nature of Skin of Haires, and the Paps.

SOME measure not the fineness of spirit and wit by the puritie of blood : but suppose that creatures are brutish, more or lesse, according as their Skin is, thicker or thinner : and as the other couertures of their bodie be either grosse and hard, or thin and tender : as we see for example in Oisters and Tortoises. They affirme moreover, that the thick hide in Kine & Oxen, and the hard bristles in Swine, impeach the entrance of subtil aire and fine spirit into their bodies : in such wise, that nothing can pierce and passe through, which is pure and fine, as it should be. And hereto they bring men also, as a prooffe, who are thicke skinned, and more brawnie, for to be more grosse of sence and vnderstanding : as who would say, that Crocodiles were not very wittie and industrious, & yet their skin is hard enough. And as for the Riuer-horse, his hide is so thicke, that thereof jaulines and speares are turned : and yet so industrious is that beast, that in some case he is his owne Physician, and he hath taught vs to open a veine, and let blood. The Elephants skin is so tough and hard, that thereof be made targuets and shields, of so good prooffe, that is impossible to pierce them thorough, and yet they are thought to be of all four-footed beasts, most ingenious and wittie. Wherefore, conclude we may, that the skin it selfe is senselesse, and hath no fellowshipp at all with the vnderstanding : and especially that of the head, and whersoever it is of it selfe naked and without flesh, be sure (if it be wounded) impossible it is to consolidate the wound, and namely, in the eie lids and bals of the cheekes. All creatures that bring forth their young quicke, are hairie : those that lay eggs, haue either feathers, as birds : skales, as fishes : or else be couered with shels, as Tortoises : or last of all, haue a plaine skin and no more, as Serpents. The quills of all feathers be hollow. Cut them, they will grow no more : plucke them, they will come againe. Insects flie with thin and brittle pellicles or membranes.

The

- A The sea Swallowes haue them euermore moist and drenched in the sea. As for the Bat, he is afraid to wear them, and therefore flies about houses, & his wings besides are diuided into joints. The haires that grow forth of a thick skin, are commonly hard & grosse, but euermore thinner and finer in the females. In horses and mares they grow at length vpon their mains. Lions also haue them long about their shoulders and foreparts. Connies haue long haires about their cheekes, yea, and within-forth : as also in the soles of their feet : and so hath the Hares, according to the opinion of *Trogus* : who thereby collecteth, that hairy men likewise are more lecherous than other. The hairiest creature of all other is the Hare. In mankind only there grows haire about the priuy parts : and whosoever wants it, man or woman, is holden for barren, & not apt for generation. Haires in men and women are not all of one sort : for some they bring with them into the world, others come vp and grow afterwards. Those they haue from their mothers womb do not lightly fall and shed, and least of all in women. Yet shal ye haue some women to shed the haire of the head, by occasion of sicklinesse : as also other women to haue a kinde of down vpon their face, namely when their monethly fleurs do stay vpon them. In some men the later kind of haires, to wit of the beard, &c. wil not come of their own accord without the help of Art. Four-footed beasts shed their haire yerely, and haue it grow againe. Mens haire of their heads groweth most : and next to it that of their beards : if the haire be cut it grows not againe at the cut end, but springs from the root. It growes apace in some sicknesses, and most of all in the consumption of the lungs, and in old age, yea, and vpon the bodies of the dead. In lecherous persons, the haire of their head, browes, and eie-lids, with which they came into the world, do fall more early than in others : but those that spring afterward grow sooner againe if they be cut and shauen. The wooll and haire that foure footed beasts do beare is more course and thick by age, but it comes not in such plenty as before. And such haue alwaies their backe well couered with haire and wooll, but their bellies bare. Of Kine and Ox hides sodden there is made glew : but the Bulls hide hath no fellow for that purpose. Man only of all males hath euident paps in his breasts : other creatures haue little nipples only in shew of teats. Neither hath all females teats in their breasts, but only such as are able to suckle their yong : none that lay eggs haue paps, nor any haue milk vnles they bring forth their yong liuing : and yet of all fowles I must except the Bat alone. As for the illfaured Scritchowles called Stryges, I think they be but tales that go of them : namely, That they will giue milk out of their breasts to yong infants. True it is, all men agree in this, That the manner was in old time to vse in cursing and execration, the termes of Strix ; but what bird it should be I suppose no man as yet knoweth.

CHAP. XL.

¶ Notable obseruations in liuing Creatures as touching their paps.

- SHEE Asses are much pained with the ache of their vdders, when they haue soled ; and therefore after six moneths they will not giue them any more sucke : whereas mares doe suckle their colts a whole yeare almost. Those beasts which be whole hoofed, and haue not about two yong at once, haue all of them two paps and no more, and those in no other place else but between their hinder legs. Such as be clouen footed, and horned likewise, haue them in that place : but Kine haue foure teats ; Ewes & Goats but two apiece. Such beasts as be very fruitful and bring many yong, and likewise whose feet are parted into toes, these haue many nipples or teat heads all along their belly, disposed and set in a double course, as namely Sowes : of which those of the better sort haue 12 ; the common sort but tenne. Also Bitches after the same manner. Some beasts haue 4 teats in the mids of their belly, as Panthers : some twaine and no more, as the Lionesse. The Elephant alone hath twaine vnder his shoulders or legs before, and those not euident in the breast part, but short thereof, and lying hidden as it were within the arm-pits. And generally, none that haue their feet diuided into toes, haue vdders behinde vnder their hin legs. A Sow at euery farrow giues the foremost nipples to those pigs that come first, and so in order as they be farrowed : and those teats be they that are next to her throat and highest. Euery pig knowes the own pap, and will take it and no other when it comes first into the world ; and thereof it is nourished. If a pig be taken from the sow, the milk of that pap wil dry vp presently, or returne backe, and the pap it selfe fall flat to the belly. Also if it chance that but one sucking pig be left, that pap alone wil do the part and let down milke, which Nature

ture first appointed for that one pig. She Beares haue foure paps apiece. Dolphins haue no more but two teats and nipples in the bottom of their belly, and those not very apparant to the eye, nor streit and direct, but lying fomwhat aside and byas: and no beast besides giueth sucke as it runneth but shee. To conclude, Whales, Wirlepooles, and Seales, nourish their yong with their vdder and teats.

CHAP. XLI.

¶ Of Milke: and of what milke Cheefe cannot be made.

THe milke that comes from a woman before she hath gon 7 months with child is not good: but from that time forward it is wholsome, because the infant may liue and do well after that terme. Many are so frim and free of milke, that all their breasts are strut and full thereof euen as far as to their arm-holes. Camels giue milke vntill they be great with yong again: and their milke is thought to be most sweet and pleasant in tast, if to one measure thereof you put three of water. A Cow hath no milke ordinarily before she hath calued. The first milke that she giueth downe is called Beestins: which, vnlesse it be delayed with some water, will soon turn to be as hard as a pumish stone. She Asses are not so soon with yong, but they haue milke in their vdders: but if they go in good and battle pasture, it is not good their yong shoud suck their milke in two daies after, for the very tast thereof is enough to kil them: and this disease that comes of Beestins is called Colostratio. The milke that those giue which haue teeth in both chawes is not good to make cheefe of, because it will not cruddle. Camels milke of all others is thinnest, and Mares milke next to it. Asses milke is holden for to be thickest, and therefore they vse it in stead of renning, to turn milke and gather curds thereof. It is thought also to be very good for to make womens skin faire and white. Certes the Empreffe *Poppae*, wife to *Domitius Nero*, had alwaies wheresoeuer she went, 500 she Asses milch, in her train: and in their milke she bathed and washed her whole body, as in an ordinary bain, supposing that thereby her skin was not only whiter, but also more neat, smooth, and void of riuels. All sorts of milke will thicken with fire, and turne into whey with cold. Cowes milke maketh more cheefe than Goats milke, by twice as much almost, although you take no more of the one than the other. The milke of those that haue about foure paps is naught for cheefe: but theirs is better that haue but twain. The renner of an hind-calse or Leueret, and a Kid, is much commended. But especially of a Leueret or Rabbet, which also is medicinable for the flux of the belly: a thing to be obserued in them alone, of all creatures that are toothed in both chawes. A wonder it is, that barbarous nations liuing of milke, haue for so many hundred yeares either not knowne, or else not regarded the benefit of cheefe: and yet they vse to thicken their milke into a kind of pleasant foure curd in manner of a Sellibub; and to charn butter thereof, which is the skum and cream of milke, much thicker than that which is called whey. To conclude, I may not let passe, That Butter hath the vertue and properties of oile: inso much as forrein and barbarous nations do anoint their children therewith, as we also do ours.

CHAP. XLII.

¶ Cheeses of sundry sorts.

AT Rome (the only place that hath best meanes neere at hand, to judge of the fruits and commodities of all nations in the world) the cheeses which come out of the prouinces of Nemausium, and from the villages of Læso and Baux, are highly praised for the best; but they last not long: their commendation is for the present season while they be greene and new. There are brought good cheeses from two coasts of the Alps, which greatly praise the pasture thereabout. Also dainty cheeses are made in Dalmatia, from whence we haue passing good; and namely from Drinaldi. Moreouer, the prouince of Ceutronia sends vs excellent cheefe from Vatufium. But the great store and plenty of cheefe commeth from the Apennine mountain: which yeeldeth vs the Cebane cheefe out of Liguria, which is very fine meate, notwithstanding it be made most of cws milke. Also out of Vmbria we haue good cheefe, from the dairies along the riuier *Ætio*. Howbeit in the confines between Tuscane and Liguria, the most famous great cheeses are made, and namely about Luca, for one of them weigheth a thousand pounds.

A pounds. Next to these in goodnesse be those that are made neer the city of Rome about Vestinum: but from out of the Seditian territory and the plains thereabout, there come cheeses that passe all the rest. As for cheeses made of goats milke, they are not to be defrauded of their due praise, especially when they are fresh and new made: and if besides, they may haue a little driness in smoke, which giueth both a good lustre, and also a pretty tast to them: for such cheeses be made within the very city of Rome, and go beyond all others. As for the cheeses made in France, they taste like a medicine, and haue an aromatical relish with them. For outlandish cheeses beyond-sea the Bithynian carry the best name. That there is a certain tarter or saltier (if by nothing els) may well be known by the tast of the cheefe made thereof: for there is none; but the older they are, the more saltish they be: yet such are well known to recouer their fresh taste again, if they be soaked in Thyme vinegre. Some report, that *Zoroastres* liued in the desert wildeernesse 20 yeares with cheefe: the which was so well tempered, that it seemed nothing old, for it neither moulded nor yet bred vermin.

CHAP. XLIII.

¶ The difference between the members of Man and other Creatures.

OF liuing creatures vpon the land, Man alone is two footed. He only hath a canell bone and shoulders, armes also to embrace: whereas others haue shoulders only & fore-legs to rest vpon. In all creatures that haue hands, they be fleshy within-forth only: for the back part consists of skin and sinewes. Some men there be with six fingers to one hand. Wee haue heard, that *M. Curiatius* a Nobleman of Rome had two daughters so handed: whereupon they were called *Sedigitæ*. Also there was a man named *Volcatius*, who was an excellent poet, and had six fingers to an hand, whereupon he was named *Sedigitus*. Euery finger of a mans hand hath three joints; the thumbe twaine, and it bendeth and boweth full opposite to all the rest of the fingers: and yet by it selfe it stretcheth awry from the others, and is thicker than the rest of the fingers. The little finger is equall in length to the thumbe: the fore-finger and the fifth (or ring finger) are iust of one size: betweene which the middle finger is the longest. Those foure footed beasts that liue of rauine and prey haue five toes to their fore-feet, whereas others haue but foure: Lions, Wolves, and Dogs, and some few others, haue likewise 5 toes or pawes in their hin-feet, and one like a spur, which beares forth behind, and hangs down from the paterne bone of the foot. All other smaller beasts haue five to a foot. The armes of all men be not of a iust and euen measure: for it is well known, That there was a Thracian sword-Fencer named *Studiosus*, belonging to the fence-school of *C. Caligula* the Emperour, whose right arme was longer than the left. Certaine beasts without reason vse the ministry of their fore-feet in stead of hands, and as they sit on their rumpe reach meat therewith to their mouth, as Squirils.

CHAP. XLIV.

¶ The resemblance that Apes haue to men.

AS for all the race and kind of Apes, they resemble the proportion of men perfectly in the face, nose, eares, and eye-lids; which eye-lids these creatures alone (of all foure-footed) haue under their eyes as well as aboue: nay, they haue paps and nipples in their breasts, as women: armes also and legs bending contrarie waies, euen as ours doe. Nails they haue also and fingers like to vs, with the middle finger longer than the rest, as ours be. A little they differ from vs in the feet; for somewhat long they are, like as their hands be; and the sole of their foot is answerable to the palm of their hand. Thumbs and great toes they haue moreover, with joints directly like a man. And setting aside the member of generation, and that only in the he Ape, all inward parts are the very same that ours, as if they were made iust by one patterne.

CHAP. XLV.

¶ Of Nails.

NAiles are taken and reputed for the extremities and vtmost ends of the sinewes: and ye shall finde them in as many as haue fingers and toes. But in Apes they are channelled halfe

halfe round like a gutter tile, whereas in man they be flat and broad. When one is dead they will grow. In rauous creatures hooked they be and bowing inward : in dogs right and strait, saue only that which in most of them crooks from behind their legs like a spur. All creatures that haue the fashion of a foot, haue toes thereto except an Elephant. And yet he seems to haue an appearance of five in number, but they are not diuided asunder, or if they be, they are not distinct one from another but very sleightly, and like rather to houfs than nails : the forefeet also are bigger than the hinder. In the hin-feet they haue short ioints. The elephant bends his hams inward, as doth a man : whereas all other liuing creatures bow the ioints of their hinder legs, otherwife than of the former. For such as ingender and breed yong aliue bend their knees before them : but the ioint of their hough behind clean backward. Mens knees and elbows bow contrary one to the other : so do Beares and all the sort of Apes, which is the cause they be not so swift of foot as others. Four footed beasts, as many as lay eggs (as the Crocodile and Lizards) haue their knees before, bending backward ; but those behind bowing forward : and yet their legs be crooked like a mans thumb. In like sort, they that haue many feet : vnlesse it be the hin feet of all, in as many as do skip and hop ; for they all be straight. Birds, after the manner of foure footed beasts, doe bow their wings forward, but the ioint of their legges backward.

In the knees of men there is generally reposed a certaine religious reuerence, obserued euen in all nations of the world : for humble suppliants creep and crouch to the knees of their superiors : their knees they touch, to their knees they reach forth their hands : their knees (I say) they worship and adore as religiously as the very altars of the gods : and for good reason haply they do so, because it is commonly receiued, That in them there lies much vital strength. For in the very ioint and knitting of both knees, on either side thereof before there are two emptie bladders as it were, like a paire of cheeks, which hollownesse and concauitie if it be wounded and pierced through, causeth as present death as if the throat were cut. In other parts likewise of the body we vse a certain religious ceremonie : for as our maner is to offer the backe part of the right hand to be kissed, so we put it forth and giue it as well in testimonie of faith and fidelitie. It was an antient fashion in Greece, when they would make court and with great respect tender a supplication to some great personage, to touch the chin. In the tender lappet of the eare is supposed to rest the seat of remembrance, which we vse to touch when we mean to take one to beare witness of an arte or other thing done, and to depose the same in the face of the court. Moreover, behind the right eare likewise is the proper place of *Nemesis* (which goddesse could neuer yet find a Latine name, so much as in the very Capitol) and that place are we wont to touch with the fourth finger (which is next the least) in token of repentance, when we haue let fall some word rashly, and would craue pardon of the gods therefore. The crooked and swelling veins in the legs man alone hath, and women very feldome. *Oppius* writes, that *C. Marius* (who had bin Consul of Rome 7 times) endured, without sitting down for the matter, to haue those veins taken forth of his legs, a thing that neuer any was known to abide before him. All foure-footed beasts begin to go ordinarily on the right hand, and vse to ly downe on the right side : others go as they list. Lions and Camels only haue this propertie by themselves, to keep pace in their march, foot by foot, that is to say, they neuer set their left foot before their right, nor ouer-reach with it, but let it gently come short of it and follow after. Men & women haue the greatest feet in proportion of all creatures : but females vsually in euery kind haue lesse & slenderer feet than males. Men and women only haue calues in their legs, and their legs full of flesh. Howbeit we reade in some writers, That there was one man in Egypt had no calfe at all to his legs, but was legged like a crane. Man alone hath palmes of his hands, & broad flat soles to his feet ; and yet some there be who that way are deformed and disfigured. And thereupon it came that diuers came to be surnamed *Planci* [i. flat footed :] *Plauzi* [i. splay footed :] *Scauri*, [i. with their ancles standing ouermuch out :] *Pausti*, [i. broad footed.] Like as of their misshapen legs some haue bin named *Vari* [i. wry legged :] others, *Vatie*, and *Fatinij*, [i. bow-legged :] which imperfections beasts also are subiect vnto. Whole hoofed are all they that beare not horns : in regard wherof they be armed with house in stead of that offensive weapon : and such as they be haue no ancle bones : but all clouen footed haue those bones. Howbeit all that haue toes want ancles : and in a word, there is not one hath them in the fore-feet. Camels haue ancles like to Kine and Oxen, but somewhat lesse : for indeed they be clouen footed, although the

A the partition be very little, and hardy discerned vnder the foot, but seemeth flesh all ouer the sole, as Beares also, which is the cause, that if they trauaile farre vnshod, their feet are surbated, and the beasts will tire.

CHAP. XLVI.

¶ A discourse of beasts houses.

THE Houses of Horses, Mules, Asses, and such like beasts of carriage onely, if they be pared and cut, will grow againe. In some parts of Sclauonia, the Swine are not clouen-footed, but whole hoofed. All horned beasts in manner be clouen-footed : but no beast beares two hornes, and hath withall the house of one entire peece. The Indian Ass hath onely one horne. The wild Goat also called Oryx, is clouen houfed, and yet hath but one horne. The Indian Ass moreover, of all the whole houfed beasts alone, hath the pasterne or ankle-bones. As for Swine, a mungrell kind they are thought to be of both, in regard of those bones ; and thereupon are reputed filthy and acursed. They that haue thought that a man had such, are soon convinced. As for the Once, he indeed alone of all those whose feet are diuided into toes, hath that which somewhat resembles a pasterne bone. So hath a Lion also, but that it is more crooked and winding. As for the streight pasterne bone indeed, it beareth out with a bellie in the joynt of the foot, and in that hollow concauitie wherein the said bone turnes, it is tied by ligaments.

CHAP. XLVII.

¶ Of Birds feet, and their Clawes or Tallons.

OF Fowles, some haue their feet diuided into clees and toes ; others be broad and flat footed : and some are betweene both ; which haue indeed their toes parted and distinct, and yet their feet be broad between. But of all them that haue foure toes to a foot : to wit, 3 in the forepart, and one behind at the heele in manner of a spur : howbeit this one is wanting in some, that are long legged. The Vrinecke or Hickway, with some few others, haue two before and other two behind. The same bird putteth out a tongue of great length, like to serpents. It turneth the necke about and looketh backward : great clawes it hath like those of Choughes. Some bigger birds haue in their legs one other shanke-bone more than ordinarie. None that haue crooked tallons, be long legged. All that stauke with long shankes, as they fly stretch out their legges in length to their tailles : but such as be short legged, draw them vp to the midst of their belly. They that say, No bird is without feet : affirme also, That * Martinets haue feet : like as also the swift Swallow called Oce, and the sea Swallow Drepanis. And yet such birds come so little abroad, that they be feldome seen. To conclude, there haue been now of late, Serpents knowne flat-footed like Geese.

CHAP. XLVIII.

¶ Of the feet of Insects.

ALL Insects hauing hard eies, haue their fore-legges longer than the rest, to the end that otherwhiles they might with them, scoure their eies, as we see some flies doe : but those whose hinder-legs are longest, vse to skip and hop, as Locusts. Howbeit, all of them haue six legs apeece. Some Spiders there be, that haue two ouer and about the ordinarie, and those be very long : and euery leg hath three ioynts. As for some sea-fishes, we haue said before that they haue eight legs : namely, Many feet, Pourcuttles, Cuttles, Calamaries, and Crabfishes : and those moue their fore-clees like armes a contrary way, but their feet either they turne round or else fetch them crooked at one side : and a man shall not see any liuing creature againe, al round, but they. As for others, they haue two feet to guide them and lead the way ; but Crabs onely haue foure. There be Insects besides vpon the land, that exceed this number of feet ; and then, they haue no fewer than twelue : as the most sort of wormes : yea and some of them reach to an hundred. No creature whatsoeuer hath an odde foot. As touching the legs of those which be whole houfed, they be all full as long when they first come into the world, as euer they will be : well may they shoot out bigger and burnish afterward, but (to speake truly and properly) they grow

grow no more in length. And therefore when they be yong sucking soles, a man shall see them scratch the haire with the hinder feet: which, as they wax elder and bigger, they are not able to do, because their legges thrue only in outward compasse, and not in length. Which also is the cause, that when they be new soled, they cannot feed themselves but kneeling, vntill such time as their neckes be come to their full growth and iust proportion.

CHAP. XLIX.

¶ Of Dwarfs: and genitall parts.

There are no liuing creatures in the world (euen the very fowles of the aire not excepted) but in each kind there be dwarfs to be found. As for those males which haue their instruments of generation behind, we haue sufficiently spoken. In Wolues, Foxes, Weefils, and Ferrits, those genitall members be of a bonie substance; and of them there be soueraigne medicines made, for to cure the stone and grauell in mans bodie engendred. The Beares pisse also, becommeth as hard as an horn (men say) so soone as his breath is out of his bodie. As for Camels pisses, they vse in the East countries to make their best bow strings therof, which they account to be the surest of all others. Moreouer and besides, the genitall parts put a difference between nation and nation; also between one religion and another: for the priests of *Cybele* (the great mother of the gods) vse to cut off their owne members and to gueld themselves, without danger of death. On the contrarie side, some few women there be, monstrous that way, and in that part resemble men: like as we see there are Hermaphrodites, furnished with the members of both sexe. In the daies of *Nero* the Emperour, the like accident was seen (and neuer before) in some foure-footed beasts. For he, in very truth, exhibited a shew of certaine mares that were of the nature of those Hermaphrodites, found in the territorie of *Treuers* in France: and they drew together in his owne coach. And verily a strange and wondrous sight this was, To see the great monarch of the world, sit in a charriot drawne by such monstrous beasts. As touching the stones of Rams Buckes, and greater beasts, they hang dangling downe between their legs: but in Bores, they be thrust together, & knit vp short close to the bellie. Dolphines haue these parts very long, and the same lying hidden within the bottom of their bellies. In Elephants likewise they be close and hidden. In as many creatures as doe lay egges, the stones sticke hard to their loines within the bodie: and such be euermost quicke of dispatch in the act of generation, and soone haue done the feat. Fishes and Serpents haue none at all; but in stead thereof there be two strings or veines reach from their kidnies to their genitall member. The * Buzzard (a kind of Hawke) is provided of three stones. A man hath his cods somer time bruised and broken, either by some extraordinarie accident, or naturally: and such as be thus burst, are counted but halfe men, and of a middle nature betweene Hermaphrodites and guelded persons. To conclude, in all liuing creatures whatsoeuer, the males be stronger than the females, setting aside the race of Panthers and Beares.

CHAP. L.

¶ Of Tails.

There is not a liuing creature, excepting men and Apes (take as well those that bring forth their yong aliue, as others that lay egges only) but is furnished with a taile, for the necessarie vse of their bodies. Such as be otherwise rough-haired and bristly, yet haue naked tiales, as Swine: those that be long shagged and rugged, haue very little and short skuts, as Beares: but as many as haue long side haire, be likewise long tailed, as Horses. If Lizards or Serpents haue their tiales cut off from their bodies, they will grow againe. In fishes they serue in good stead, as rudders and helmes to direct them in their swimming: yea they fit their turnes as well as oares, to set them forward as they stirre them, to this or that hand. There be Lizards found with double tiales. Kine and Oxen haue the longest rumpe for their tiales of any other beasts; yea and the same at the end, hath the greatest tuft and bush of haire. Asses haue the said docke or rumpe longer than horses: and yet all such beasts either for saddle or packe, haue it set forth with long haire. Lions tiales are fashioned in the very tip thereof, like vnto Kine or Oxen, and Rats: but Panthers are not after the same manner tailed. Foxes and Wolues

haue

A haue shag tiales like sheepe, but that they be longer. Swine carie their tiales turned and twined round. And Dogs, that be of cures kind and good for nothing, carrie their tiales close vnderneath their bellies.

CHAP. LI.

¶ Of Voices.

Aristotle is of opinion, That no liuing creature hath any voice, but such only as are furnished with lungs and wind-pipes: that is to say, which breath and draw their wind: and therefore he holdeth, that the noise which we heare come from Insects, is no voice at all, but a very sound, occasioned by the aire that gets within them, and so being enclosed, yeelds a certaine noise, and resoundeth againe. And thus it is (quoth he) that some keep a humming or buzzing, as Bees: others make a cricking with a certain long traine, as the Grasshoppers; for euident it is, and wel known, that the aire entering into those pipes (if I may so term them) vnder their breast, and meeting with a certaine pellicle or thin skin, beates vpon it within, and so sets it a stirring, by which attrition, that shrill sound commeth. Again, it is as apparent, that in others, and namely, Flies and Bees, the buzzing which we heare, begins and ends euermore with their flying. For (no doubt) that sound commeth not of any wind: that these little creatures either draw or deliuer, but of the aire which they hold inclosed within, and the beating of their wings together. As for Locusts, it is generally beleued & receiued, that they make that sound with clapping of their feathers and wings and thighs together. In like manner, among fishes in the waters, the great Scallops make a certaine noise as they shoot out of the water. But soft fishes and such as lie couered with a crust or shell, neither vtter voice, nor yet yeeld sound. As for other fishes, although they be without lungs and pipes, yet are they not quite mute, but deliuer a certaine sound. Howbeit, they that would maintaine, that fishes are dumbe indeed, doe cauill and say, that such a noise commeth of crashing and grinding their teeth together. But what will they say then to the water-Goat, & the riuer Bore, which in the riuer Achelous do euidently grunt: as also others, wherof we haue spoken? Again, such as lay eggs do hisse: and Serpents draw their hissing out in length. The Tortoise hisses likewise, but after a broken manner, with staies and rests between. Frogs keep a croaking after their kind, as hath been said before: and yet a man may seem well to doubt thereof, how it should be: considering, that the noise which they make comes but from their teeth and mouth outward, and is not framed in their breast or stomacke. Howbeit, in them there is great difference, by occasion of the nature of diuers countries. For in Macedonie (by report) they are mute: and there also the Swine be dumbe. As for birds, the least euermore be most full of chirping, chaunting, and singing; and most of all, about the breeding time. Some of them keepe a singing when they fight, as Quails: others, when they goe to fight, as Partridges: and some again after victorie, as cocks. And they haue a crowing by themselves differing from the cackling of hens: whereas in other birds you canot discern the male from the female by the singing, as we see in Nightringales. Some sing all the yeare long, others at certaine times, as we haue more at large declared, in the particular treatise of each bird. The Elephant he sends out at his very mouth (somewhat short of his muffle) a certaine sound like to sweet singing: but thorough that muffle or trunk of his, he sounds (as it were) out of a trumpet. Kine only of females, haue a bigger voice than Bulls: for in euery kind else the female hath a smaller voice than the males: like as we see in mankind, the gelded Eunuchs. As an infant is comming into the world, it is not heard to crie all the while that it is in the birth, before it be fully born. When it is a yeare old, it begins to prattle and talke, but not before. King *Cresus* had a sonne, who lying swaddled in his cradle, spake by that time he was 6 months old: but this was a prodigious signe, and presaged the finall ruine of that kingdome. Those children that begin with their tongue betime, are later ere they find their feet. The voice in man or woman beginneth to change and waxe greater at 14 yeares old. The same in old age growes again to be smaller: and in no other creature doth it more often alter. Moreouer, as touching the Voice, there be strange and wonderful matters reported, and those worth the rehearsal in this place. For first and foremost we do see, That vpon the skaffold or stage in publick Theatres, if the floore be strowed ouer well and thicke with saw-dust or sand, the voice of the actors will be drowned and lost, yea, and remain still about the skaffold, as if it were there buried: also where there be hollow and vn-

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euen

euen wals round about or emptie drie-fats and tuns set, the voice will be taken vp in them, and passe no farther. But the same voice, betweene two wals directly set one by another, runs apace: yea, and through a vault it may be heard from the one end to the other, be the sound neuer so low; provided, that all be smooth and euen between, and nothing to hinder the passage thereof. To speake yet somewhat more of the Voice: In it doth rest a great part of the countenance and visage of man, wherby he is discerned and knowne. For we know a man by hearing his voice before we see him, euen as well as if our eies were fixed vpon him. And see how many men and women there are in the world, so many sundrie voices there bee, for each one hath a feuerall voice, as well as a face, by himself. And hereof arises that varietie of nations, that diuersitie of languages all the world through. From hence come so many tunes in song, so many notes in Musick, as there bee. But aboue all, the greatest thing to be noted in Voice, is this, That wheras the vtterance of our mind, thereby doth distinguish vs from brute and wild beasts: the same euen among men maketh as great a difference betweene one and another, as the other is betweene man and beast.

CHAP. LII.

¶ *Of the excreescence and superfluitie of some members. Also the discourse and sayings of Aristotle as touching mans life*

Looke what part is more than ordinarie by nature, in any liuing creature, the same serues to no vse. As for example, the sixth finger in a mans hand is euermore superfluous, and therefore fit for nothing. It was thought good in Ægypt once to nourish and keep a monstrous man who had foure eies, wherof two stood in the backe part of his head behind: but surely he saw neuer a whit with them. I wonder verily, that Aristotle not only beleueed, but also sticked not to set downe in writing, that there were certaine signes in mans bodie, whereby we might foreknow whether he were long liued or no. Which, albeit I take to be but vanities, & not rashly to bee vttered without good aduise-ment (because I would not haue men amused, and busily occupied in searching Prognostications in themselves, as touching their owne life) yet will I touch the same, and deliuer them in some sort, since so great a clerk as Aristotle was, held them for Resolutions, and thought them worth the penning. He putteth downe therefore, as signes of short life, thin teeth, long fingers, a leaden hew, many lines in the palme of the hand, with crosse bars or short cuts. Contrariwise, he saith, That those who are Lute backed, thicke shouldered, and bending forward, who also in one hand haue two long life lines, and aboue 32 teeth in their head, and besides are wel hanged, and haue large eares, bee long liued. And as far as I can guesse, he requires not, that all these signes should concur and meet together, for to signifie as is before said: but, as I suppose, his meaning is that euery one of them by it selfe is significatiue and sufficient. Surely, these Physiognomers & Chiromantines or Palmestrie, as friuolous and foolish as they be, yet now adaiies are in credite, and euery man is full of them. *Trogus*, a most graue and renowned Author among vs, is of opinion moreouer, That there is judgment to be giuen, not only of mens complexions, but also of their conditions, by their very sight & countenance: and surely, I think it not amisse to set downe his very words. A large and broad forehead (saith he) is a token of a dull conceit and heauie vnderstanding: and contrariwise, they that haue a little forehead, are by nature, fickle and inconstant: and finally, a round forehead, and bearing out argues anger and chollier, as if this outward tumor thereof bewraied the swelling and boiling, of that humor. In whomsoever the eie-browes are streight and lie euen, they betoken soft and effeminate persons: but if they bend and bow toward the nose, they shew austeritie. Say their turning and bending be toward the temples of the head, they are signes of a mocker and scorner: finally where they lie very low, such persons (be ye sure) are malicious, spitefull, and enuious. Long eies, in whomsoever they bee, do testifie hurtfull and dangerous persons. They that haue the corners full of flesh, are of a malicious nature: where the white of the eie is spread large and broad, it is a token of impudencie. And such as euery whiles bewinking and closing of their eie-lids, (trust me truly) they be giddie-headed, and vnstaid. Those that haue great eares, and especially the laps thereof, make account they be blabs of their tongue, and fooles withal. Thus much of Physiognomie, according to *Trogus*.

CHAP.

CHAP. LIII.

¶ *Of the Spirit and breath of liuing creatures: also what things be venomous in taste, and do kill. Of mens food. And last of all, what hindereth digestion and concoction of meat.*

The breath of Lions hath a very strong deane and stinking smell with it: but that of a beare is pestilentiall and deadly: in so much, as no beast will touch where a beare hath breathed and blown vpon: for surely such will sooner corrupt & putrifie than others, as if they were blasted. As for the breath of a man, Nature hath suffered it to be infected many waies, namely, by the viands and meat that he eateth, by faulty and rotten teeth; and most of all by old age. And yet our breath, without which there is no fence, feeleth no pain it selfe, as being void of feeling and altogether senselesse. The same goeth and commeth continually without rest and intermission: the same is alwaies new and fresh: and as it shal depart out of the body last, so it shal remaine alone, when all is gon besides it. Finally, returne it shal into the aire and the heauen, from whence it first came. Now, albeit this breath that we draw, be the very means whereby we liue, and without which we cannot maintain our life, yet otherwhiles troublesome it is vnto vs, and plagueth vs as a very punishment ordained for vs. The Parthians of all others be most subiect to this inconuenience, euen from their very youth, by reason of the grosse feeding of all meats indifferently, without choise and discretion: and specially of their drunkenesse. For excessive drinking of wine causeth stinking breath. But the Nobles and great States of that countrey haue a remedy therfore, and make their breath sweet, by taking with their meats the kernels of Pome-granates, which yeeld a most pleasant sauer. The very breath of Elephants causeth Serpents to come out of their holes: but Stags and such other Deere, therewith do blast & burn them. As touching certain kinds of men, who by sucking only could draw & fetch out the poison out of bodies wounded by venomous Serpents, we haue already spoken. As for hogs, they will feed of Serpents, and do well enough, wheras to other creatures they be no better than poison. All those little creatures, which we named Insects, will die if they be but sprinkled or wet with oile. The Vultures or Geires which flie from sweet ointments, are desirous yet of other odors and perfumes: like as Beetles like well the smell of Roses. Some Serpents there be that the Scorpion kils. The Scythians poison their arrow-heads with the venomous filthy bloud of vipers and mans together. A present poison this is, and remediless; and it no sooner toucheth but it taketh, and killeth forthwith. As touching those creatures that feed of poison, we haue spoken heretofore. Moreouer, some creatures there be, which otherwise being harmlesse, if they be fed with venomous beasts or plants, become also themselves noisome & dangerous. The wild bores in Pamphylia, and vpon mountains of Cilicia, that haue eaten Salamanders, become venomous: and whosoever chance to eat of their venison, are sure to die vpon it. And yet cannot a man know any such venome therein, either by sent at nose, or tast of tongue. Moreouer, the very water or wine wherein a Salamander hath bin stifled and suffocated, or whereof it hath but drunk, will kil a man that shall but sip thereof neuer so little. The like is to be said of that Frog which we call *Rubra* [i. the toad that liues in bushes.] See how many ambushes our life is subiect vnto! Wasps feed greedily vpon Serpents, and vpon that food their stings be deadly. And therefore you see it skilleth much what meats we eat, and the manner of our food is very material. As we may learn farther in that treatise which *Theophrastus* wrote of the Ichthyophagi that liue of fish: where he hath set downe, That Kine and Oxen doth eat fish, but they must in any case be aliae.

To come now vnto mens diet: their best and most wholesome feeding is vpon one dish and no more, and the same plaine and simple: for surely this huddling of many meats one vpon another of diuers tastes is pestiferous: but surdrie sauces are more dangerous than that. As touching our concoction: all tart and sharp meats are of hard digestion: also fulnesse and surfeting: hasty and greedie feeding likewise be enemies to digestion, and hurtful to the stomack. In sum, we digest our meat more hardly in Summer than in Winter, and in age worse than in youth. Now to helpe and remedie all this excesse and enormitie, vomite hath bene deuised: but vse it whosoever will, he shall find the naturall heat of his bodie thereby to decay: he shal sensibly perceiue that it hurteth the teeth, and eies especially. To goe to bed vpon a full stomack, and

to digest in sleepe, is better to make a man fat and corpulent, than strong and lusty. And therefore wrestlers and champions who are acquainted with ful & liberall diet, vse rather to walk after meat for to digest. And in one word, much watching maketh best digestion.

CHAP. LIIII.

¶ Of making bodics fat or leane. Also, what things being tasted, do allay hunger, and quench thirst.

Bodies grow to be burly and grosse, with sweet meats, fat feeding, & much drinke: contrariwise, drie diet, & actually cold, and thirst withal, make a body lean. There be beasts in Africk, and especially the lesser sort, which drink not aboue once in foure daies. A man may well liue 7 daies without any food whatsoeuer: & wel is it knowne, that many haue continued more than 11 daies without meat or drink. There haue bin some known to hungry euermore that nothing would satisfie them, and such haue died for very famine, although they did nothing else but eat: a disease incident to no creature but a man. Some again can assuage and appease their hunger, yea, and slack and extinguisht their thirst with a very little, and yet preserve & maintain the naturall strength of their body: namely, with tasting butter, cheese made of Mares or Affes milk, and Licorice. But to conclude and knit vp this discourse: the worst and most dangerous thing euery way that can be in all the course of our life, is Excesse and Superfluity; but to the health of our bodics most of all: and therefore the best course is, to cut off by all means that which is offensiu and heauy to the body. Thus much shall suffice as touching liuing and sensible creatures. Let vs therefore now proceed to the rest of Natures workes.



THE TWELFTH BOOKE OF THE HISTORIE OF NATVRE,

WRITTEN BY C. PLINIVS
SECVNDVS.

The Proeme.

Hus you see by that which hath bin written before, what are the natures as well in generall, as particularly in parts, of all liuing and sensitiue creatures within the compasse of our knowledge. It remaineth now to discourse of those which the earth yeeldeth: and euen they likewise are not without a soule in their kind (for nothing liues which wanteth it:) that from thence we may passe to those things that lie hidden within the earth, and are to be digged out of it: to the end, that no worke and benefit of Nature might ouerpasse our hands, and be omitted. And in truth, these treasures of hers lay long covered vnder the ground, in so much as men were perswaded, that Woods & Trees were the last & only goods left vnto vs and bestowed vpon vs by Nature. For of the fruit of trees had we our first food: their leaues and branches serued to make vs soft pallats and couches within the caves: and with their rinds and bark we clad and covered our nakednesse. And euen at this day, some Nations there be that liue still in that sort, and no otherwise. A wonderfull thing therefore it is, that from so small and base beginnings we should grow to that passe in pride, that we must needs cut through great mountaines for to meet with marble: send out as far as to the Seres for silk stuffe to apparell vs: diue downe into the bottome of the red sea for pearls: and last of all sinke deepe pits euen to the bottom of the earth, for the precious Hæmerauld. For this pride and

vanitie

A vanitie of ours, we haue deuised means to pierce and wound our eares: because, forsooth it would not serue our turns to weare costly pearles and rich stones in carkanets about our necke, borders vpon the haire of our head, bracelets about our arms, and rings on our fingers: vnlesse they were ingrauen also, and cut into the very flesh of our bodics. Well then, to follow the course of Nature, and the order of our life (as meet it is we should) we will treat in the first place of Trees, and lay before mens eyes the life of the old world, and what was their behaviour and demeanure at the first, in their manner of liuing.

CHAP. I.

¶ The honour done in old time to Trees: When the Plane-trees were first knowne in Italy, and of their nature.

Bold time, Trees were the very temples of the gods: and according to that ancient manner, the plaine and simple peasants of the country, fauoring still of antiquity, do at this day consecrate to one god or other, the goodliest and fairest Trees that they can meet withal. And verily we our selues adore not with more reuerence & deuotion the stately Images of the gods within our temples (made though they be of glittering gold, and beautifull yuorie) than the very groues and tufts of trees, wherein we worship the same gods in all religious silence. First and foremost, the ancient ceremonie of dedicating this and that kind of Tree to seuerall gods, as proper and peculiar vnto them, was alwaies obserued, and continueth yet to this day. For the mighty great **C** Oke named *Æsculus*, is consecrated to *Iupiter*; the Laurel to *Apollo*; the Oliue tree to *Minerua*; the Myrtle to *Venus*; and the Poplar to *Hercules*. Moreover, it is receiued and beleued generally, That the Syluans and Faunes, yea, and certaine goddesses, are appropriate and assigned to woods and Forrests; yea, there is attributed vnto those places a certain diuine power and god-head, there to inhabit: as well as vnto heauen the proper seate for other gods and goddesses. Afterwards, in proesse of time men began to taste also the fruit of Trees, and found therein a iuice (without all comparifon) more lenitiue and pleasant to the contentment of their nature than that which came of corn and grain: for therof made they Oile, a singular liquor to refresh and comfort the outward members and parts of the body: out of it they pressed wine, the onely drinke that giueth strength within, and fortifieth the vitall powers. From thence gather we many fruits, yerely growing and comming of themselves without the labour and industry of man. And albeit, to serue our belly & please our tooth, we stick not to maintain fight and deale in combat with wild beasts in the Forrests; although we hazard our selues in the sea, to meet with monstrous fishes which are fed with the dead bodies of men cast away by shipwracke; and all to furnish and set out the table; yet is not the cheare thought good enough, vnlesse fruits also be sent vp at the later end, that they may haue the honor in all feasts of the second seruice, and the banquet. Besides all this, Trees serue our turns for a thousand necessary vses, without which our life could not be well maintained. With Trees we saile ouer seas into strange lands, and by transporting commodities and merchandise too & fro, we make lands meet together: of Trees we build our houses, wherein we dwell. Trees were the matter in times past, whereof were made the images of the gods. For as yet no man thought of the costly Anatomy of the elephant, neither was their tooth in any account: whereas now adaeies we make the tressels, frames, and feet of our tables, euen of the same yuory that we see the faces of gods are portraied of, as if we had our warrant from them to begin & maintain our riot and superfluity in this behalf. We find in old **E** Chronicles, That the Frenchmen and Gaules took occasion first to come down into Italy, & to ouerspread the whole country (notwithstanding they were beforetime debarred from thence by the impregnable fort, as it were, and the vnpassable bulwark of the Alps betweene:) because one *Elico*, a Swisser or Heluetian, who had made long abode at Rome (where he was entertained for his skil in Smiths worke and Carpentry) at his return home again into his country, brought ouer with him dry figs and Raisons: the first fruits also as it were of oile & wine for a tast, to set their teeth a watering. And therefore the French had good reason, and might wel be born withall and pardoned, for seeking to conquer euen by force of armes those countries where such fruits grew. But who would not maruell rather at this, That our people here should go into far countries, and fetch a tree from thence, euen out of another world, only for the shade that it giueth?

veth? For surely, of fruitfull trees Italy hath store enough: and what tree should that be, but the very Plane? brought first ouer the Ionian sea into the Ile Diomedea, for to beautifie the tomb of *Diomedes*: from thence translated into Sicily, and so bestowed at length vpon Italy, & there planted as a most singular, rare, & speciall tree. But now is it carried as far as Terwin and Tourmay in France, where it is counted an appertenance to the very soile that paeth tribute: in so much, as people that wil but walk and refresh themselves vnder the shadow of it, must pay a custome therefore vnto the people of Rome. *Dionysius* king of Sicily, and the first of that name, caused them to be brought from Rhegium in Calabria to his Roial city, where his pallace was, only of a singularity, because they should be seen to giue a shade before his house, where afterwards was made the Colledge or place of publick exercise. But these trees did not greatly like the soile, for they neuer grew big, nor prospered to any purpose. Howbeit, I find in writers, that there were other besides in Italy, and namely about Adria, as also in Spain. And all this happened about the time that Rome was sackt by the Gauls. But afterwards they came to be so highly esteemed, that for to make them grow the better, men wolud be at the cost to water them with wine: for this was found by experience, that nothing was so good for them as to poure wine to their roots. Thus haue we taught euen our trees also to drinke wine, and be drunke. The Plane trees of any great name at first, were those that grew in the walking place of the Academia in Athens; where the root of one outwent the boughs 36 cubits in length. Now in this age there grows a famous one in Lycia, neer to the high way were men passe too & fro, & it hath a pleasant cold fountain adioining to it: the same is hollow within like to a house, & yeelds a caue of 8 foot in compasse: but it caries such an head withal like a groue, so large, so broad, & so branched, that euery arm resembles one entire tree: in so much, as the shade therof takes vp & spreadeth a great way into the fields. And because in euery respect, it might resemble a very cabbin and caue indeed, there are stony banks & seats within, in form of an arbor round about, made as it were of pumish stone ouergrown with mosse. And in truth, this tree, and the scituation therof is so admirable, that *Licinius Mutianus* thrice Consul, and lately Lieutenant generall and Gouernor of that Prouince, thought this one thing worthy to be recorded as a memoriall to posterity. That he and 18 more persons of his company, vsed to dine and sup within the hollownesse of that tree: where the very leaues yeelded of the own sufficient bed and bench-room to rest and repose themselves: where they might sit secured from danger of wind to blow vpon them: where whiles he sat at meat, he wished nothing more than the pleasure to heare the showers of rain to pat drop by drop, and rattle ouer his head vpon the leaues: & finally, that he tooke much more delight to lie within the said cabbin, than in a stately chamber built of fine marble, all glorious within with hangings of tapistrie and needleworke of sundry colours, and the same seeled ouer head with an embowed roofo laid with beaten gold. Moreover, *Caligula* the Emperour had such another Plane tree growing in the country about Velitra, most artificially: wherein he vsed to take great pleasure, with admiration of the sundry lofts and planks one ouer another, the large settles also and spacious branches that the boughs yeelded, where he was wont to sit at repast, making one of the 15 guests. For the room was of that capacity, that it would not only receiue so many to sit with ease at the table, but also the gentlemen and seruitors that waited and ministered vnto them: and he termed this supping place by the name of, His nest: because it seemed like a birds nest in a tree. There is to be seen at Gortyna, within the Island Candy, one Plane tree neere vnto a faire fountain: recorded it is as well by Greekes as Latines in their writings, and by the testimony of them both, neuer sheds the leaues, but remains alwaies green, as well in Winter as Summer: by occasion whereof arose the tale (so much giuen is Greece to deuise fables by and by of euery small matter) That *Jupiter* vnder that tree desloured the yong lady *Euroopa*: as if (forsooth) there were no other tree but it of the same kind and nature, in Cyprus. But as the nature of man is euermore curious, and seeketh after nouelties) the Candioes desirous to haue of the same race within Crete, set many slips thereof in sundry places, as if they longed to haue more such vicious fruit (as is before-named:) for in very deed that Tree is in no one thing more commendable, than for excluding the heat of the Sunne in Summer, and admitting it in Winter. In the time of *Claudius Casar*, late Emperour, there was an enfranchised slaue belonging to *Marcellus Eferminus*, a daintie guilded Eunuch of Thesalie, and exceeding rich, who caused certain Plane trees to be brought out of Candie into Italie, for to plant them at a manor which he had in the the territorie neare vnto Rome. This freed Eunuch for to grow into

more

A more power and fauor with *Casar*, had ingrafted himselfe, as adopted among his freed men: and surely for his wealth might well be called *Dionysius*, who was the first that transplanted these kind of trees. Thus you see, that ouer and aboue those monstrosities which Italy hath deuised of it selfe, we haue remaining and reigning among vs those also of strange and forraigne nations abroad in the world.

CHAP. II.

¶ Of the low or dwarfe Plane tree: And who first deuised to clip and shred Arbours.

B AS big as these Plane-trees, are yet there be those of a forced smallnesse to the other, called *Chamaeplatani*: whereby a man may see, that we haue inuented the meanes to haue abortiue trees also, euen to hinder their growth, that they cannot come to their full perfection. And therefore euen in Trees as well as in other liuing creatures, there is a certaine infelicitie, which may well be termed, A dwarfish vntowardnesse. This smallnesse in trees may come, by the manner of planting them, as well as by cutting and keeping them downe. The first man that deuised to shred and cut arbours, was one *Cn. Martius*, a gentleman of Rome, and a fauorite of the Emperour *Augustus*; and this inuention hath not bin knowne aboue 80 yeares.

CHAP. III.

¶ Of Trees that be strangers in Italy: and namely of the Citron or Limon Tree.

C Cherry-trees, Peach-trees, and generally all that either haue Greek names or any other but Latine, are held for aliens in Italy. Howbeit, some of them now are enfranchised and taken for free denizens among vs: so familiar they be made vnto vs, and they like the ground so well. But of them, we will speake in the ranke of those trees that beare fruit. For this present we are to treat of those that be meere forrainers: and for good lucke sake, begin we will with that which of all others is most holesome, to wit, the Citron tree, called the Assyrian tree; and by some, the Median Apple-tree: the fruit whereof is a counterpoison and singular Antidote against all venome. The tree it selfe, beares the leafe like vnto an Arbut tree; many it hath certain prickles among. The Pomecitron is not so good to be chewed and eaten of it selfe: howbeit very odoriferous it is: as be the leaues also therof, which are vsed to be laid in wardrobes among apparell, for the smel thereof wil passe into the cloths, and preserve them from the moth, spider and such like vermin. This tree beares fruit at all times of the yere; for when some fall for ripenesse, others wax mellow; and some again, begin then but to shew their blossome. Many forrainers haue assaied to transplant them, and set them in their own countries, in regard of their excellent vertue to resist poisons. And for this purpose they haue caried yong quicksets, or plants of them, in earthen pots made for the purpose, and inclosed them well with earth: howbeit the roots had liberty giuen them to breath (as it were) at certain holes for the pores, because they should not be clunged and pent in prison. Which I rather note, because I would haue it known once for all, and well remembered, That all plants which are to be remoued and carried far off, must be set very close, and vsed in the same order most precisely. But for all the care and paines taken about it, for to make it grow in other countries, yet would it not forget Media and Persia, nor like in any other soile, but soon die. This is that fruit, the kernels wherof (as I said before the lords and great men of Parthia vsed to seeth with their meat, for to correct their soure and stinking breaths. And verily there is not a tree in all Media, of better respect than is the Citron tree. As for those trees in the region of the Seres (which beare the silk wool or cotton) we haue spoken thereof in our Cosmographie, when we made mention of that Nation.

CHAP. IV.

¶ Of Indian Trees: and when the Ebene was first knowne at Rome.

I N like manner, discoursed we haue of the talnesse and greatnesse of Indian trees. Of all those trees which be appropriate to India, *Virgil* hath highly commended the Ebene aboue all the rest:

rest: and he affirmeth, That it will not grow elswhere. But *Herodotus* assigneth it rather to *Aethyopia*; and saith; That every three yeares the *Aethyopians* were wont to pay by way of tribute vnto the kings of Persia, * 1000 billers of the timber of that tree, together with gold and yuory. Moreouer, I must not forget (since that mine author hath so expressely set it downe) that the *Ethyopians* in the same regard were bound to pay in like manner, twentie great and masse Elephants teeth. In such estimation was yuorie then, namely in the 310 yeare after the foundation of Rome, at what time as *Herodotus* put forth that historie at Thuri in Italy. The more maruell it is, that we giue so much credit to that writer, saying as he doth, How that in his time & before, there was no man knowne in Asia or Greece, nor yet to himselfe, who had not so much as seen the river Po. The Card or Map of Ethiopia, which lately was presented and shewed to the Emperor *Nero*, as we haue before said, doth sufficiently testifie, That from Syene (which con-
fines and boundeth the lands of our Empire and dominion) as far as to the Island Meroe, for the space of 900 miles, there is little Ebene found: and that in all those parts betwene, there be few other trees to be found, but Date trees. Which peradventure may be a cause, That Ebene was counted a rich tribute, and deserved the third place, after Gold & Yuory. Certes, *Pompey* the Great, in that solemnitie of triumph for the victorie and conquest of *Mithridates*, shewed one Ebene tree. *Fabianus* is of opinion, that it wil not burne: howbeit, experience sheweth the contrary, for take fire it will, yea and cast a pleasant and sweet perfume. Two kindes there be of Ebene: the one, which as it is the better, so likewise it is rare and geason; it carrieth a trunk like another tree, without knot, the wood thereof is blacke and shining, and at the very first sight, faire and pleasant to the eie, without any art or polishing at all. The other is more like a shrub, and putteth forth twigs as the Tretrifolie. A plant this is, commonly to be seene in all parts of India.

CHAP. V.

¶ Of certaine Thornes, and Fig-trees of India.

Here groweth also among the Indians, a Thorne resembling the later kind of Ebene: and found to serue for the vse of candles: for no sooner commeth it neere vnto the fire, but it catcheth a flame, & the fire leaps presently vnto it. Now it remains to speak of those trees, which set *Alexander* the Great into a wonder, at what time as vpon his victory he made a voyage for to discouer that part of the world. First and formost, there is a fig tree there, which beareth very small and slender Figs. The property of this tree, is to plant and set it selfe without mans help. For it spreadeth out with mighty armes, and the lowest water-boughes vnderneath, doe bend so downward to the very earth, that they touch it againe, and lie vpon it: whereby, within one yeares space they will take fast root in the ground, and put forth a new Spring round about the Mother-tree: so as these branches thus growing, seeme like a traile or border of arbors most curiously and artificially made. Within these bowers the Shepherds vse to repose and take vp their harbor in Summer time: for shady and coole it is, and besides well fenced all about with a set of young trees in manner of a pallaisado. A most pleasant and delectable sight, whether a man either come neere, and looke into it, or stand a farre off: so faire and pleasant an harbour it is, all greene, and framed arch-wise in just compasse. Now the vpper boughes thereof stand vp on high, and beare a goodly tuft and head aloft like a little thicke wood or Forrest. And the body or trunk of the Mother is so great, that many of them take vp in compasse three score paces: and as for the foresaid shadow, it couereth in ground a quarter of a mile. The leaues of this Tree are verie broad, made in forme of an Amazonian or Turkish Targuet: which is the reason, that the Figges thereof are but small: considering that the leafe couereth it, and suffereth it not to grow vnto the full. Neither doe they hang thicke vpon the Tree, but here and there very thinne, and none of them bigger than a beane. Howbeit, so well and thoroughly ripened they bee with the heate of the Sunne, notwithstanding the leaues are betwene, that they yeeld a most pleasant and sweet rellice in tast, and are a fruit for a king, answerable to the mightie, huge, and prodigious tree that beareth it. These Fig-trees grow abundantly about the river Acefine.

CHAP.

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CHAP. VI.

¶ Of the tree named Pala: of other Indian trees, whereof the names be unknowne. Also of those that beare wooll or Cotton.

Another tree there is in India, greater yet than the former, bearing a fruit much fairer, bigger, and sweeter than the figs aforesaid, and whereof the Indian Sages & Philosophers do ordinarily liue. The leafe resembleth birds wings, carrying three cubits in length, and two in bredth. The fruit it puts forth at the bark, hauing within it a wonderfull pleasant iuice: inso-much as one of them is sufficient to giue 4 men a competent and full refectiō. The trees name is Pala, and the fruit thereof is called Ariena. Great plenty of them is in the country of the Sydraci, the vtmost limit of *Alexander* the Great his expeditions and voiaes. And yet is there another tree much like to this, and beareth a fruit more delectable than this Ariena, howbeit, the guts in a mans belly it wringeth, and breeds the bloody-flux. Whereupon *Alexander* made open proclamation and straitly forbad, That no man should taste thereof. As for the Macedonian souldiers, they talked much of many other trees, but they described them in generall termes only, and to the most of them they gaue no names at all. For one tree there is besides, in other respects resembling the Terebinth, and it carrieth a fruit much like to Almonds; onely it is lesse, but of a most sweet and toothsome taste. In *Bactriana* verily, some take it to be a speciall kind of the Terebinth indeed, rather than a tree like vnto it: but that treewhich carrieth a fine flax, whereof they make their dainty linnen & lawn, it hath leaues like to those of the Mulberry tree, and beareth a red berry like to the hips of an Eglantine. They plant and set these in their fields and plains: and surely, standing as they do in such order, there are no rowes of any trees that yeeld a fairer sight and prospect. The Oliue tree of India is but barren, saue that it brings a fruit much like the Wild Oliue.

CHAP. VII.

¶ Of Pepper trees: of the Cloue tree, and many other.

The trees that beare Pepper euery where in those parts, be like vnto our Iuniper trees. And yet some haue written, That they grow only vpon the front of the hill Caucasus on that side which lieth full vpon the Sun. The corns or graines that hang thereupon, differ from Iuniper berries: and those lie in certain little huskes or cods like to the pulse called Fasse or Kidney beans. If that be plucked from the tree before they gape and open of themselves, they make that spice which is called long Pepper: but if as they do ripen, they cleaue and chawne by little & little, they shew within, the white pepper: which afterwards being parched in the Sun, changeth colour, and waxeth black, and therewith riueld also. Peppers be subiect to the injury of the weather as well as other fruits: for if the season be vnkindly and vntemperate, they will catch a blast, and then the seeds will be deafe, void, light, & naught. This fault is called among the Indians, Brechmasis, which in their language signifieth, an abortiue or vntimely fruit. This pepper of all other kinds is most biting and sharp, but it is the lightest, and pale of colour with all. The blacke is more kindly and pleasant: and the white is more milde in the mouth than both the other. Many haue taken Ginger (which some call Zimbiperi, and others Zingiberi) for the root of that tree: but it is not so, although in taste it somewhat resembles pepper. For Ginger grows in Arabia and Troglodytica in meadowes about the villages: and it is a white root of a certain little herbe. And howsoeuer it be very bitter and biting, yet it quickly meeteth with a worme, and rottes. A pound of Ginger is commonly sold at Rome for six deniers. Long pepper is soon sophisticated, with the Senuic or mustard-seed of Alexandria: & a pound of it is worth fifteen Roman deniers. The white costeth seuen deniers a pound, and the blacke is sold after foure deniers by the pound. As for Pepper, I wonder greatly that it should be so much in request as it is: for whereas some fruits are sweet and pleasant in taste, and therefore desired; others beautifull to the eie, and in that regard draw chapmen: Pepper hath neither the one nor the other. A fruit or berry it is (call it whether you will) neither acceptable to the tongue, nor delectable to the eie: and yet for the biting bitternesse that it hath, we are pleased therewith, and we must haue it set forsooth from as far as India. What was he, gladly would I know, that ventured

ture first to bite of pepper and vse it in his meats: Who might he be, that to prouoke his appetite and find himselfe a good stomach, could not make a shift with fasting and hunger onely? Surely, Ginger and Pepper both grow wild in those countries where they do like, and yet wee must buy them by weight, as we do gold and siluer. Of late daies here in Italy, wee haue made means to haue the Pepper tree growing among vs: and verily a litle scrubby plant it is, or shrub rather, bigger somewhat than the myrtle, and not far vnlike. The graine that ours beareth, carrieth the very same bitteresse that the greene pepper of India is thought to haue before it be full ripe. For here it wanteth the due parching and ripening against the sun: and by that means cometh short of the riuels and blacknesse that the outlandish pepper hath. Sophisticated it is, by intermingling with it the grains or berries of Iuniper: for surely, they do maruellous soon take the taste and strength of pepper. And as for the weight, there be diuers waies to deceiue the chapman therein.

Ouer and besides, there is another fruit that commeth out of India, like vnto pepper cornes, and it is called Cloues, but bigger somewhat and more brittle. And they say, that it groweth in a certain groue consecrated to their gods in India. Transported ouer it is vnto vs for the sweet smell that it casteth.

Moreouer, the Indians haue a thorny and prickly plant, which beareth a fruit like to pepper, and passing bitter: the leaues be smal and grow thick after the maner of Priuet: it putteth forth branches 3 cubits long: the bark is pale, the root broad and of a woody substance, resembling the colour of box. Of the infusion of this root in faire water, together with the seed, in a brasen vessell, is made that medicine or composition which is called Lycium. A bush there groweth likewise vpon mount Pelion [like Pyxiacantha, i. the Berberrie bush] whereof is made a counterfeite Lycium. In like manner, the root of the Asphodill, with an Oxe-gal, Wormewort, Frankincense, and the mother and lees of oile, wil do the same: but the best Lycium, and most medicinal, is that which doth yeld a great froth or scum. The Indian merchants do send it ouer in bags made of the skins either of Camels or Rhinocerotes. In some parts of Greece they name the very bush whereof this Lycium is made, Pyxacanthum Chironium.

CHAP. VIII.

¶ Of Macir, Sugar, and the trees of the region Ariana.

THE Macir likewise is brought out of India. A reddish bark or rind it is, of a great root, and beareth the name of the tree it selfe: but the form of that tree I know not how to describe. This rind sodden in hony, & so condit as a Succade, is a singular good medicine for those that be troubled with the Dysentery or bloody-flux: as for sugar, there is of it in Arabia; but the best comes out of India. * A kind of hony it is, gathered and candied in certaine Canes: white this is like gum [Arabick] and brittle between a mans teeth. The graines hereof when they are at the bigst, exceed not a silberd nut, and serue only for physick. In the realm of Ariana (which confineth and boundeth vpon the Indians) there is a certain thorny plant, so full of sharp pricks, that it is comberous to them who come about it; which yeelds a precious liquor issuing out thereof, like to Myrrhe. In the same prouince there grows a pestilent venomous shrubbe called Rhaphanus, bearing leaues like the bay tree, which with their fragrant smell train horses thither to eat thereof; but they are so good for them, that they left not Alexander the Great scarce one horse of all his Cauerrie, they died so fast of that food at his first entrance into the countrey. The like accident befell to him also among the Gedrosians. In like manner, there is another thornie plant (by report) in that region, leaued like the Laurell: the iuice and liquor whereof, if it be sprinkled or dashed in the eyes of any liuing creature whatsoeuer, puts them quite out and makes them blind. Moreouer, they haue an herb there, of a singular pleasant savor, but covered all ouer it is with little venomous serpents: their sting is present death. Onesicritus reports, That in the vales of Hircania there be trees like fig-trees, which the Hircanians call Occhi, out of which there distills or drops hony euery morning for the space of two houres.

CHAP. IX. ¶ Of Bdellium: and the trees growing by the Persian gulf.

N Eere to these parts lies Baetiana, wherein is the most excellent Bdellium. The tree that bears it is black, of the bignesse of an Oliue, with leaues like an Oke; and the fruit resembling

A bleth wild figs, and is of the same nature. The gum thereof, some call Brochos; others, Malachra; and there be again that name in Maldacon. Howbeit, when it is blacke, and brought into roses or lumps, they giue it another name, and call it Hadrobolon. But indeede the right Bdellium when it is in the kinde, should be cleare, as yellow as wax, pleasant to smell vnto, in the rubbing and handling fatty, in taste bitter, and nothing soure. Being washed and drenched with wine (as they vse it in sacrifices) it is more odoriferous. There is found of it in Arabia, India, Media, and Babylon. As for that which is brought out of Media, they call it Peraticum: this is more tractable and gentle in hand, more crusty and bitter than the rest. But the Indian Bdellium is the moister and more gummy: this is sophisticated with Almonds, whereas the other kinds be made counterfeite with the bark of Scordastus, a tree that yeelds the like gum. But this trumpery and deceit is found by the smell, colour, weight, taste, and fire. And let this one word for all, serue as a generall rule to proue all such drugs and spices by. The Bactrian Bdellium when it is in the fire, yeeldeth a dry and smoky fume, and hath many white markes in it resembling the nailes of ones fingers: besides, it hath his just poise and weight that it ought to haue, neither more nor lesse; for as it should not be ouer weighty, so it may be too light. Commonly the price goeth after this rate, to wit, three deniers a pound.

Vpon these regions about named, confineth Persis, whereas the red sea (which we named in our Geographic, the Persian gulf) floweth at certain tides far into the land, and in these sands and downes are to be seen diuers trees of strange natures: for when the tide is past, you shall see at a low water some trees with their roots bare, as if they were eaten with the salt water; & a man cannot tell whether they were brought thither with the tide, or left in the ebbe: but surely the naked roots seem to clasp & take hold of the barren sands, as if they were Polype fishes should cling to any thing. And yet the same, when the sea floweth again, notwithstanding they be beaten vpon with the waues, stand fast and stir not. Again, at some high water and spring-tide, they be covered all ouer with water: and by good arguments it is euident to the eye, That nourished they be with the roughnesse of the surging sea-water. Their heights is wonderfull: and fashioned they be in forme of an Arbut tree: the fruit without-forth like to Almonds, but the kernels within be writhed.

CHAP. X.

¶ The Trees of the Island Tylos within the Persian sea. Moreouer of the trees that beare Woolle or Cotton.

W Ithin the same gulf of Persia, there lieth an Isle full of woods to the East side, euen vpon that coast which is ouerflowed with the tide. Euery tree within, is equall in bignesse to the fig-tree: the blossoms that they carry, are so sweet, as it is wonderful & vn-speakable: the fruit like a Lupine, yet so rough & prickly, as no beast will gladly touch it. In the highest part and knap of the same Island, there be trees bearing wooll, but not in such sort as those of the Seres: for whereas the leaues of those do carry a downe or cotton, these are altogether without and barren thereof: and but that they be somewhat lesse, they might seeme to be vine leaues. Howbeit they beare a fruit at the last, like Gourds in fashion, and as bigge as Quinces, which when they be full ripe, do open and shew certain bals within of down: whereof they make most fine and costly linnen clothes.

CHAP. XI.

¶ Of the Gossampine trees: as also of other Cotton or Bombase trees, whereof clothes be made. In what manner diuers trees do yeeld their fruit.

T Here is a lesser Isle named Tylos, ten miles from the other, where be trees called Gossampines, which yeeld more cotton than those in the greater. King Inba saith, that this cotton groweth about the branches of the said trees, and that the linnens made thereof be far better than those of the Indians. As for those trees in Arabia whereof they make their linnen cloth, he affirmeth that they be called Cynæ, and haue leaues like the Date tree. Thus you see, how the Indians be clad with trees of their own. In those Islands called Tyli, there is another tree which beareth a blossome much like the floure of a White Violet, or Cock-gilliflowe, but foure times

as big, which may seeme strange in that tract. And yet there is another Tree not vnlike to it, howbeit fuller of leaues, and bearing a blossome like to a Damask e or incarnate Rose. This floure flutteth close in the night, beginneth to open in the morning at the Sun-rising, and by noone sheweth out at the full. The inhabitants haue a by-word and saying among them, That it sleepest all night, and wakes in the morning. The same Island bringeth forth Date trees, Oliue trees, Vines, and amongst other fruits Figges also. No Trees there, doe shed their leaues: for the Island is well watered with cold and quicke springs: and besides it hath the benefit of raine. As touching Arabia, which lieth neere and bordereth vpon these Islands, the spices and odoriferous fruits that be therein, are to be treated of with distinction: for their merchandise doth consist of roots, branches, barke, juice or liquor, gums and rofins, wood, twigs, floures, leaues and apple.

CHAP. XII.

¶ Of Costus, Spike-nard, and the diuers kinds of Nard.

But the root and leafe be of greatest price in India. And first and formost the root of Costus bites and burns in the mouth, and is of a most excellent and soueraigne smell: for otherwise the branches or body of the shrub is good for little or nothing. In the Island Patale (which lieth at the very first fosse and mouth where the riuer Indus falleth into the sea) there be found two kinds thereof: namely, the black, and the white, which is counted the better. A pound of Costus is held at 16 Roman deniers.

As touching the leafe of Nardus, it were good that we discoursed therof at large, seeing that it is one of the principall ingredients aromaticall that go to the making of most costly & precious ointments. The plant it selfe Nardus, hath a massie, heauy, & thick root; but short, black, and brittle, notwithstanding that it be fatty and oleous. Soone it vinoweth and catcheth a kind of mustinesse: and like to the Cypress[e] or Cyperus, it hath a sharp tast, rough and smal leaues, but comming thick. The head of Nardus spreads into certain spikes or eares, whereby it hath a twofold vse, both of spike and also of leafe, in which regard it is so famous. A second sort there is of it growing along the riuer Ganges, condemned altogether as good for nothing, for it hath a strong and stinking fauor: whereupon it is called Ozanitis. There is an herbe growing euery where called Pseudonardus, or bastard Nard, which is obtruded vnto vs and sold for the true Spikenard. A thicker leafe it hath and a broader than the other: the colour is more pallar and weak, inclining to white. Also the very root of the right Nard, for to make the better weight, is mingled with gums, with Licharge of siluer, Antimony, or the rind of Cyperus. But the good, sincere, & true Nard is known by the lightnes, red colour, sweet smell, and the taste especially: for it drieth the tongue and leaueth a pleasant rellish behind it. The Spike carieth the price of an 100 Roman deniers a pound. As touching the leaues, the diuersitie thereof makes difference also in the price: for that which hath the larger leaues, and therupon is called Hadrosphærum, is worth 30 deniers a pound. A second sort there is with a smaller leafe, and of a middle size, named therefore Mesosphærum: and that is bought after 60 deniers the pound. But the best of all is that with least leaues, and carrieth the name of Microsphærum: and that the merchant selleth for 75 deniers the pound. What kind soeuer it be, the greener and newer it is, the better it is reputed, and more odoriferous, than that which hath been long kept. Yet say it be old gathered, if the colour hold and keepe well, men preferre it before the blacker, though it be new. With vs in Italie, and in this part of the World, the leafe of Nardus comming from Syria, is esteemed best: next to it the Celtick, out of France: and in the third place that of Candy, which some name Agrion, [i. the wild] others Phiu: and this hath a leafe resembling Loueache or Alexanders, a stalke a cubite long full of ioints and knots, of a weake whitish and light purple colour; the root groweth crooked, full of frings and haire hanging to it, and is much like to birds claws or feet. As for Baccharis, it is called likewise Rustick-nard: but of it wil we speak among other floures. Al these kinds of Nardus are to be reckoned herbes, saue that only of the Indians: of which, the Celticke or French Nard, is plucked and gathered together with the root: and for the better preparing thereof, it ought to be well washed and foked in wine, and so dried in the shade out of the Sunne. Then is it made vp into certaine bundels of an handfull apeece, bound vp in papers, and differeth not much in goodnesse from the Indian Spikenard: Howbeit

Abeit, lighter it is than that of Syria. A pound of it is worth at Rome 12 deniers. The only proof and triall of all their leaues is this, That they be not brittle, and rather ripe drie, than sere or rotten-dry, That they breake not and fall in pieces. With the Celticke and French Nard there euermore groweth another herbe, called Hirculus, and it taketh that name of a strong and Goatish smell which it yeeldeth: besides, so like it is vnto the other, that it is foisted in among the good, and so sold with it. Yet herein is the difference; for that this hath no stem or stalke at all; the leaues thereof also are lesse: and last of all, the root is neither bitter in taste, nor sweet in smell.

CHAP. XIII.

¶ Of Asara-Bacca, Amomum, Amomis, and Cardamomum.

Asarum or Fole-foot, called otherwise, Asara-Bacca, hath the very properties and vertues of Nard: and therefore some haue called it Wild Nard. An herbe it is, carrying leaues like to Iuic, saue that they be more round and softer: it putteth forth a purple floure, and hath a root like vnto the French Nard. The floure is full within of seeds like grape kernels, of an hot taste, and resembling wine. In shadowie mountaines it floures twice a yeare. The best groweth in Pontus, the next to it for goodnesse is found in Phrygia: that of Illyricum is of a third ranke. The root is digged vp when it beginneth to put forth leaues. They vse to dry it in the Sun: soon it wil vellow and be mouldy, quickly also it waxes old, and loses the strength. Of late daies there was an herbe found in Thracia, the leaues whereof differ in nothing from the

C Indian Nard.

As for the grape of Amomum, which now is in vse and much occupied, some say it groweth vpon a wilde vine in India. Others haue thought, that it commeth from a shrubbe like Myrtle, & carieth not aboue a hand-bredth, or 4 inches in height. Plucked it is together with the root: and gently must be laid and couched in bunches by handfuls, for if great heed be not taken, it will soone burst and breake. The best Amomum and most commendable, is that which carrieth leaues like to those of the Pomegranate, without riuels and wrinkles, and besides, of a red colour. The next in goodnesse is that which is pale. The greene or grasse coloured is not all out so good, but the worst of all is white: and that colour comes by age, and long keeping: a pound of these grapes intire and whole in the cluster, is worth 60 Roman deniers. But if they be crumbled and broken, it will cost but 48. This Amomum groweth likewise in a part of Armenia named Otene: also, in the kingdomes of Media and Pontus. It is sophisticated with the leaues of the Pomgranate, and with some other liquid gum besides, that it may hang vnited together and roll round into the forme of grapes.

Now as touching that which is called Amomis, it is lesse full of veins, and nothing so sweet smelling, but harder than Amomum: whereby it appeareth, that it is either a diuers plant from it, or els if it be the same, it is gathered before it be full ripe.

Cardamomum is like to these aboue rehearsed, both in name, and also in making and forme: but it bears a longer graine for seed. The maner also of gathering and cutting it downe, in Arabia, is the same. Foure kinds there be of it. The first is most green and fatty withal: hauing foure sharp corners, and if a man rub it between his fingers, he shal find it very tough and stubborne: and this is most esteemed of all the other. The next to it is somewhat reddish, but inclining to a whitish colour. A third sort is shorter, lesse, and blacker than the rest. Howbeit, the worst is that which hath sundry colours, is pliable and gentle in the rubbing, and smelleth but a little. The true Cardamomum ought to come neare in resemblance to Costus. And it grows in Media. A pound of the best will cost 12 deniers.

The great affinitie or kinred rather in name, that Cinnamon hath with these spices before rehearsed, might induce me to write therof in one suite, euen in this place: but that more meet it is to shew first the riches of Arabia, and to set down the causes why that country should be so named Happy and Blessed. Wee will begin therefore with the chiefe commodities thereof, namely, Frankincense and Myrrhe: and yet Myrrhe is found as wel in the Troglodites country, as in Arabia.

THere is no region in the whole world that bringeth forth frankincense but Arabia: and yet is it not to be found in al parts therof, but in that quarter only of the Aramites. Now these Aramites inhabit the very heart of Arabia, and are a countie of the Sabæi. The capitall city of the whole kingdom is called Sabota, seated vpon a high mountain: from whence vnto Saba, the only country that yeelds such plenty of the said incense, it is about 8 daies journey. As for Saba (which in the Greeke tongue signifieth, a secret myserie) it regards the Sunne rising in Summer, or the North-East, enclosed on euery side with rockes inaccessible: and on the right hand it is defended with high cliffes and crags that beare into the sea. The soile of this territorie, by report, is reddish, & inclining to white. The Forrests that carry these Incense trees ly in length 20 Schænes, and beare in bredth half as much. Now that which we call Schænus, according to the calculation of *Eratosthenes*, contains forty stadia, that is to say, fise miles: howsoeuer some haue allowed but 32 stadia to euery Schænus. The quarter wherein these trees grow is full of high hills: howbeit, go down into the plains and valley beneath, you shall haue plenty of the same trees, which come vp of their own accord, and were neuer planted. The earth is fat, and standeth much vpon a strong clay, as all writers do agree. Few Springs are there to be found, and those that be are full of Nitre. There is another tract by it selfe confronting this country, wherein the Minæans do inhabit: and through them there is a narrow passage, whereby the frankincense is transported into other parts. These were their first neighbours that did traffique with them for their Incense, and found a vent for it: and euen so they doe still at this day, whereupon the frankincense it selfe is called of their name, Minzum. Setting these people of the Sabæans aside, there be no Arabians that see an Incense tree from one end of the yere to another: neither are all these permitted to haue a sight of those trees. For the common voice is, that there be not aboue 3000 families which can claime and challenge by right of succession that priuiledge to gather incense. And therefore all the race of them is called Sacred and Holy: for looke when they go about either cutting and flitting the trees, or gathering the Incense, they must not that day come neere a woman to know her carnally; nay they must not be at any funerals, nor approach a dead corps, for being polluted. By which religion and ceremonious obseruation the price is raised, and the incense is the dearer. Some say, these people haue equall liberty in common to go into these Woods for their commodities when they will: but others affirme that they be diuided into companies, and take their turns by yeares. As concerning the very tree I could neuer know yet the perfect description of it. We haue waged warres in Arabia, and our Roman armie haue entred a great way into that country. *C. Cesar* the adopted son of *Augustus* wan great honour and glory from thence: and yet verily, to my knowledge, there was neuer any Latine Author, that hath put down in writing the form and fashion of the tree that carrieth incense. As for the Greeke Writers, their bookes doe vary and differ in that point. Some giue out, that it hath leaues like to a Peare tree, only they be somewhat lesse, and when they come forth they be of a grassie green colour. Others say that they resemble the Lentiske tree, and are somewhat reddish. There be again who write, that it is the very Terebints and none else, that giueth the Frankincense: of which opinion king *Antigonus* was, who had one of these shrubs brought vnto him. King *Iuba* in those bookes which he wrot and sent to *C. Cesar*, son to the Emperor *Augustus*, (who was inflamed with an ardent desire to make a voiage into Arabia, for the great fame that went thereof) saith, That the tree which beares Frankincense hath a trunke or body writen about, and putteth forth boughes and branches like for all the world to the Maple of Pontus. Item, that it yeeldeth a iuice or liquour as doth the Almond tree; and such are seene commonly in Carmania: as also those in Egypt which were planted by the carefull industrie of the *Ptolomees*, Kings there. Howeuer it be, this is receiued for certaine, that it hath the very barke of a Bay tree: Some also haue said that the leaues be as like. And verily such kind of trees were they which were seen at Sardis: for the Kings of Asia likewise were at the cost and labor to transplant them, and desirous to haue them grow in Lydia. The Embassadors who in my time came out of Arabia to Rome, haue made all that was deliuered as touching these trees, more doubtfull and vncertaine than before. A strange matter, and wonderfull indeed, considering that twigges and branches of the Incense tree haue passed betwene:

by

A by the view of which impes, we may judge what the Mother is: namely, euen and round in the bodie, without knot or knar, and from thence she putteth out shoots.

They vse in old time to gather the Incense but once a yere, as hauing little vent, and small returne, and lesse occasion to sell than now adaies: but now, since euery man calleth for it, they feeling the sweetnesse of the gaine, make a double vantage (as it were) of it in one yere. The first, and indeed the kindly season, falls about the hottest daies of the Summer, at what time as the Dog daies begin: for then they cut the Tree where they see the bark to be fullest of liquor, and whereas they perceiue it to be thinnest and strut out most. They make a gash or slit only to giue more libertie: but nothing do they pare or cut cleane away. The wound or incision is no sooner

B made, but out there gusheth a fat some or froth: this soone congeales and growes to be hard: and where the place will giue them leaue, they receiue it in a quilt or mat made of Date tree twigs, plaited and wound one within another wicker-wise. For elsewhere, the floore all about is paved smooth, and rammed downe hard. The former way is the better to gather the purer and clearer Frankincense: but that which falleth vpon the bare ground, prooues the weightier. That which remaines behind, and stickes to the Tree, is parted and scraped off with kniues, or such like yron tooles; and therefore no maruell if it be full of shavings of the bark. The whole wood or Forrest is diuided into certaine portions: and euery man knowes his owne part: nay, there is not one of them will offer wrong vnto another, and encroch vpon his neighbors. They need not to set any keepers to look vnto those Trees that be cut, for no man will rob from his fellow if

C he might; so just and true they be in Arabia. But beleue me, at Alexandria where Frankincense is tried, refined, and made for sale, men cannot look surely ynough to their shops and work-houses, but they will be robbed. The workman that is employed about it, is all naked, saue that he hath a paire of trouses or breeches to couer his shame, and those are sowed vp and sealed too, for feare of thrusting any into them. Hood-winked he is sure ynough for seeing the way to and fro, and hath a thicke coife or maske about his head, for doubt that he should bestow any in mouth or eares. And when these workmen be let forth againe, they be stripped starke naked, as euer they were borne, and sent away. Whereby we may see, that the rigor of justice cannot strike so great feare into our theecues here, and make vs so secure to keepe our owne, as among the

D Sabæans, the bare reuerence and religion of those woods. But to returne againe to our former cuts. That Incense which was let out in Summer, they leaue there vnder the Tree vntil the Autumne, and then they come and gather it. And this is most pure, cleane, and white.

A second Vantage and gathering there is in the Spring: against which time, they cut the bark before in the Winter, and suffer it to run out vntil the Spring. This comes forth red, and is nothing comparable to the former. The better is called Carpheotum, the worse, Dathiathum. Moreover, some say, that the gum which issueth out of the young trees is the whiter: but that which comes from the old, is more odoriferous. There be others also of opinion, that the better Incense is in the Islands. But King *Iuba* doth auouch constantly, that there is none at all in the Islands. That which is round like vnto a drop, and so hangeth, we call the male Incense; whereas

E in other things lightly we name the male, but where there is a female. But folk haue a religious ceremonie in it, not to vse so much as the tearme of the other sexe, in giuing denomination to Frankincense. Howbeit, some say, that it was called the Male, for a resemblance that it hath to cullions or stones. In very truth, that is held for the cheife and best simply, which is fashioned like to the nipples or teats that giue milk, standing thick one by another: to wit, when the former drop that distilled, hath another presently followeth after, and so consequently more vnto them, and they all seeme to hang together like bigs. I read, that euery one of these were wont to make a good handfull, namely, when men were not so hasty & eager to carry it away, but would

F giue it time and leisure to drop softly. When it is gathered in this sort, the Greeks vse to call it Stagonias and Atomus: but the lesser goblets they name Orobias. As for the small cruims or fragments which fall off by shaking, wee called Manna, [*i. Thuria*.] And yet there be found at this day drops of Incense that weigh the third part of a pound, that is to say, about * 39 Romani deniers. It happened on a time, that king *Alexander* the Great being then but a very little child, made no spare of Incense, but cast still vpon the altar without all measure when he offered sacrifice. Whereupon, *Leonides* his tutor and schoole-master, by way of a light reproofe, said vnto him thus, Sir you should in that maner burne Incense when you haue once conquered those nations where there growes Incense. Which rebuke and checke of his tooke so deep a print in

Alexander's

or rather 39
and a scrupulo.

Alexanders heart, and so well he carried it in memorie, that after he had indeede made conquest of Arabia, he sent vnto the said *Leonides* his Tutor, a ship full fraught and charged with Incense, willing him not to spare, but liberally to bestow vpon the gods when hee sacrificed. To returne againe to our historie. When the Incense is gathered (as is before said) conueighed it is to Sabota, vpon Cammels backs, and at one gate (set open for that purpose) is it brought into the citie. For by law forbidden it is on pain of death, to take any other way. Which done, the Priests there of the god whom they call *Sabis*, take the disme or tenth part of the Incense, by measure, and not by weight, and set it apart for that god. Neither is it lawful for any man to buy or sell, before that duty be paid: which serueth afterwards to support certaine publick expenses of the citie. For al strangers and traueilers within the compasse of certain daies journey, if they come to the citie, are courteously receiued, and liberally entertained at the cost and charge of the said god *Sabis*. Caried forth of the country it cannot be, but thorough the Gebanites: and therefore there is a custome paid to their king. The head citie of that kingdome, *Thomna*, is from *Gaza* (the next port-towne in Iudæa toward our coast) seuen and twentie miles fourscore times told: and this way is diuided into 62 daies journey by Camels. Moreouer, besides the tyth aforesaid, there be measures bestowed vpon the Priests to their owne vse: and others likewise to the kings Secretaries and Scribes. And not only these haue a share, but also the Keepers, Sextons, and Wardens of the temple, the Squires of the bodie, the Guard and Pensioners, the kings officers, the Porters, Groomes, and other seruitors pill and poll, and euery one hath a snatch. Moreouer, all the way as they trauell; in one place they pay for their water, in another for fodder and prouender, or else for their lodging & stable-room, & euery where for one thing or other they pay toll: so as the charge of euery Camell from thence to the sea vpon our coast, commeth to 688 deniers: and yet we are not come to an end of payments. For our Publicanes and customers also belonging to our Empire, must haue a fleece for their parts. And therefore a pound of the best Incense will cost 16 deniers: of the second 15: and the third 14. With vs it is mingled and sophisticated with parcels of a white kind of Rosin which is very like to it: but the fraud is soone found, by the meanes aboue specified. The best Incense is tried and knowne by these markes, *viz.* If it be white, large, brittle, and easie to take a flame when it comes neare a coale of fire; last of all, if it still not abide the dent of the tooth, but flie in pieces and crumble sooner than suffer the teeth to enter into it.

CHAP. XV.

¶ Of Myrrhe, and the Trees that yeeld it.

Some haue written, That the Trees which beare the Myrrhe, doe grow confusedly here and there in the same woods, among the Incense Trees: but more there are who affirme, That they grow apart by themselves. And in truth, found they are in many quarters of Arabia, as shall be said when we treat of the seuerall species of Myrrh. There is very good Myrrh brought out of the Islands: and the Sabæns passe ahe seas, and trauell as far as to the Troglodites country for it. There is a kind of Myrrhe tree planted by mans hand in Hort-yards, and much preferred it is before the wild that groweth in the woods. These Trees loue to be raked, bared, and cleansed about the roots: they delight (I say) to haue the superfluous spurnes rid away from the root: and the more that the root is cooled, the better thriue the Tree. The plant groweth ordinarily fise cubits high, but not all that length is smooth and without pricks: the bodie and trunke is hard and wrythen, thicker than the Incense trees: it is greatest toward the root: and so arifes smaller and smaller, taperwise. Some say, that the bark is smooth and euen, like vnto that of the Arbut Tree: others againe affirme, that it is prickly and full of thornes. It hath a leafe like to the Olive, cut more crisped and curled, and withall it is in the end sharp-pointed like a needle. But King *Iuba* writes, that it beareth the leafe of Loueach or Alifanders. There be who write, that it resembles the Iuniper, saue only that it is more rough and beset with sharp pricks. And some let not to dream & talke, that both Myrrhe and also Incense came from one and the same Tree. Indeed, the Myrrhe trees are twice cut and launced in one yeare, and at the same seasons, as well as the Incense trees: but the slit reacheth from the very root vp to the boughes, if they may beare and abide it. Howbeit, before that incision be made, they sweat out of themselves a certain liquor called *Stacte*, which is very good Myrrh, and none better. As wel of this franke

A franke and garden myrrh tree, as of the wild in the woods, the Myrrh is better that is gathered or runs in Summer time. There is no allowance of myrrh offered and giuen to the god *Sabis*, as there was of Incense, because it is found in other countries. Howbeit the King of the Gebanites hath payed vnto him for toll and custome a fourth part of all that passeth through his kingdome. To conclude, whatsoeuer is bought in any market or place abroad, they put and thrust it hard together in leather bags one with another: but the Druggists and Apothecaries can soon separate the better from the worse, and be very cunning and ready to digest them according to the marks that they go by, as well of smell as fattinesse.

CHAP. XVI.

¶ Diners kinds of Myrrhe: the nature, vertue, and price thereof.

B Many sorts there be of Myrrh. Of all the wild kinds, the first is that which groweth in the Troglodites country. Next to it is *Minæa*, in which rank you may place *Attramittica* and *Aufaritis*, which both come out of the realme of the Gebanites. In a third place reckon that which they call *Dianitis*. A fourth sort is gotten here and there in all parts, and huddled together. In the first range is *Sembracena*, so called of a city within the kingdom of the Sabæans, and is next vnto the sea. The sixth they call *Dufaritis*. Besides all these, a white myrrh there is found but in one place, which ordinarily is brought to the city *Mesalum*, & there sold. The Trogloditick myrrh they chuse by the fattinesse thereof, and for that it seemes to the eye greener: it shewes also soule, rude, and ilfaoured: but sharper it is, and more biting in mouth than the rest. The *Sembracene* hath none of these faults, but is pleasant and cheereful to see to, howbeit of small operation and strength. But to speake in a word, and once for all, the best myrrh is known by little pieces which are not round: and when they grow together, they yeeld a certain whitish liquor which issueth and resolueth from them, and if a man break them into morsels, it hath white veines resembling mens nailes, and in taste is somewhat bitter. A second degree there is in goodnes, when it sheweth sundry colors within. And the worst of all is that which within-forth is black; and the same is worse yet, if it be as black without. As touching the price of myrrh, it alters as it is more or lesse in request, and according as it meeteth with many or few chapmen. For ye shall haue *Stacte* sold sometimes for 6 deniers a pound, and otherwhiles for 50. The greatest price of the garden frank-Myrrh, or that which is let by mans hand is 22 deniers. The red called *Erythrea* is neuer aboue 16: and this is taken to be the true myrrh of Arabia. The kernell within of the Trogloditick Myrrh will cost 13 deniers a pound: but that which they call * *Odoraria* is sold for 14. All kinds of Myrrh being mingled and sophisticated with pieces of Masticke comming from the Lentiske, and with other gum: *Item* with *Elaterium* [i. the iuice of the wild cucumber] to make it more bitter: as also, that it might seem weightier, with the some of lead, or litharge of siluer. And surely setting aside these two corruptions, all the rest are found by the very tast of the gum, which also will sticke vnto the teeth in the chewing. But the craftiest and finest deuice to counterfeit it, is with Indian myrrh, gathered there from a certain thorny plant which growes among them. This is the onely thing that India bringeth forth worse than other countries. And verily so bad it is, that soone it may be knowne from other myrrhes.

CHAP. XVII.

¶ Of Mastick, Ladanium, and Bruta of Enhemus, Strobilus, and Syrax.

F From the foresaid Myrrh therefore last named, let vs for the affinitie passe to Mastick: which comes also of another thorny tree in India, as also in Arabia, called *Lama*. Howbeit of Mastick there be two sorts: for both in Asia and also in Greece there is found an hearbe, which directly from the root putteth forth leaues, and it beareth a bur or thistle head like an apple, full of seeds. Cut the top of this herbe, and there will issue forth a certain liquor so like vnto the right mastick, that hardly a man shall know the one from the other.ouer and besides, there is a third sort of Masticke in Pontus, more like to Bitumen. Howbeit, the very best Mastick is brought out of the Island *Chios*, and the same is white, and a pound of it is worth in Rome 20 deniers: but the black ye shall buy for twelue. As for the Chian Masticke, it issueth forth

forth as a gum out of the Lentisk tree. Mingled this is also like as frankincense, with rosin.

Moreover, Arabia doth glory even yet in their Ladanum. And many haue reported, that this comes by fortune or chance, and by occasion of violence and wrong done to an odoriferous plant that yeeldeth it in this manner following: The Goats they say, harmefull creatures as they be to all plants, but more desirous to be broufing of sweet and aromaticall shrubs (as if they knew how precious they were) vse to crop the sprouts and sprigs of this plant which beareth Masticke; which being so full of this odoriferous and sweet liquor, that they smel again, dorth drop and distill the said moisture, which the shrewd and vnhappy beast catcheth among the shag long haire of his beard. Now by reason that dust getteth among, it baltereth & clut-
tereth into knots and balls, and so is concocted into a certaine consistence in the Sunne. And hereupon it is, that in Ladanum are found goats haire. But this hapneth by their saying, in no other place but among the Nabateans in the frontiers of Arabia toward Syria. The later moderne writers call the plant which yeeldeth Ladanum, Strobos: and they affirme, That in the forestts of Arabia where these do grow, the boughes are much broken by the broufing of these goats, and so the iuice and liquor stickes to their locks and beards. But the true Ladanum (say they) is peculiar to the Island Cyprus (for, giue me leaue I pray you, to speake by the way of euery kind of spice and aromaticall drugs, & not strictly to keep & obserue the order & consequence of places where they be found.) And by report, after the same manner as this Ladanum in Arabia, there hangeth and cleaueth to the beards and shagge haired legs and flanks of the goats there also, a certain grease and fattinesse called Oesypus: but, according to them, it must be gotten when they crop off the leaues and floures of the herbe Cistus, in a morning for their breakefast, at what time as the Island Cyprus standeth all with a dew. Now when the morning mist is dispatched by the heat of the Sunne, there gathereth dust amongst these moist and wet haire of theirs, and sticketh to: and then the Islanders come and comb from their beards and flanks that which the call Ladanum. Some call that plant in Cyprus whereof it is made, Ledon: and in truth thereof it taketh the name of Ledanum amongst them. For by their report, this herbe hath a fatty substance feeling vpon it, and the peasants of the countrey roll the herbs together into balls or rundles, with small cords, and so make vp those little lumpes ye see. By which we may perceiue, that as well in Arabia as Cyprus there be two kinds of Ladanum: the one mixed with earth, and naturall of it selfe: the other brought into balls and artificiall. The earthy is brittle and will crumble: the artificiall is tough, clammy, and will cleaue to ones fingers. Moreover, it is said that there be certain shrubs in Carmania that beare Ladanum, as also about Egypt, by occasion of plants thither brought by the *Ptolomes*, kings of Egypt: or as some say it is the Incense tree that bringeth it forth: and is gathered after the manner of a gum issuing out of the tree by incision made in the barked, and is receiued in goat skins. The best Ladanum is worth forty Asses a pound. Sophisticated it is with Myrtle berries, and with other filth of beasts. The good Ladanum indeed, which is of it selfe without other mixture, ought to haue a wild and sauage smell with it, as if it came out of a wildernesse. Greenish it is, and drie to see to: but handle it neuer so little, and presently it dorth relent and wax soft. Set it on fire, and it burneth bright and cleare, and then it cast a sweet and pleasant odour. But all that is counterfeit and mixed with myrtle berries may soon be knowne, for they will crackle in the fire. Besides, the true Ladanum hath rather stony grit comming from the rockes, mingled with it, than dust.

In Arabia, the Oliue tree also hath a kind of liquour which issueth out of it: and thereof is compounded a certain soueraign salue named of the Greeks Enhemon, which is singular good to draw vp wounds and heale them clean. In the maritime parts and sea coasts the said Oliue trees at some tides are ouerflowed with the waues. Yet receiue the Oliue berries no hurt thereby: notwithstanding it be certain, that the sea dorth leaue salt vpon the leaues. Thus you see what be the peculiar commodities as touching trees, proper vnto Arabia. True it is that it hath others besides, but because they be found elsewhere, and knowne to be better in other places than in Arabia, I will treat of them in their course and ranke when it commeth. And yet Arabia it selfe, as fruitfull and happy as it is in this behalfe, is wondrous eager in seeking after forreine spices, and sendeth for them into strange countries. So soone are men gluttied and haue their fill of their owne: and so greedy and desirous be they of other countries commodities.

They

A They send therefore as far as the Helymæans, for a tree named Bruta, like to a spreading cypress, hauing boughes couered with a whitish bark, casting a pleasant smelling perfume when it burneth, and highly commended in the chronicles and historie of *Claudius Caesar* for strange vertues and wonderfull properties. For he writeth, That the Parthians vse to put the leaues thereof in their drinke, for to giue it a good tast and odoriferous smell. The odour thereof resembleth the Cedar very much: and the perfume is a singular remedie against the stinking and noisome fumes of other wood. It groweth beyond the great channell of the riuer Tigris, called Pasitigris, vpon the mount Zagrus neare vnto the citie Citaca.

They send moreover to the Carmanians for another tree called Strobos, and all to make sweet perfumes: but first they infuse the wood thereof in Dare-wine, and then burn it. This is an excellent perfume: for it wil fill the whole house, rising vp to the chambers aloft to the arched feelings of the rouse, and returning downe againe to the very floore and ground beneath, most pleasantly. But it stuifes a mans head, howbeit without any paine or ach at all. With this perfume they procure sleep to sick persons. And for the traffick of this commodity, the merchants meet at the citie Carras, where they keep an ordinarie faire or mart: and from thence they went customably to Gabba, twentie daies journey off, where they were wont to haue a vent for their merchandise, and to make returne: and so forward into Palestine of Syria. But afterwards (as *K. Iuba* saith) they began to go to Charace, and to the kingdom of the Parthians, for the same purpose. For mine owne part, I thinke rather with *Herodotus*, That the Arabians transported these odours and spices to the Persians first, before that they went therewith either into Syria or Ægypt: and I ground vpon the testimonie of *Herodotus*, who affirmeth, That the Arabians paid euery yeare vnto the KK. of Persia the weight of a talent in Frankincense, for tribute.

C Out of Syria they bring back Storax, with the acrimonie and hot smell wherof, being burnt vpon their hearths, they put by and driue away the loathfomnesse of their own odors, wherewith they are cloyed: for the Arabians vse no other fuell at all for their fires, but sweet wood. As for the Sabæans, they seeth their meats in the kitchin, somewith the wood of the Incense tree, and others with that of Myrrhe: insomuch as both in citie and country their houses be full of the smoke and smell thereof, as if it came from the sacrifice vpon the altars. For to qualifie therefore this ordinarie sent of Myrrhe and Frankincense wherewith they are stuffed, they perfume their houses with Storax, which they burne in Goats skins. Loe, how there is no pleasure whatsoever but breeds lothfomnesse, if a man continue long to it. The same Storax they vse to burne for the chasing away of Serpents, which in those forestts of sweet trees, are most rife & common.

CHAP. XVIII.

¶ Of the felicitie of Arabia.

N Neither Cinamon nor Casia do grow in Arabia, and yet is it named Happie: vnworthie country as it is, for that surname, in that it taketh it selfe beholden to the gods aboue therefore, whereas indeed they haue greater cause to thanke the infernal spirits beneath. For what hath made Arabia blessed, rich, and happie, but the superfluous expence that men be at, in funerals, employing those sweet odors to burne the bodies of the dead, which they knew by good right were due vnto the gods. And verily it is constantly affirmed by them who are acquainted well with the world, and know what belongeth to these matters, That there commeth not so much Incense of one whole yeares increase in Saba, as the Emperor *Nero* spent in one day, when he burnt the corps of his wife *Poppea*. Cast then, how many funerals euery yeare after were made throughout the world: what heaps of odors haue been bestowed in the honor of dead bodies: whereas they offer vnto the gods by crums and graines only. And yet when as men made supplication to them with the oblation of a little cake made with salt, and meale, and no more; they were no lesse propitious and merciful, nay they were more gracious and fauourable a great deale, as may appeare by histories. But to returne againe to Arabia, the sea enricheth it more than the land, by occasion of the orient pearles that it yeeldeth and sendeth vnto vs. And surely our pleasures, our delights, and our women together, are so costly vnto vs, that there is not a daye goeth ouer our heads, but what in pearles, perfumes, and silkes; India, the Seres, and that demy-Island of Arabia, stands vs at the least in an hundred millions of Sesterces, and so much fetch they from vs in good money, within the compasse of our Empire. But of all this masse of

Spice

Spice and Odors, how much (I pray you) commeth to the seruice of the coelestiall gods, in comparison of that which is burnt at funerals, to the spirits infernall;

CHAP. XIX.

¶ Of Cinamon, and the wood thereof called *Xylocinnamomum*.
Also of Canell or Casia.

FAbulous antiquitie, and the prince of lyers *Herodotus*, haue reported, That in that tract where *Bacchus* was nourished, Cinamon and Canell either fell from the nests of certaine fowles, and principally of the Phoenix, thorough the weight of the venison and flesh which they had preyed vpon and brought thither whereas they builded in high rockes and trees; or else was driuen and beaten downe, by arrowes headed with lead. Also that Canell or Casia was gotten from about certaine marshes, guarded and kept with a kind of cruell Bats, armed with terrible and dreadfull tallons, and with certain flying Pen-drasons. And all these deuises were inuented only to enhance the price of these drugs. And this tale is told another way, namely, That in those parts where Canell and Cinamon grow (which is a country in manner of demy-Island, much enuironed with the sea) by the reflection of the beames of the Noon-sun, a world of odoriferous smells is cast from thence, in such sort, that a man may feele the sent at one time of all the aromaticall drugs as it were met together, and sending a most fragrant and pleasant fauour far and neare: and that *Alexander the Great* sailing with his fleet, by the very smell alone discovered Arabia a great way into the maine sea. Lies all, both the one and the other: for Cinamome or Cinamon, call it whether you will, groweth in *Aethiopia*, a countrey neare vnto the *Troglodites*, who by mutuall marriages are linked together in great affinity. And in very truth the *Aethiopians* buy vp all the Cinamon they can of their neighbours, and transport it into other strange countries ouer the vast Ocean, in smal punts or boats, neither ruled with helme and rudder, nor directed to and fro with ores, ne yet caried with sailes or any such meanes of navigation: one man alone shall see you there in a boat, armed and furnished with boldnesse only in stead of all, to hafard himself and his goods in the surging sea. These fellows, of all times of the yeare, take the dead of the winter, and then (to chuse) they will venter to crosse the seas for their voyage, when the Southeast winds are aloft & blow lustily. These winds set them forward in a freight and dire & course thorough the gulfes; and after they haue doubled the point of *Argeste*, and coasted along, bring them into the famous port or hauen-towne of the *Gebanites*, called *Ocila*. And albeit this voiage be long & dangerous (for the merchants hardly can return in five yerres, and many of them miscarie by the way) yet by report they are nothing dismayed and daunted therewith, but willingly aduenture still. And being at *Ocila*, what thinke you doe they exchange for, and wherewith freight they their vessels back againe homeward? euen with glasse, vessels of copper and brasse, fine cloth, buckles, claspes, and pincers, bracelets and carcanets, with pendant jewels: so as a man would verily thinke, that this trafficke were maintained and the voiaiges enterprised vnder the credit & for the pleasure of womankind especially. Now as touching the plant that bears Cinamon, the tallest is not aboue 2 cubits high aboue ground, nor the lowest vnder one hand-breadth or 4 inches: in compasse about 4 fingers thicke: immediately from the earth it putteth forth twigs, and is full of branches of six fingers length, but it looketh as if it were drie and withered: whiles it is greene it yeelds no smell at all, and the leaf resembleth *Origan*: it loues drought, for in rainie weather it is lesse fruitfull, and yet it is of this nature, To be cut as a coppis. It will grow verily in plaines, but gladly it would lodge among the thickest rough of bushes, greeues, & briars that are to be found: so as men haue much adoe to come by it and to gather it: but neuer is cut or cropped without especiall permission of a certaine god, which they take to be *Iupiter*; and this patron of the Cinamon tree, they call *Assabinus*. To obtaine leaue and license so to do, they are glad to sacrifice the inwards of 44 Kine or Oxen, Goats also and Rams: and when they haue all done, yet permitted they be not to go about this businesse either before the Sun rising, or after his setting. Now when these twigs and branches be cut, the Sacrificer or Priest diuides and parts them with a iauelin, and sets by one portion for the god abovesaid: the rest doth the merchant put vp and bestow in paniers for the purpose. This manner of diuision is otherwise reported; namely, That the whole heap is cast into three parts, whereof the sunne hath one for his share: but they draw lots first for euery one

A one of these trees seueral bundles or parcels of Cinamon sticks; and that which falleth to the Sun is let alone and left behind: but of the own accord it catcheth a light fire and burneth. The best Cinamon is thought to be that which growes about the slenderest sticks, for the length of an hand bredth from the vpper end. The second sort in goodnesse is that which is next it, and somewhat lower, but it beareth not full so much as an hand bredth; and so consequently in order by degrees downward; for the worst and of least price is that which is neere the root, because there is least barke, the chiefe thing required in Cinamon: which is the cause that the twigs in the tree top are preferred before the rest, for that in them there is most barke. As for the very wood it selfe, which is called *Xylocinnamomum*, there is no reckoning made of it, because of the acrimonie and sharpenesse that it hath, resembling *Origan*. A pound thereof is worth 20 deniers. Of Cinamon there be (according to some) two kinds; to wit, the whiter and the blacker. In times past, the white was in more request: but now adaies the black is most seck by: yea, and that of diuers colours is better esteemed than the white. But the truest marke indeed to chuse the best, is to see that it be not tough, and that it crumble not quickly if one piece be rubbed against another. That which is tender and hath besides a white bark, is not regarded at all, but condemned for the worst. Moreouer, this is to be noted, that the King onely of the *Gebanites* setteth the price and sale of Cinamon: he it is that selleth it in open market according as it is by him taxed. In old time a pound of it was sold for 1000 deniers, and this price afterward rose higher by one halfe, by reason that the Forrests of Cinamon were (as men say) burnt by the barbarous *Troglodites* their neighbors in their furious wrath. Now why it should be so deare, no man certainly knows: whether it were through the great rich merchants who ingrossed all into their hands by way of monopoly, or by some other casualtie and chance of fire aforesaid. But true it is and well knowne by that we find in diuers writers, That there be such hot Southerne windes blowing in those parts, that in Summer many times they set the woods on fire. *Vespasian Augustus* the Emperor was the first that dedicated in the Temples of the Capitol and goddesse *Peace*, garlands and chaplets of Cinamon enclosed within fine polished gold. In that temple which the Empreffe *Augusta* caused to be built in the palace vpon Mount *Palatine*, for the honor of *Augustus Caesar* late Emperor, her husband, I haue myself seen a Cinamon root of great weight, set in a cup of gold, which yearely did put forth certain drops which congealed into hard grains. That monument remained there to be seen, vntill the Temple and all was consumed by fire.

E As concerning Casia or Canell, a plant it is, which groweth neer to the plains from whence the Cinamon comes; but it loveth to liue vpon mountaines, and beareth a bigger and rounder wood in the branches than the Cinamon, and hath a thin rinde or skin, more truly than a bark: the slenderer that the same is, and lighter, the more reckoning is made of it; clean contrary to the Cinamon. This shrub that beareth Casia groweth to the height of 3 cubits: and 3 colours it carieth; for when it comes vp first, for a foot from the root it is white: then as it shooteth halfe a foot higher it waxeth red: but as it riseth farther it is blackish: and this part is held for the best; and so the next to it in a degree lower: but the white is of no regard at all, and therefore they neuer cut the twigs and branches neere the root, nor aboue two cubits in length. And when they haue cut them in this manner, they presently sow them vp in greene skinned of four-footed beasts, killed new and fresh for that purpose, that of their corruption and putrefaction there might breed certaine wormes to eat out the wood within the barke, and so make it hollow; for the bark is so bitter that the worm will not touch it. The newest and freshest Canell is reputed best, and that which hath a most delicate smell; very hot in the mouth, and burning the tongue, rather than gently warming it without any great biting. Such Canell is of a purple colour, and very light in hand; which seeming much to the eye, yet weigheth little: besides, the pipes be but short, and the outward rinde or coat is not brittle and easie to fall in pieces. This elect and choise Canell the barbarous people call *Lacta*. Another sort there is named *Balsamodes*, because it hath a smell resembling Balm: bitter it is in the mouth, & therefore of more vse in physicke; like as the blacke is most employed in sweet perfumes and oynments. There is no drugs that varieth more in price than the Canell: for whereas the best will cost fifty deniers Romana pound; all the rest a man may buy for five.

C H A P. XX.

¶ Of *Isocinnamon, Cancamum, and Tarum.*

THe Hucksters and regraters that buy and sell againe haue another kinde, which they call Daphnoides, and they syrname it Iso-cinnamon: and surely they hold it at 300 deniers a pound. Mingled it is and made counterfeited with Storax, with the smallest and tendrest branches also of Lawrell, for the likenesse it hath to the bark therof. Moreover, it is set & planted in our part of the world here in Italy, also in the vtmost marches and confines of our Empire, along where the riuer Rhine runs, it liueth, being set neere vnto Bee-hiues. Howbeit, because it wants the parching heate of the Sun, it is nothing so deepe coloured; and thereupon also it comes short of the smell that the other hath. Out of the regions which bound on those parts where Casia and Cinamon groweth, there are brought ouer vnto vs two other spices, called Cancamum and Tarum: but by the way of the Troglodite Nabathæans, who onely of the antient Nabathæans there settled and remained,

C H A P. XXI.

¶ Of *Serichatum, Gabalium, and Myrobalanum, [i. Ben.]*

IN the same country, the Arabians come charged also with Serichatum and Gabalium: but they make an hand with it among themselves, and spend it quite: in such sort, as their drugs are known only in name to vs in this part of the world, albeit they grow together with Cinamon and Casia. And yet otherwhiles there is Serichatum brought vnto vs, which some perfumers vse to put into the composition of ointments. And a pound of it is commonly exchanged for six deniers.

As for Myrobalanum, [*i. Behen*] it growes ordinarily in the region of the Troglodites, about Thebais, and that part of Arabia which diuideth Iury from Egypt: a drug that Nature hath brought forth only for ointment, as the very name giueth it. Whereby it appeareth also, that it is a very nut of a certain tree, which beareth leaues like to Heliotropium: whereof we wil speake among other herbs. The fruit that this plant beareth is about the bignes of a filberd nut. That which growes in Arabia, and yet called Syriaca, is white: but contrariwise that about Thebais is black. The former of these two is commended for the goodnesse of the oile which is pressed out of it: but the Thebaick Ben is in greater request for the plenty that it yeeldeth. As for the Trogloditick, it is the worst of all, and the cheapest. And yet some there be that prefer the Æthiopian Ben before all other. The Nut and fruit thereof is black and fat, with a smal and slender kernell within: howbeit the liquor pressed forth of it is more odoriferous: and it groweth in champian countries and plains. It is affirmed moreover, that the Egyptian Ben is more oleous and fat, hauing a thicker shell, and the same red. And albeit that it grow in marsh ground, yet is it a shorter plant and more dry than the others. But contrariwise they say, that the Arabick is green of colour, and thinner in substance: and for that it groweth vpon the mountaines it is more massie and weighty. But the best simply by many degrees, is that Ben which is called Petrea, coming from about the town abouesaid; with a blackish rind, & white kernel. Now the Perfumers and Apothecaries, do presse only the husks and shells, but the Physitians extract an oile out of the very kernels, which as they stamp, they poure hot water euer and anon vnto it, by little and little.

C H A P. XXII.

¶ Of *Phenicobalanus, Calamus odoratus, and Squinanth.*

THe Date in Egypt called Adipsos hath the like vse in ointments, and is next in request for such odoriferous compositions, as the Myrobalanus, or Ben aforesaid. Green it is in colour, it smelleth like vnto a Quince, and hath no woody stone within. But to serue for those purposes aboue recited, it must be gathered somewhat before it beginneth to ripen. That which is left behinde vngathered is called Phenicobalanus. This waxeth blacke, and maketh them drunke that eat thereof. As for Myrobalanus, or Ben, it is worth two Romane deniers a pound.

A pound. The occupiers and shopkeepers call the very setting and grounds of their ointment and compositions, by the name of Myrobalanon.

Moreover, within Arabia there growes also the sweet Calamus, which is common to the Indians & Syrians likewise. That of Syria passes all the rest, and comes vp in a tract of that countrey, distant from the coast of our Sea fiftie stadia. Between mount Libanon, and another mountain of no account [for it is not Antilibanon as some haue thought] in a little vale beneath neer vnto a lake, the marshes and flats whereof are drie in Summer for the space of thirtie stadia, there grow both sweet Calamus, and also Squinanth or Iuncus Odoratus, [*i. the Sweet-rush.*] For let vs speake also in this place of the said Scænanth: and although it be but a rush, and another booke is appointed for the treatise and historie of such Hearbes, yet because we handle the Species that go to the composition of sweet Perfumes, Pomanders, & ointments, I cannot passe it ouer. Well then, neither the one nor the other of these twaine, differ in sight from the rest of that kind. But Calamus is the better of the twaine, and hath a more pleasant smell; for a man may wind the sent of it presently a great way off: besides, it is softer in hand: and better is that which is lesse brittle, and breaketh in long spils and shiuers, rather than knappeth off like a Radish root. Within the pipe of this reed, there lieth a certaine matter like vnto a Spiders-web, which the Apothecaries call the flower of it, and that Calamus is counted better, which hath more in it of these floures. There is another mark also of good Calamus, namely, if it be black: and yet in some place, they make no reckoning of the blacke Calamus. But in a word, the shorter and thicker that the reed is, the better is the Calamus: and the same is more supple and pliable when a man would breake it. As for Calamus, it is worth eleuen deniers the pound: but Squinanth is sold for fifteen. Moreover, some say that there is a sweet rush or Squinanth found in Campania. And now are we gone from those lands that coast vpon the deep ocean, and come to those that confront and lie vpon our Mediterranean seas.

C H A P. XXIII.

¶ Of *Hammoniacum, and Spagnum.*

TO begin withall, in the sands of those parts of Affrick, which lie vnder Æthiopia, there is a liquor distilled, called in Greeke *Hammoniacum*, of *Hammon*, which signifieth Sand, and the Oracle of *Iupiter Hammon*, for neare vnto the temple where the said Oracle returnes Answers, there grow certaine trees within the sands, which they call Metopia, from which, *Hammoniacum* droppeth in manner of a rosin or gum: and of it there be two kinds: the one is named Thrauston, like vnto the male or better Frankincense, and is most esteemed: the other is fat and full of rosin, and they call it Phyrana. The manner to sophisticate *Hammoniacum*, is with sand, to make men beleue that it grew among the sands, and gathered it in the growing and coming vp: and therefore the good *Ammoniacum* is known when it is in least morcels, and those very cleare. The price of the best is after fortie asses the pound.

Beneath these quarters, and within the prouince Cyrenaica, there is found a passing sweet Mosse, called *Sphagnos*; and of some Bryon [*aromaticum*]. Of all such Mosses, this is thought to be the best. Next vnto it, is that of Cyprus: and in a third ranke, the mosse which groweth in Phoenicia. There is such Mosse (by report) in Egypt, and likewise in France: whereof, for my part, I make no doubt: for they be nothing else but the grey and whitish haire that we see hang to trees, and about the oke especially, called commonly Mosse; but only that these be sweet and odoriferous. The cheife praise is of the whitest and lightest: a second commendation belongs to that which is red: but the blacke is worth nothing, neither is any reckoning made of that which groweth in Islands and rockes, and (to conclude) all those that smell not as Mosse should, but rather like to Dates, or the plants whereof they come.

C H A P. XXIII.

¶ Of *Cyprus, Aspalathus, and Marum.*

THere is a tree in Ægypt called *Cyprus*, bearing leaues like to *Ziziphus* or the *Iube* tree, and a grain resembling *Coriander* seed, with a white floure very pleasant and sweet. These floures be steeped and sodde in common oile: out of which is afterwards pressed medi-

cinable oile called Cyprus, or Cyprinum. A pound of it will cost five Roman deniers. The best comes from that tree which growes vpon the bankes of that riuer Nilus about Canopus, which is the first mouth where it discharges it selfe into the sea. The second in goodnesse groweth about Ascalon a citie of Iudæa. The third in worth for smell and sweetnes, is had from the Isle Cyprus. Some take this Cyprus to be the plant, which in Italy is called Ligustrum. [i. Priuet.]

In the same tract groweth Aspalathus: a white thornie shrub it is, of the bignesse of a small tree, and beareth a floure resembling a rose. The root of it is in request for the making of sweet perfumes and ointments. There goes a common speech, That euery plant ouer which the rainbow is seen bent, will cast the same sent that Aspalathus doth: but if it chance that the rainbow settle ouer Aspalathus, then it wil yeeld a sweet sauer incomparable, and such as cannot be expressed. Some call it Erysceptrum, others Sceptum, simply. The good Aspalathus is red, or rather of a fierie colour, massie and heauie in hand, with a smell of Castoreum. It is sold for fiftene deniers the pound.

In Ægypt likewise there groweth Marum, but it is not so good as that of Lydia; for it hath greater leaues, and those spotted with sundry colours; whereas the other hath little short leaues, but they smell passing sweet.

CHAP. XXV.

¶ Of Baulme, as well the liquor thereof called Opobalsamum, as the wood named Xylobalsamum. Also of Storax [Calamita] and Galbanum.

BVt the Baulme is that sweet and odoriferous liquor that goes beyond all others. The tree that yeelds it, Nature hath bestowed only vpon the land of Iurie. In old time it was not to be found but in two parkes or hortyards, belonging both to the kings of Iurie, whereof the one contained not about twentie jugera or acres, the other not so much. The Emperors *Vespasians*, both father and son, brought one of those little Balm trees to Rome, and shewed it openly to the whole citie. *Pompey* the Great likewise made proud boast and vaunted much, when hee said, That trees also by him were borne in triumph. Now this Balm tree serueth and doth homage, yea is tributarie with the whole nation where it groweth: but it is of a nature far different from that which both our Latine writers, & those also of forrain countries, haue described: for more like it is to a vine than a Myrtle. It is planted by slips and branches, as the vine: and of late bound and tied also like a young vine. It spreadeth and filleth the hills where it is set, after the manner of those vines in vineyards, which without any helpe of props, support and beare up themselves. Cut likewise it is, pruned, and cleansed, from those superfluous shoots that it puts out. It loueth to be well husbanded, digged about, raked, and trimmed: and with this ordeting, growes apace, so as within three yeres it is fruitfull. It beares a leafe much like to Rue, and continueth with a greene head all the yere long. At the sacking and destruction of Ierusalem, the Iewes in a furious rage both against their owne persons & their goods, would needs haue wreaked their anger and been reuenged on the poore Baulme trees, and haue spoiled them for euer: but the Romans on the other side stood in their defence, so as about this very plant, there was a cruell battell fought. But now these trees are vnited vnto the domaine of our Empire: and by order from the state, are set and maintained: so as neuer at any time before, were they more in number, or taller of growth: howbeit the highest exceeds not two cubits. And three sorts there be of them. The first hath small branches and small like haire; whereupon it is called *Eutheristos*, [i. easie to be cut or loppt.] The second, rough and rugged to see to, bowing and bending forward, full of twigs and branches; sweeter also than the other to smell to, and this they name *Trachy* in Greeke, which is as much to say as Rough. The third they call *Eumeces*, because it is higher than the rest, and it hath besides a smooth barke: this in goodnesse is the second; and the first, named *Eutheristos*, is the worst. The fruit or seed that the Baulme tree beareth resembleth wine in tast, of colour red, and it is not without a certaine veine of fat. The worst part of the graine or fruit, is the lighter in weight, and the greener. It is clad with boughes and leaues thicker than the Myrtle. Now, for to draw the precious liquor out of it called Baulme, incision ought to be made in the barke, with glasse-kniues, with sharp flint stones, or lancets of bones. For it may not abide, that any instrument of yron or Steele should come neare vnto the quicke; it dieth presently if you touch the heart of it therewith: and yet the same will suffer all superfluous

A superfluous boughes and branches to be cut off and pruned. But he that launceth and maketh incision, must guide and gage his hand very artificially in the cutting, that he go not too deep, nor perce a jot farther than the barke. This feat being wought, there issues out of the wound a juice or liquor, which they call *Opobalsamum*, of an excellent and surpassing sweet smell: but it comes forth by small drops: and as it thus weepes, the teares ought to be receiued in wooll, and then afterwards it is gathered and laid vp in small hornes. Out of which it is poured into earthen pots that neuer were occupied. This Baulme when it is fresh and new, may be likened to Oile, in thickenesse and consistence, but in colour it is white; in time it growes reddish, and hard withall, howbeit, cleare and transparent, that a man may see thorough it. During the wars that *Alexander* the Great waged in Iurie, it was ordinarie in a Summers day to gather one spoonefull of this liquor, and that was all that might be done. And when the season serued best

B for this purpose, and that it was counted a plentifull yere, the greater hort-yard or parke of the kings aboue said, neuer yeeldeth in al about 6 gallons, and the lesser but one: sold it was commonly for the double weight in siluer. But at this day, euery tree that may beare it, and hath a larger veine to abide incision, is launced thrice in a summer: and after that, it is loppt and sheared. And those cuttings are good chaffer, and sold very well to the merchant. For being thus lopped once in 5 yeres at the farthest, they yeeld in branches for wood only, eight hundred deniers. This is called *Xylobalsamum*, and it goes into odoriferous compositions: for in default of the right Baulme liquor, the Apothecaries make a shift to serue their turne with the wood alone, called *Xylobalsamum*. As for the very bark, it enters also into many medicinable confections: no manuell therefore if it carrie some price. But it is the liquor only that is so precious, the liquor it is which yeelds that most fragrant smell; then follows the grain or fruit in a second degree, the bark in a third, and the wood as it is last, so it hath least grace and credit. Of the wood, the best is that which in color resembles Box, and giues sweetest sent. But of the fruit, the greatest graines and the weightiest, be most esteemed; such bite at the tongues end, and be hore in the mouth. Howbeit, this is adulterated with the seed of * *Hypericum*, that comes from the citie Petra. But the deceit is soone detected and found, for that seed is not so big, so massie and full, nor so long as the true graine of Baulme: besides, it hath but a dull sauer or none at all, and in tast resembleth pepper. The liquor is knowne to be right or good, if it be oileous and fat, thin, and there, somewhat inclining to red, and, if in rubbing betwene your fingers, it renders a pleasant sauer. The white Baulme may be ranged in a second place of goodnesse: the greene and the thicke is not so good as it: but the blacke is worst. For Baulme as well as Oile, will be stale and worse for the age, if it be kept too long. This is moreover obserued, that in euery incision, that which flowed forth before the seed is ripe, is most precious.ouer and besides, this Baulme may be sophisticated with the owne seed: and hardly can this couenage be found out, but that it hath a bitterer tast than that which is naturall. For the good Baulme should be pleasant and delicat in the mouth, not soure nor tart at all: only in smell it should haue a harsh verdeur. Corrupted it may be otherwise, with Oile of Roses, of Cyperus, of Lentiske, or Masticke, of Ben, of Terebinth, and Myrtles, also with Rosin, Galbanum, and Cyprian waxe, as occasion serues, and according as men list to sophisticat it. But the greatest knauerie of al, is to mingle gum among it: for being so handled, it will stickie and cleaue to the palme or inside of a mans hand, nay, it will sinke in water to the bottome, which are two chiefe properties of the right Baulme. For the very pure and perfect Baulme ought to cleaue too: but when it hath gum mingled among, stick it will likewise, but it will gather soon a brittle rouse or crust vpon it, which quickly cracks and breaks. Also this sophistication is found out by the tast. But in case there be any trumperie of Wax or Rosin, the fire wil soone bewray it; for when it burnes, it will yeeld a more muddie and blacke flame. As for the sophistication made with honie, it may soon be knowne: for presently the flies will take it, and gather thicke about it.ouer and besides, put a drop of pure Baulme into warme water, it will settle to the bottom of the vessell, and congeale: but contrariwise, the counterfeit Baulme, will flote and swim about like oile. Againe, if it haue Galbanum in it, yee shall see a white streak or circle round about it. To conclude, would you know in a word the right Baulme indeed? It will turne milke, and cruddle it: and it wil not stain a cloth. In summe, there is no merchandise and commodity in the world, wherein there is practised more fraud and deceit, than in the trafficke of Baulme. For a Sextare or wine quart of Baulme will cost a thousand Roman deniers by retails, which was bought for three hundred and no more at the hands

of the factors vnder the Emperor, who sold it first. Whereby a man may see how gainfull it is to increase this liquor by sophistications. As for the Baulme wood Xylobalsamum, the price of it is six deniers a pound.

Now it remaines to speake of Storax [Calamita] comming out of that part of Syria, which about Phoenice, confronts and borders next to Iurie: and namely, about Gabala, Marathus and the mount Casius in Seleucia. The tree that yeeldeth this gum or liquor, is also named Styxax, like vnto a Quince tree. It hath first a rawish austere tast, which afterwards turnes to be more sweet and pleasant. There is found within a resemblance of canes and reeds, full of this iuice. Howbeit, about the rising of the Dog star there be certain winged wormes settle vpon the said reeds, creepe in and eat away the marrow (as it were) which lay within: so as a man shall find nought left behind but a mouldy dust or rotten powder, good for nothing. Next to this Storax of Syria, great account is made of that which commeth out of Pisidia, from Sidon, Cyprus, and Cilicia: but least reckoning is made of that which Candie sendeth vs. That which is brought from the mount Amanus in Syria, is good for the Physicians, but better for the perfumers and confectioners. From what nation soeuer it comes, the best Storax is that which is red, somewhat glutinous besides by reason of the fattines. The worst is that which hath no consistence and tenacitie, but crumbles like bran, and is so mouldie that it is ouergrowne with a white hoarie mosse. The pedlers and such like petty merchants can skill how to sophisticate this drug also, with the rosin of cedar and gum: otherwhiles also with honie, or bitter almonds. But all these deceits are known by the tast. The price of the best is 19 deniers a pound. There is a Storax besides which Pamphylia doth yeeld, but drier it is, and nothing so full of moisture.

Moreouer, we haue from Syria out of the same mountain Amanus, another kind of gum called Galbanum, issuing out of an hearbe like Fennell-geant, which some call by the name of the said Rosin, others Stagonitis. The best Galbanum, and which is most set by, is gristly and cleare withall, resembling Hammoniacum, without any spils of wood in it. For in that wise the hucksters vse to deceiue chapmen by mingling beanes with it, or the gum Sagapenum. The right Galbanum, if you burn it, chafeth away Serpents with the strong perfume or smoke thereof. It is sold for five deniers the pound: and is vsed only in Physicke for medicines.

CHAP. XXVI.

¶ Of Panaces, Spondylium, and Malobathrum.

The same perfumers seeke also into the same Syria for Panaces growing there, and yet it is to be found also about Psophis, a citie in Arcadia, and the fountaines from whence floweth the riuer Erymanthus: yea, and in Affricke besides, and Macedonie. This Panax is an hearbe with a tall stalke and round tuft in the head like Fennell, and yet it is a plant by it selfe, growing to the height of five cubits. At the first it putteth out foure leaues, and afterwards six. They be very large and round withall, lying vpon the ground: but toward the top they resemble the leaues of an Oliue: it beareth seed in the head hanging within certaine round tufts, as doth the Ferula. Out of the stalk of this hearb there there is drawn a liquor by way of incision, made in haruest time: and likewise out of the root in Autumne, or the fall of the leaf. And this is called Opopanax. The best looks white when it is gathered and congealed. The next in worth and weight, is that which is yellow. As for the blacke it is of no account. The berter Opopanax costeth not about two Asses a pound.

Another hearbe there is of this Fennell kind, namely Spondylium, somewhat different from the former, but in leaues only: because they be lesse than those of Panax, and diuided after the manner of the Plane leaues. This Spondylium groweth no where but in cold and shadowie places. It carrieth a fruit or graine called also Spondylium, which resembleth the forme of Sil or Siler montanum, and serueth for no vse but Physick.

We are beholden moreouer to Syria for Malobathrum. This is a tree that beares leaues rolled vp round together, and seeming to the eie withered. Out of which there is drawne and pressed an Oile for perfumers to vse. Egypt is more fruitfull of this hearbe than Syria. And yet there comes a better kind thereof from India than both those countries. It is said, that it grows there in meeres and standing waters swimming aloft, after the manner of Fen-lentils or Duckes meat, more odoriferous than Saffron: enclining to a blacke colour: rough in handling, & in tast

M

A salt or brackish. The white is not so well esteemed. It will soon be mouldie when it is stale. The rellish thereof ought to resemble Nardus at the tongues end. The perfume or smell that *Malobathrum or the leafe yeeldeth when it is boiled in wine, passeth all others. It is strange and monstrous, which is observed in the price: for it hath risen from one denier to 300 a pound, whereas the Oile it selfe doth cost 60.

*Folium

CHAP. XXVII.

¶ Of oile Olive, made of Greene Oliues, likewise of Grape Veriuice.

For the mixture and composition of ointments, the Oile of vnripe Oliues and Veriuice is very good: and verily, made it is in two kinds, & after two sorts, to wit, of the Oliue, and the Vine. Of the Oliues, if yee would haue good, they ought to be pressed whiles they be yet white; for if they turn colour once and be blackish, the worse is the Oyle or Veriuice that cometh thereof. And such kind of Oliues be called Drupæ, namely, before they be fully ripe and good to eat, and yet haue lost their colour. And herein is the difference, for that the oyle of this later sort is green, the other is white. Now as for grape Veriuice, it should be made of the Vine Plythia, or Amminea, and before the canicular daies, when as the grapes bee but new knit, and no bigger than the Cich-peafe. The grapes (I say) must be gathered for this purpose, at the beginning before they change colour, & the iuice thereof ought then to be taken. Then should the Veriuice that comes from it, be sunned: and heed must be taken in any case, that no dewes by night do catch it, and therefore it would stand in couert. Now when this iuice or veriuice is gathered, it is put vp in earthen pots: and otherwhiles kept also in vessels of copper. The best grape veriuice, is red, sharp, and soure in taste, dry withall and scyptick. A pound or a pinte of such veriuice is worth six deniers. It may be made in another sort: namely, by punning and stamping vnripe grapes in morters: drying it afterwards in the Sunne, and so made vp into certain rolls or trochisks.

CHAP. XXVIII.

¶ Of Bryon and Oenanthe: of the tree Elate, and Cinnamon Caryopus.

The mosse of the white Poplar or Asp, which is reputed as the grape thereof, is vsed likewise in these odoriferous and sweet compositions. The best grows about Cnidos or Caria, in thirsty, dry, and rough places. A second sort is that which is found vpon the Cedar of Lycia. To this pertaineth Oenanthe, which is no more but the grapes of the wild vine called Labrusca. Gathered it is when it floureth, that is to say, when it smells best. It is dried in the shade vpon a linnen sheet lying vnder it, and then put vp into little barrels. The chiefe cometh from Parapotamia: the second from Antiochia and Laodicea in Syria: and a third sort from the mountaines of Media: and this is best for medicine. Some prefer before all these, that which groweth in the Island Cyprus. As for that which is made in Affricke, it is meet for Physitions onely, and is called Massaris. Now, the better euery is that which they gather from the white wild vine, than from the black. Moreover, there is another tree which serues for perfumes: some call it Elate, and we Abies [i. the Fir] others Palma or the Date, and some againe Spathe. That which grows about the sands of Affricke, where Iupiter Hammons temple standeth, is highly commended above the rest: and after it, that in Egypt. Next thereto is the Syrian. This tree is odoriferous when it grows in dry places only: it hath in it a certaine fat liquor or Rosin, and entereth into compositions of sweet ointments, for to correct and mitigate the other oile. In Syria there is a drug which they call Cinnamon Caryopon. A iuice or oyle this is, pressed out of a certain nut. This Cinnamon differeth much in forme from the stickes of true Cinnamon: indeede about specified: although in smell it cometh neare vnto it. A pound thereof is worth to be bought and sold 40 Asses, [i. 2 lib. 6. d.]

THE



THE THIRTEENTH BOOK OF THE HISTORIE OF NATVRE,

WRITTEN BY C. PLINIVS

SECVNDVS.

The Proeme.

Thus far forth the woods and Forrests are of estimation, in regard of the pleasure they doe vnto vs for perfumes and sweet odors: and in truth, if we consider duly these aromaticall plants, admirable they becuere one in their kinde, euen as they be weighed apart by themselves alone. But such is the riot and superfluitie of man, that being not content with that perfection of Nature shining in those plants and trees alone rehearsed, he hath not ceased to mingle and compound them, and so of them all together for to make one confused smell: and thus were our sweet ointments and precious perfumes deuised, whereof we purpose to write in this booke next ensuing.

CHAP. I.

¶ Of Ointments, Perfumes, and their compositions: and when they came into knowledge first at Rome.



As touching the inuention of Ointments, it is not well known how as the first that deuised them. Certaine it is, that during the raigne of the Troianes, and whilest Ilium stood, men knew not what they meant: nay, they vsed not so much as Incense in Sacrifice and diuine seruice. The fume and smoke of the Cedar and the Citron trees onely, the old Troianes were acquainted with when they offered sacrifice: their fuming and walmng steame (more truly I may so terme it, than any odoriferous perfume) they vsed: which they might easily come by, since they were plants growing among them, and so familiar; notwithstanding they had found out the iuice of Roses, wherewith yet they would not correct the foresaid strong fumes in those daies; for that also was knowne to be a commendable qualitie of Oile Rosate. But the truth is, The Persians and none but they ought to be reputed the inuention of precious perfumes and odoriferous ointments. For they to palliate and hide the ranke and stinking breath which commeth by their surfet and excesse of meats and drinks, are forced to helpe themselves by some artificiall meanes, and therefore goe euermore all to be perfumed and greased with sweet ointments. And verily, so farre as euer I could finde by reading histories; the first prince that set such store by costly perfumes, was King *Darius*, among whose coffers (after that *Alexander* the Great had defeated him and woon his campe) there was found with other roiall furniture of his, a fine casket full of perfumes and costly ointments. But afterwards they grew into so good credit euen among vs, that they were admitted into the ranke of the principal pleasures, the most commendable delights, and the honestest comforts of this life. And more than that, men proceeded so far, as therewith to honour the dead: as if by right that duty belonged to them. And therefore it shall not be amisse to discourse of this theame more at large. Wherein I must aduertise the Reader by the way, that for the present I will but only name those ingredients that go into the composition of these ointments: such I mean as came not from herbs and trees, shrubs & plants; referuing the treatise of their natures, vertues, and properties, vnto their due place.

First

A First and formost therefore, all perfumes took their names either of the country where they were compounded, or of the liquors that went to their making, or of the plants that yielded the simples and the drugs: or els of the causes and occasions proper and peculiar vnto them. And here it would be noted also principally, that the same ointments were not alwaies in like credit and estimation: but one robbed another of their honor and worth: inso much, as many times vpon sundry occasions, that which was lately in request and price, anon gaue place to a new and later inuention. At the first in antient time, the best ointments were thought to come from Delos; but afterwards, those that were brought out of Ægypt: no talke then but of Mendesium, compounded at Mendes, a city there. And this varietie and alteration was not occasioned alwaies by the diuersity of composition and mixture, but otherwhiles by reason of good or bad drugs: for ye should haue the same kind of liquors and oiles better in this country for one purpose, and in that for another: yea, and that which in some place was right and true, the same did degenerat and grow to a baillard nature, if you changed once the region: for a long time, the oile or ointment of Iris or the Floure-de-luce root made at Corinth, was in much request, and highly praised: but afterwards that of Cizicum won the name and credit, for the artificiall composition thereof. Semblably, the oile of Roses that came from Phaselus, was greatly called for: but in proesse of time, Naples, Capua, and Præneste, stole that honor and glory from thence in that behalfe. The ointment of Saffron, confected at Soli in Cilicia, imported for a good while and carried the praise alone: but soone after, that of Rhodes was euery mans money. The oile drawne out of the floures of the wild vine in Cyprus, bare the name once; but afterwards that of Ægypt was preferred before it: & in the end the Adramytians gained the credite and commendation from both places, for the perfect and absolute conffection thereof. The ointment made of Marjoram, gaue credit for a certain time to the Isle Cos: but not long after, their name was greater for another made of Quinces. As for the oile Cyprinum, which came of Cypros, the best was thought to be made in Cyprus: but afterwards there was a better supposed to be in Ægypt: where the ointments Metopium and Mendesium all of a sudden were better accepted than all the rest. It was not long first, but that Phoenice put Ægypt by that credit for those two singular compositions, & left the Egyptians the name alone for the foresaid oyle Cyprinum. The Athenians were renowned for their antient Panathenaicum, & euer held their own. There was in old time a notable composition named Pardalium, made in Tharsus: but now the mixture & making thereof is quite lost. The ointment likewise Narcissimum, where the floure of the Daffodil was the Basis, is now forgotten, and no more made of it. The manner of compounding all these ointments, was twofold, to wit, either of the iuice & liquor, or els of the very substance & body of the simples. The former sort resemble rather the nature of oiles: but the later of ointments. And these the Greeks call either Stymmata, which yeeld the consistence & thicknes to ointments, or Hedysmata, which serue to aromatize and giue a compleat perfection to them. There is a third thing between these, requisit also to the full making of these sweet ointments, namely, the colour: although many take no regard at all of it. And for this purpose, the perfumers put into their compositions Cinnabaris [i. Vermillion] or Sanguis Draconis and Orcanet. The salt moreover that is strewed among, serueth to repress and correct the nature of the oile that vniteth all the ingredients besides. But those that haue the root of Orcanet in them, need no salt at all to be put in besides. As for Rosin and Gum, they are mingled with the rest to incorporate the drugs and spices, and to keep in the sweet odour thereof, which otherwise would evaporate and soon be lost. We are to presume by all likelyhood, that the first composition of ointments and soonest made, was of the odoriferous mosse Bryon, and the oile of Ben onely: whereof we haue written in the former book. Then came in place a more compound ointment called Mendesium, and that received Rosin also to the foresaid oile of Ben. And more than that, another besides named Metopium. Now is this Metopium an oile compounded, which the Egyptians do presse out first of bitter Almonds, but they added thereto for to incorporate the better, grape Veriuiice: and the ingredients besides, were Cardamanum, Squinanth, sweet Calamus, Hony, Wine, Myrrhe, the graines or seeds of Baulme, Galbanum, Rosine, and Turpentine. One of the meanest and basest ointments now adaies, and therefore thought to be as antient as any other, is that which consists of the oile of Myrtles, sweet Calamus, Cypress, and Cypros; [Squinanth] Lentiske, and the rind of the Pomegranat. But I would thinke verily, that Ointments came to be so diuulged and common euery where abroad, by meanes of Roses most

of all: considering, that nothing grows more ripe in all places. Which was the cause, that the simple mixture of oile Rosate, without any sophistication besides, continued for a long time, hauing the addition of grape Verjuice, the floure of Roses, the Saffron, Cinnabaris, or Sang- Dragon, Calamus, Hony, Squinanth, the floure of salt called Sperma-ceti, or els in lieu thereof the root of Orcanet, & Wine. The oile or ointment of Saffron was after the same sort made, by putting thereto Cinnabaris, Orcanet, & wine. Semblably is to be said of the oile of the sweet lesse Maioran, wherein was mixed grape verjuice and sweet Calamus. This composition was singularly well made in Cyprus & at Mitylene, where great store of sweet *Majoran grows. There be other oiles likewise which are not of so good reckoning, namely, of Myrtles, & Bayes, which receiue a mixture with the addition of Majoran, Lillies, Feni-greek, Myrrhe, Casia, Spikenard, Squinanth, & Cinnamon. Moreover, of great quinces & the lesse called Mala Struthea, is made the oile Melinum, whereof we wil speake hereafter: which the perfumers vse in their ointments, by putting thereto grape-verjuice, the oile Cyprinum, the oile Sesamine, Baulme, Squinanth, Casia, & Sothernwood. As touching the oile of *Lillies, which is the most subtil and thinnest of all other, it is made of Lillies, Ben, sweet Calamus, Hony, Cinnamon, Saffron, Myrrhe, & Aspalathus. Also the foresaid oile Cyprinum is made of the floures of Cypros, of Veriuiue, Cardamomum, Calamus, Aspalathus, & Sothernwood. Some there be that put moreouer vnto this oile, Myrrhe & Panace. The Sidonians are excellent at the making of this composition: & after them the Egyptians, so that they put not in Sefamium oile: for it wil last & keep good ful four yerres: & if it begin to lose the smel, it is quickned and refreshed again with Cinnamon. Now as touching the ointment of *Feni-greek, it is made of fresh oile, Cyperus, Calamus, Melilot. Feni-greeke, Hony, oile of Quinces, the greater & the lesse sweet Marioram. This was of highest reputation in the daies of *Menander* the comical poet. But long after there succeeded into the same place of credit, the ointment Megalium: so called for the great glory that it caried: & this was compounded of the oile of Ben, of Baulm liquor, sweet Calamus, Squinanth, Balm-wood, Casia, & Rosin. In the making hereof, this property it had by it selfe, that all the while it was a compounding and seething, it should euer and anon be vented, & shifted out of one vessell into another, vntill the smel of it were gone. Which neuerthelesse it would recouer againe after it was once cold. Moreover, some liquors there be of themselves, that without any other mixtures may serue and go for noble sweet ointments. Among which, that of Malabathrum is the chief: next to it the Flour-de-luce of Sclauonia, and the great sweet Marioram of Cyzicum. Howbeit, the Herbarists loue to be putting in some few spices besides, as well in the one as the other: but some make choise of one thing, some of another to intermingle withall. They that take delight to haue their mixtures most compound, adde vnto either of those abouenamed, Hony, the floure of salt, grape verjuice, the leaues of Agnus Castus, and Panace, & generally all that be strange and forraign, to make their compositions seem more wonderful. To the oile or ointment of Cinnamon, there goes the oile of Ben, Balm-wood, sweet Calamus, Squinanth, the *fruit or seedes of Balsamanum, Myrrh, & Hony Aromatical. This is of all other the thickest ointment in substance. The price of this, is from 35 deniers to 300 the pound. As for the ointment Nardinum or Foliatum, it is composed of the oile of green Oliues or grape verjuice, of the oile of Ben, of Squinanth, Costus, Spikenard, Amomum, Myrrhe, and Baulme. Howbeit, this point would not be forgotten in the making of this composition, that it is a very easie matter to sophisticate it; by reason, that there be no fewer than nine herbs or simples which we haue declared, that come neere to the Indian Spikenard, and may be taken for it. Finally, to quicken and fortifie the sert of all these ointments, there must no spare be made of Costus and Amomum, which of all other drugs pierce into the nostrills, and cast a strong smel. To make them thicker and more pleasant, there would be good store of Myrrhe put in: but to haue them better for the vse of Physicke, and more medicinable, it is good to season them wel with Saffron. As for Amomum, of it selfe alone it causeth all ointments where it comes to be most quicke and peneratiue: in so much as it causeth head-ache. Some for to spare cost thinke it sufficient to aromatize onely these ointments with those drugs that are so deare and precious, either by strewing the powder, or sprinkling their liquors amongst, whereas the rest of the ingredients be boiled: but such compositions be nothing so effectual, as when all be sodden and fermented together. As for Myrrhe it selfe, it maketh alone a precious ointment without any other oile. I meane that one-ly of the liquor Staete: for otherwise it is exceeding bitter and vnpleasant. If it bee mingled with

A with the oile Cyprinum, it looketh greene; if with the oile of Lillies, it will be fatty and vnctuous; if with Mendesium, blacke; with oile Roset, white; with that of Myrrh, pale. Lowhat were the inuentions in old time of aromaticall and odoriferous ointments: loe what were the deuises afterwards of the shopkeepers and perfumers, to picke pence out of our purses, and to rob vs. It remains now to speak of the paragon indeed of all these pleasures and delights: of that I say wherein consists the very height and chiefe point of this argument in hand.

CHAP. II.

¶ Of the Ointment called Roiall: of drie Perfumes, Powders, and Pomanders: and how they be kept.

B T He Roiall Ointment therefore (which the Parthian kings vsed ordinarily, and of whome it took that name to be called Roiall) is tempered and composed in this manner: to wit, of Ben, Costus, Amomum, Cinamon, the Arbut or Comarus, Cadamonum, Spikenard, Marum, Myrrhe, Casia, Storax Calamita, Ladanum, Baulme liquor, sweet Calamus, Squinanth of Syria, the floure of the wild vine, Malabathrum, Sericharum, Cyperus, Aspalathus, Panace Saffron, Cypros, Marioram the greater, clarified, or purified Hony, and Wine. As for Italy (the Saffron, Cypros, Marioram the greater, clarified, or purified Hony, and Wine. As for Italy (the lady and conquereesse of all other nations) there grows nothing in it good to make ointments, no nor nothing throughout all Europe, vnlesse it be the Flour-de-luce root, and the Celticke Spikenard: for wine, Roses, Myrtle leaues, and oile, are well known to be common for all countries.

C As for those mixtures which be called Diapasmata, they consist of dry spices and drugs. Also the dregs or grounds of Ointments, they cal Magma. Moreover, this is to be obserued in the mixture and composition of those Ointments, That the drugs which be put in last, are euer the strongest and most effectual.

Now as touching the keeping of Ointments, they are best preferred in pots or vessels of Albastre: and Odors are surest maintained and continue longest, being incorporate in oile: which the fatter that it is, serueth better for a continuance of their sent; as a man may see very well in the Oile of Almonds. And to say a truth, the older that an ointment is, and the longer fermented, the more vertue it hath for the age. The sun is an enemy vnto them, and therefore they must incorporate and vnite together in the shade, and be put vp in vessels of lead. The trial of them is taken with the back-part of the hand, for feare lest that the heat of the fleshie side within, should corrupt and marre them.

CHAP. III.

¶ Of the Superfluitie in expence at Rome, about these Ointments: and at what time they were first vsed there.

E A T this day there is not in Rome any thing wherein men more exceed, than in these costly and precious ointments: and yet of all other, they are most superfluous and may be best spared. True it is, that much money is laid out vpon pearles and precious stones; but these are in the nature of a domaine and inheritance, and fall to the next heire in succession. Againe, a rich and costly apparell stand vs in a great deale of coine; howbeit they are durable and last a long time: but Perfumes and ointments, are soone done and gone; they exhale and breath away quickly; they are momentanie, they serue but for the present, and die suddenly. The greatest water in them, and their commendation is this, To cause a man (what businesse soeuer he hath otherwise) to cast his eie and looke after a gentlewoman as she passes by perfumed in the streets, and sendeth a smel from her as she goes. This is all the good they do; and yet forsooth a pound of this ware must cost 400 deniers: so deare is the pleasure that passes from our selues & goes to another: for the party himselfe that carrieth the perfume about him, hath little or no delight at all in it: others they be that read the benefit and pleasure thereof. And yet among these odorous compositions, there is choise and difference betweene one and another. We finde in the writings of *M. Cicero*, that he made more account of those ointments that saoured of the earth, than those which smelled all strong of Saffron: as if he meant thereby, That in this excessive disorder and most corrupt enormitie of all others, a certaine moderation yet and sad delay would

would do well; and that a feuerity (if I may so say) in the vice it self, were better to be liked. But some take delight especially in thick and grosse ointments, and are not content to be perfumed yea and bathed all ouer, vnlesse they be besmeared, greased, and daubed also therewith. I haue my selfe seen some of them to annoint the very soles of their feet with these precious Baulms. and (by report) it was *M. Otho* that first taught the Emperor *Nero* this wanton delicacie. But I would gladly know, and some good body tell me, I pray, how he could feele the smell thereof, and what delight or contentment it might yeeld from that part of the body? I haue heard say besides, by some of the inward familiars and speciall fauorits of this prince, That he commanded the very walls of his baines and stoues to be perfumed with precious ointments: and that *C. Caligula* the Emperor, caused the very vessels and seats wherein he vsed to sit when he bathed or swet in his hot house, to be in that manner annointed. And because this might not seeme to be a speciall pleasure fit for an Emperor onely, I knew one of *Nero's* seruants afterwards, who vsed so to do as well as his lord and master. But I muse and maruell at nothing so much, as that this wanton delight should find the way and enter so far as into the mids of the camp. For wot ye what? I assure you the very standards and ensignes, the *Egles* (I say) and *Minotaures*, so dusty as they be otherwise, so foule and ill-fauored, as being kept so long, and standing by vnoccupied, are wont forthwith to be annointed and perfumed vpon high and festiuall daies. And, so god helpe me, I would I knew who it was that first brought vp this fashion and needlesse superfluitie: Certes, I would not defraud him of his due honor: I would (I say) recommend his name vnto all posterity. But thus it is (no doubt) and it cannot otherwise be; Our *Egles* and standers (bribed, hired, and corrupted with this so good a reward) haue therefore in recompense conquered the whole world. Vnder such colors and pretences (indeed) we deceiue our selues, and cloake the vice and ryot of our times: and thus hauing so good a reason as this, to induce and draw vs on, we may not sticke to haue precious baulms vpon our heads, so it be vnder our fallats and mourninges.

To say for certainty and precisely, when this enormity entered first into Rome and began there to raigne, I am not able. Sure it is, as appeareth vpon record, That after the subduing of *K. Antiochus* and the conquest of Asia, which was about the 565. yeare from the foundation of Rome, *P. Licinius Crassus*, and *L. Iulius Caesar* the Censors, published an edict, prohibiting and forbidding to sell any foreine or strange ointments within Rome: for so they termed these sweet mixtures and compositions. But (beleue me) now adaies, some there be so wanton and delicate, that there is no wine or other drinke good with them, nor will go downe their throat, vnlesse it be spiced and aromatized with these baulms: and so little passe they for the bitternesse of these odours and smells, that they are well content to waite and spend a deale thereof, without and within, behind and before, aboue and beneath, to enioy the perfume thereof in all parts of the body. Well knowne it is, that *L. Plotius*, brother to *L. Plancus*, a man of great credit and authority, as hauing bin twice Consul, and Censor besides, being outlawed and proclaimed a banished person by the decree of the * *Triumvirs*, was discovered within a certaine caue at *Salernum*, where he lay close hidden and sure enough otherwise, by the very smell onely of a precious ointment that he had about him: and so by that meanes (besides the shame and disgrace that he receiued, thus to detest himselfe and be found of his enemies) the rigor of the act and arrest that passed against him, was executed and performed vpon his body. And who would euer pittie such persons, & not iudge them worthy to come to so bad an end? but to conclude all this discourse, there is not a country in the world that yeelds such plenty and varietie of drugges fit for these compositions, as *Egypt*: and next to it, *Campaine* in *Italy* may carry the name, for the store of roses there growing.

CHAP. IIII.

¶ Of Dates, and Date trees: their nature and seuerall kinds.

The land of *Iury* is as much renowned, or rather more, for the abundance of Palms or Date trees which it affoordeth: the discourse whereof we will now enter into. True it is, and it cannot be denied verily, that there be of them found in Europe, and namely, euery where in *Italy*; but such, be all of them barren. Also in the maritime parts and sea-coasts of *Spaine*, ye shall meet with Palmes that beare Dates, but they are but rart and vnpleasant, and indeed neuer come

A come to their maturity and ripenesse. Those of *Africk*, I must needs say, bring forth a sweet and pleasant fruit, but it will not last, and soon is gone: whereas contrariwise, in the East parts, the people make wine thereof; and in some countries they vse it for bread, yea the very bruite and four-footed beasts do ordinarily feed of Dates: and therefore we hold and conclude, that Dates may be truly called, forrein fruits; and their Trees, meere strangers in this part of the world. For in *Italy* a man shal not find so much as one Palm tree that comes vp of it selfe, without it be set or planted by mans hand: neither in any other region whatsoeuer, vnlesse it lie vnder some hot climat: but to beare fruit ye shal neuer know it in any country, if the same be not extreme ardent and seortching. Date trees loue a light and sandy ground, and specially (for the most part) if it stand much vpon a veine of Nitre besides. And yet contented will they be to grow by some rivulet side, where they may haue, as it were, one foot in the water, and be euer drinking of the yere long, especially in a drie season. Some thinke, that dung is as contrary and hurtfull vnto them, as to some kind of Citron trees in *Assyria*, vnlesse it be mingled & tempered with water, or the trees planted neere to some running river. Moreover, many kinds there be of Date trees, and the first are smal, and exceed not the bignesse of shrubs: these in some parts are barren, and in others fruitful: they shute out little short branches round about, but very full of leaues, the which in most places serue in stead of parget & rough-cast, to defend wals of houses against the weather and drifts of rain. Howbeit a second sort there be that are much taller, and whole Forrests stand only vpon those trees: they put forth leaues sharp pointed, and they grow round about disposed one close vnto another in manner of comb-teeth: and these must of necessitie be taken for wild, and no better: and they loue here and there as it falleth out, to be intermingled among those of the tamer kind, as if they tooke I wot not what pleasure in their company. The rest growing in the East parts, be streight, round, and tall, enuironed about the body with circles or houps, made of the very barke it selfe, and they are of the thickenesse of a mans thumbe, set in order one aboue another like steps & greeces neere together, in such sort that the people of the East may easily climbe them, by the means of the said barke, which serueth not onely for a vestiment to the tree, but also for staires to him that would mount vp, so that it is a wonder to see how nimbly a man will run vp to the top. These Date trees beare all their branches toward the head, and their fruit comes not forth among the leaues as in other trees, but hangerth to certaine branches and twigs of the owne between the boughes like clusters of grapes: in so much as it resemblerth partly the nature of a grape, and partly of an apple. The leaues made in forme of a knife blade sharp toward the point, slit as it were and clouen in the edge along both sides, make shew at the first of certain faire and beautifull gems: and now they serue in stead of cords, and to bind vines together: also being diuided and sliued into flakes, they are good to plait for hats and light bongraces for the head, against the heat of the Sunne. Moreover, all learned men who are deeply studied in the secrets of Nature, be of opinion & do teach vs, That in all trees and plants, nay rather in all things that proceed out of the earth, euen in the very herbs, there are both sexes. Let it suffice therefore to haue spoken thus much once for all in this place. But there is no tree whatsoeuer, in which this distinction of male and female appeareth more, than in *Palme* trees: for the male putteth forth his bloome in the branch, but the female sheweth no floure at all; but sprouteth and shooteth out buds in manner of a thorne: howbeit both in the one and the other, the pulp or flesh of the Date commeth first, and after it the woody stone within, which stands in stead of the grain and seed of the Date. And this appeares euidently by a good token, for that in the same branch there be found little yong Dates without any such stone at all. Now is the said stone or kernell of the Date, in forme long, not so round and turned like a ball as that of the *Oliue*. Besides, along the back it hath a cut or deep slit chamfered in (as it were) between two pillowes, but in the mids of the belly on the other side, for the most part it hath a round specke, formed like a nauill, whereat the root or chit beginneth first to put forth. Moreover, for the better planting of Dates, they set two together of their stones in a rank with the bellies downward to the earth, and as many ouer their heads: for if one alone should come vp, it were not able to stand of it selfe, the root and yong plant would be so feeble; but four together so ioine, clasp, and grow one to another, that they do well enough and are sufficient to beare themselves vpright: the kernel or woody substance within the Date, is diuided from the fleshy pulp and meat thereof, by many white pellicles or thin skins between: neither lieth it close thereto, but hollow a good distance from it, saue that in the head it is fastened therunto by a thred or

string; and yet there be other pellicles that cleave fast and sticke to the substance of the Date within. The Date is a yeare in ripening. Howbeit in certaine places, as namely in Cyprus, the meat or fleshie pulp thereof is sweet and pleasant in taste, although it be not come to the full ripenesse: [where also the leafe of the tree is broader, and the fruit rounder than the rest.] many then you must take heed not to eat and swallow down the very bodily substance of it, but spit it forth after you have wel chewed & sucked out the iuice thereof. Also they say, that in Arabia the dates haue but a faint & weak sweetnes with them: & yet K. *Inba* makes greatest account of those which the region of the Scenites in Arabia doth yeeld, where they be called *Dabula*: and he commendeth them for their delicate and pleasant taste, before all others. Moreouer, it is constantly affirmed, That the females be naturally barren, and will not beare fruit without the company of the males among them to make them for to conceiue: yet grow they will neuertheless and come vp of themselves, yea and become tall woods: and verily a man shall see many of the females stand about one male, bending and leaning in the head full kindly toward him, yeelding their branches that way as if they courted him for to win his loue. But contrariwise, he a grim fir and a coy, carries his head aloft, bears his bristled & rough arms vpright on high: and yet what with his very lookes, what with his breathing and exhalations vpon them, or else with a certain dust that passes from him, he doth the part of an husband, in so much as all the females about him, conceiue and are fruitfull with his only presence. It is said moreouer, that if this male tree be cut downe, his wiues wil afterwards become barren and beare no more Dates, as if they were widows. Finally, so euident is the copulation of these sexes in the Date trees, & knowne to be so effectually, that men haue deuised also to make the females fruitful, by casting vpon them the bloomes and down that the male bears, yea, and otherwhiles by strewing the powder which he yeelds vpon them. Besides the maner abovesaid of setting date stones for increase, the trees may be replanted of the very truncheons of two cubits long, sluied and diuided from the very brain (as it were) of the green tree in the top, and so couched and interred, leauing only the head without the ground. Moreouer, Date trees wil take again and liue, if either their slips be pluckt from the root, or their tendrils & small branches be set in the earth. As for the Assyrians, they make no more adoe, but if it be a moist soile, plash the very tree it selfe whole as it stands, and draw it along and so trench it within the ground, and thus it will take root and propagate: but such will neuer proue faire trees, but skrebs only. And therefore they deuise certain Seminaries or Nource gardens of them, and no sooner be they of one yeares growth, but they transplant them; and so againe a second time when they be two yeares old: for these trees loue alone to be removed from one place to another. But whereas in other countries this transplantation is practised in the spring, the Assyrians attend the very mids and heat of Summer, and in the beginning of the Dog-daies vse to replant them. Moreouer, in that countrie they neither cut off the heads, ne yet shred the branches of the yong plants with their hooks and bills; but rather bind vp their boughes, that they may shoot vp in height the better. Howbeit, when they are strong, they cut their branches, for to make the bodies burnish and waxe thicker, but yet in the lopping they leaue stumps of boughes halfe a foot long, to the very tree: which if they were cut off, in other places, would be the death of the mother stocke. And forasmuch as Date trees delight in a salt and nitrous soile (according as hath bin before said) the Assyrians therefore when they meet not with a ground of that nature, strew salt, not close about the roots, but somewhat farther off. In Syria and Egypt, there be some Date trees that diuide themselves and are forked in twaine, rising vp in two trunks or bodies. In Crete, they haue three, and some also fiue. The nature of the Palme or Date tree, is to beare ordinarily when they be three yeares old: howbeit in Cyprus, Syria, and Egypt, it is foure yeares first ere some bring fruit; yea and fiue yeares before others begin: and such neuer exceed a mans heighth, neither haue they any stone or woody kernel within the Date so long as they be young and tender: during which time they haue a pretty name for them, and call them Gelded Dates: and many kindes there be of these trees. As for those that be barren and fruitlesse, all Assyria and Persia throughout, vse them for timber to make quarters and pannels for feeling, wainescot, and their fine ioyned works. There be also of Date trees coppey woods, which they vse to fell and cut at certaine times: and euermore they put forth a yong spring from the old root and stock. These haue in the very head and top, a certain pleasant and sweet marow, which they terme, The braine: and therefore those that loue to eat it, wil cut and take it away, & yet the tree wil liue neuertheless: a thing

- A a thing that ye shall not lightly see in any others of that kinde. As for those Date trees which haue broader leaues, & the same soft and pliable, very good to make windings to bind vines and such like, they be named by the Greeks *Chamæropes*: great abundance there is of them in Crete, but more in Sicily. The wood of Date trees yeelds coles, that in the burning will keep fire long: howbeit a dead flame it is that they make, and nothing quicke. As touching those that be fruitfull, some beare Dates with a short stone or kernell within; others with a longer: these are more soft, those be harder. Some carry a kernell of a bony substance, like the Moon Croissant, which many are wont to polish with some tooth, and in a kind of religion are perswaded, that it is good against witchcraft, & is of vertue to procure womens loue. Some of these stones be clad and couered with many skins or pellicles, & others with fewer: ye shall haue in this Date, those tunicles thick & grosse; in that, thinner and more fine. In sum, if a man would search into them particularly, hee should find fifty sundry sorts of Dates saue one, with seuerall, strange, and barbarous names, and as many different wines made of them. But the principall and most excellent of all the rest, synamed Roiall Dates, for that they were referred to the kings owne mouth of Persia, were knowne to grow nowhere els but in Babylon, and in one hortyard or park only of a Bagous (for so they vse to call their eunuches or gelded persons, and such in times past reigned as KK. ouer them;) and this park was euermore annexed to the crowne, and went with the royal Scepter, as a chiefe demaine of the Empire, and passed from one Prince to another by succession. But in the South-countries and meridionall parts of the world, the Dates synamed Syagri are highly commended aboue all others, and most esteemed: and next to them, those which be called Margarides, are in account and good request: these be short, white, and round, more like in form to berries and little buttons, than to mast-fruit and Dates indeed: whereupon they took their name of Pearls, which they do resemble. It is reported, that in the city Chora, there is one of these trees that beare Dates like to Pearles; as also another that carries the Dates Syagri. I my selfe verily haue heard strange things of this kind of tree, and namely in regard of the bird Phoenix, which is supposed to haue taken that name of this Date tree [called in Greeke *phœnix*] for it was assured to me, that the said bird died with that tree, and reuiued of it selfe as the tree sprung againe. Now at the very time that I wrote this History of Natures works, I saw the same tree with fruit vpon it: the Date that it bears is great, hard, rough in handling, and in taste resembling some harsh and wild fruit, far different from other kinds of Dates: in such sort, as I wondered not at the name of Syagros, so like it tasted to the flesh and venison of a wild Bore in the Forrest, that comes to our board. In a fourth rank of Dates for goodnesse, are to be ranged those which they call Sandalides, for the resemblance of slippers or pantofles which they vse in old time, named Sandalio. But in these daies they be as rare, as otherwise pleasant; so that within the bounds of Æthyopia (a wonderfull matter) there be not aboue fiue of them to be found. After the Sandalides, the Dates Caryotæ are in greatest request; for they be not only good to eat, but also a wine is made of their iuice, which they yeeld in great abundance: for all the people of the East make their speciall drink thereof. But true it is, that this kind of wine is hurtful to the head, and therefore the Greeks gaue it that name. Now as these countries aboue said doe afford plenty of Date trees, and the same fruitfull enough, so Iury alone carries the name and the praise for goodnesse of Dates; and not all Iury neither, but the territory about Iericho especially: and yet I must needs say, that there be gathered very good Dates in the vales of Iury, which be named Archelais, Phaselis, & Liuias. And these Dates of Iury, haue this special property aboue all others, To be full of a far white liquor resembling milk, which hath a certaine taste of wine, and is exceeding sweet and pleasant withall like honey. The drier kind of these Dates be those that tooke name of one *Nicolas*, and were called Nicolai: passing faire and great they be aboue all others by far; for foure of them laid in a rank one at the end of another, will make a cubit in length. Other Dates there be, not so faire to the eie as these Caryotæ, but surely for pleasant taste they may be well their sisters, like as they be called thereupon Adelphides. And a third kind there be of the same Caryotæ, which they commonly call Pateton: ouer full they are of liquor, and so drunke (as a man would say) with their own iuice, that they burst euen as they hang vpon the tree their mother, yeelding their wine in that manner of their owne accord, as if they were troden with mens feet in a wine-presse; and thereupon they got that name. Another kind there is yet by it selfe, of those Dates that be drier than the rest, and they be very long and slender, yea, and otherwhiles not streight, but bending and crooked. As for those

which we dedicate to holy vses, and namely, when we sacrifice and offer oblations to the gods, **G** the Iews (a nation aboue all others noted for contempt and mockery of the gods their worship and diuine seruice) do name Chydæi [i. vile and of no price.] The Dates in Egypt called Thebaides, as also those in Arabia, be all ouer-drie and withered, poore, leane, and thin. Parched as they be continually with the heat of the sun, a man would deem they were couered with a crust or shell, rather than with a skin or pill. Go further into Æthiopia, there they be so dry that they will soon crumble into powder like meale; and indeed they make thereof their bread, when it is tempered and wrought with water. These Dates be round, and bigger than a good apple; and they grow vpon a plant or shrub which spreads branches of a cubit length: and the Greeks call them Cycæ. They hang 3 yerres before they be ripe: and euermore you shall see vpon the tree Dates ripe, when others come new forth green and small. As for the Dates of Thebais in high **H** Egypt, so soon as they be gathered, presently they are put vp into barrels, whiles their naturall heat is in them; for if that course were not taken with them, it would soon exhale and vanish away: yet will they decay and rot, if they be not baked againe in the oven. As touching all other Dates, they seeme to be the common and vulgar sort, simply called Dates: and yet both the Syrians and K. Iuba, hold them for junkets and banketting dishes. For as in some part of Phoenice, and Cilicia they be called Balani, [i. glandes or mast] so we at Rome terme them by the verie name of their own country Phoenice, & by no other. And euen of them there be many kindes; and those different one from another, either in forme, for that some be round, others long, or els in colour, whiles there be of them red and black: in which regard, a man may obserue in them, (by report) as great variety as in figs: howbeit the whitest be the best and most commended. **I** Great diuersity there is also among them in quantity and bignesse, inasmuch as yee shall haue many of them that want nothing of a cubit; and other for them againe no bigger than a beane. Now as touching the Dates that be barrelled vp and kept, they be such only as come from salt and sandy grounds, as in Iury, and Cyrenaica in Africk: for those of Egypt, Cyprus, Syria, and Seleucia in Assyria, will not keepe and be preferred; and therefore they must be spent out of hand: for which they take good order to franke their swine and feed other cattel fat with them. The true signe to know a faulty or a stale date, is this, If a certaine white specke or wart which sticke vpon it when it grew on the branch, be shed and faine off. Now to conclude this treatise, I thinke it not amisse to set downe for an example, what did betide the souldiers that were of **K** Alexanders army, who with eating of green dates new ripe, were choked, and so died. In the Gedrosians country, this accident befell vnto them, onely by the nature of the fruit it selfe, eat they of it as moderately as they could; but in other parts, their greedy and ouer liberall feeding vpon them, was their bane. For surely new dates as they come from the tree, are so exceeding pleasant and delicious, that a man can hardly forbear and make an end in good time, before hee surfeit of them and catch a shrewd turne.

CHAP. V.

¶ Of the trees in Syria.

Besides the Date tree, there be other especiall trees in Syria proper vnto that countrey: for in the first place there are a kind of Nuts there growing, commonly knowne and called Fisticks. And (by report) this vertue they haue, either taken as meat, or drunke in drink, To resist the sting and biting of serpents. Also out dry * Figs, and a lesser sort than they named Cortana come from thence. Also the Damascene prunes, growing vpon the mount Damascus; as also the fruit Sebesten are the commodities of Syria: how fouer they are now familiar herewith vs in Italy. As for Sebesten, there be wines in Egypt made thereof. Also the Phoenicians haue a lesse kind of Cedars much like to the Iuniper: and two sorts there be thereof, the Lycian and the Phoenician, which differ in the leafe: for that which hath an hard, sharpe, and prickie leafe, is called Oxycedrus: full of branches it is besides, and so knurrie, that it is troublesome to the hand. As for the other Cedar, it hath an excellent smell. Both twaine doe beare a fruit of the bignesse of Myrtle leaues, and sweet in tast. Moreover, of the greater Cedar there be two **M** kindes: that which doth blossome, beareth no fruit: and contrariwise, that which is fruitfull, sheweth no blossome: and in this, the new fruit commeth forth alwaies before the old of the former yere be ripe and gathered: also the seed of it is like that of the Cypresse. Some cal this Cedar,

Cedar, Cedrelate: whereof commeth the best Rosin. And the timber of it is euerlasting, wherefore in old time they were wont to make the images of the gods, of this wood, as it appears by the statue of *Apollo Sosianus*, made of Cedar wood, brought from Seleucia. In Arcadia there is a tree like the Cedar, but in Phrygia it is called a shrub.

CHAP. VI.

¶ Of the Terebinth.

Morcouer, in Syria grows the Terebinth or Terpentine tree. The male beareth no fruit: The females be of two sorts: the one carrieth red grains of the bignesse of Lentils, the other bring forth pale seeds. This fruit of the Terebinth ripeneth with grapes. Vpon the **B** mountain Idæ neere Tioas, it is as big as a beane, more pleasant to smell to, and glutinous like Rosin, if a man handle it. But in Macedonie the tree is but short, and spreadeth branches like a shrub: contrariwise, about Damascus in Syria, it is very great and tall. The timber of it is verie tough, continueth a long time, and neuer shrinks for age: of colour blacke, but passing faire, and resplendent withall. It puts forth floures in clusters after the manner of the Oliue, but it is red: and the leaues otherwife grow very thick. It beareth also certaine small cods or bladders full of a gummy and clammy moisture (which also issueth out of the barke) and out of those bladders there come forth little flies like gnats.

Also the male Rhus or Sumach of Syria doth beare fruit: whereas the female is barren. This plant putteth forth leaues like to the Elme, but that they be somewhat longer, and full of hairs, **C** and euermore the steles of the leaues grow contrary one against the other. As for the branches, they be slender and short, good for curriers to dresse their skins and make leather white. The seed or graine thereof resembles Lentils: and being ripe, it is red, and commonly with the grape. The which is called Rhus or Sumach, euen as the tree: a necessarie fruit for many medicines.

CHAP. VII.

¶ Of the Egyptian and Cyprian Sycomores or Fig-trees.

IN Egypt likewise there be found many trees which grow not elf-where: and principally the Sycomore, which thereupon is called the Egyptian Fig-tree. The tree for leafe, bignesse, and **D** barke, is like vnto the Mulberry tree. It beareth fruit not vpon the branches, but out of the very body of the stocke. And the same is a passing sweet fig, but without any grains at all within. It doth increase in exceeding great abundance, so it be scraped and clawed onlv with yron hooks: for otherwise it will not ripen. Come then foure daies after to gather it, you shall not misse but find it ripe, and new coming vp in the place. Thus in euery summer you shall haue a 7 fold increase, and the same in much plenty, yeelding also great abundance of milke. And say that you do not vse the scraping or paring aboue named, yet shal you be sure of 4 fruits in a summer, one vnder another, but so as the new wil driue the old before it, and cause it to shed (and fall) before it be well ripe, for want of that handling before said. The timber of this tree is counted right **E** good and profitable, hauing one singular property by it self. No footer is it hewed; but presently it is cast into standing pooles, and there drowned. This is the only way to season, and dry it. At the first (I say) it sinks downe to the bottom: but afterwards it begins to float aboue: & without all question, the water which vseth to tower and drench all other trees, foleth and sucks forth the sap and humidity of this wood. Now when it begins once to swim aloft, it is a signe that it hath the full seasoning, and is good for building and other workes.

Like to this Sycomore in some sort is a certaine tree in Candy, which is called the Cyprian fig-tree. For this likewise beareth fruit coming out at the very stock, or the maine armes and boughes thereof, when they be growne to any thicknesse: but it puts forth certain spries without any leaues at all, and they resemble roots. Now this tree is in body much like to the Poplar, but in leafe, to the Elm. It beareth fruit foure times a yere, and as often doth it bud. But the green figs will hang so still and neuer ripen, vnlesse they be scarified and skiced so, as the milky substance may run out. The fruit within, is made like a fig, and hath the same pleasant tast: but it is no bigger than the Soruis.

CHAP. VIII.

¶ Of the cod or fruit called *Ceraunia Siliqua* [*i. Carob.*]

THere is a kind of coddie shrub which the Ionians call *Ceraunia*, not vnlike to the Egyptian Sycomore abouefaid, for the fruit thereof comes likewise forth of the stock, but yet is contained within a cod : and thereupon it is that some haue called it the Egyptian fig tree, but they are grossly deceived : for it doth not so much as grow in Egypt, but in Syria and Ionia, also about Gnidos and Rhodes. The tree hath green leaues all the yeare long : it putteth forth white floures of a strong smell. From the root there spring shoots, and about the foot of the tree it bears many yong imps, which are such suckers of the sap, that they draw away all the goodnesse, and rob the parts aboue of their nourishment, whereby the head is yellow, and nothing fresh and green, but fadeth in the top. The fruit of the former yere is gathered about the rising of the Dog-star the yeare following : and then presently it brings forth new. Afterwards commeth a blossome, and the fruit thrieth and waxeth all Winter, vntill the occultation of Arcturus.

CHAP. IX.

¶ Of a tree in Egypt called *Persica* : of *Cucus*, and the Egyptian thorne *Acacia*.

THere is found in Egypt a certain kind of tree by it self called *Persica*, like to a peare tree, but that it is green all the yeare long, and sheds not the leaues : also it beareth fruit continually ; for gather to day, and ye shall find new to morrow growing forth of the place. The fruit is ripe about the Canicular daies when the Etesian winds do blow. It resembleth a Peare, saue that it is longer, and inclosed with a shel or green husk like the Almond : but where the Almond hath an hard shell without as a nut, this is soft in manner of a peare or plum, containing the stone within : and yet it differs somewhat both in shortnesse and tendernesse. The fruit is very good meat : and although the exceeding sweetnesse thereof entice one to eat still and not giue ouer, yet no danger of surfeit ensueth thereupon. As touching the wood of this tree, it is durable, hard, strong, and black withall, in which respects it resembles the Lote-wood very much. They vsed in times past to make images and statues thereof, nor so beautifull altogether, nor of so fine a grain as some others ; but for the timber thereof, which continueth sure and lasteth long, as that of the tree which we called *Balanus*. Much whereof growes curbed and crooked, and therefore is good only for shipwrights to make keels. But contrariwise, the wood of *Cucus* is highly esteemed.

A tree this is not vnlike to the Date tree, in this regard especially, that the leaues be good to twist and plait for mats & such like : herein is the difference, for that it spreads into arms and great boughs. The fruit which it beareth is as much as a man may well hold in his hand, of colour reddish or deep shining yellow, and the taste very commendable ; for it yeelds a iuice between foure and sweet, and therefore wholesome for the stomacke. The woody stone within is great, massie, and exceeding hard, whereof they vse to turne for curtain rings and saile pullies. In the belly of it there lieth a sweet kernell whiles it is fresh and new. But if it be once dried it passeth for hardnesse, in so much as no tooth can chew it, vnlesse it be steeped in some liquor many daies before. As for the wood and timber of the tree, it hath a most dainty, fine, and curled grain, in which regard the Persians set much store by it.

In the same country there growes a thorny plant which the inhabitants make great account of : and especially that which is in colour black, because it will abide the water, & neuer rot nor putrifie in it, and therefore excellent good for the ribs & sides of ships. As for the white thorn of this kind it will soon corrupt and be rotten. But both the one and the other is full of prickes euen to the very leaues. The seed lies in certain cods or husks, wherewith curriers vse to dresse their leather in stead of galls. The floure this thorne beareth is beautifull, whereof folke make faire garlands and chaplets ; profitable also besides and good for many medicines. Out of the barke of this tree there comes a gum likewise. But the chiefeft commoditie and profit that it yeeldeth is this, Cut it down when you please, it wil be a big tree againe within three yerres. It groweth

A groweth plentifully about Thebes in Egypt, among Okes, Oliues, & Peach trees, for the space of 300 stadia from Nilus : where the whole tract is all woods and Forrests, and nathelesse well watered with fountains and springs among.

CHAP. X.

¶ Of the Egyptian Plum tree, and other trees about Memphis.

IN those quarters groweth likewise the Egyptian Plum tree, not vnlike to the thorn of *Acacia* next before described : and this brings forth a fruit as big as a Medler, which neuer is ripe before mid-winter, when the daies be at shortest. The tree is alwaies greene, and sheds not the leaues all the yeare long. Within the fruit afore said there is a big stone ; but the substance otherwise and body thereof is naturally so good, and so plenteous withall, that the inhabitants make their haruest of it. When they haue gathered it, they clense it, stampe it, make it vp into balls and lumps, which they preserve and keepe. The country about Memphis in times past was all woody and full of Forrests, wherein grew so mighty big trees, that 3 men were not able to fathom them about. But among the rest there was one by it self most wonderfull, not for any strange fruit that it bare, nor yet for any singular vse and employment ; but in regard of an accident obserued in it, and a special qualitie that it had. For the tree (forsooth) outwardly resembleth a thorn, but the leaues are made directly like feathers. Let a man shake the boughs neuer so little, shed they will and fall incontinently, but soon after there spring vp new in their steads.

CHAP. XI.

¶ Sundry sorts of Gum. Also of the Cane Papyrus.

THe best gum in all mens iudgement is that which comes of the Egyptian thorne *Acacia*, hauing veins within of checker work, or trailed like wormes, of colour greenish, & cleere withall, without any pieces of the bark intermingled among, and sticking to the teeth as a man cheweth it. A pound thereof is commonly sold at Rome for three deniers. The gumme that issueth from the bitter Almond trees and Cherry trees is not so good : but the worst of all is that which the Plum tree yeeldeth. There runneth likewise out of vines a certaine gum that is passing good for the bleache, scabs, and scals in little children. And otherwhiles ye shall find some in Oliue trees, and that cureth the tooth-ache. Moreouer, the Elme growing vpon *Corycus*, a mountain in Cilicia, and the Iuniper there, haue a gum, but good for nothing. As for that of the Elme it breeds gnats there. Moreouer, of *Sarcocolla* [a tree so called] there distilleth a gum of that name, which Painters and Physitions both haue great vse of. Like it is to *Manna Thuris*, which is the powder of Incense : and therefore the white is better than the red. Sold it is at the same price that the other aboue named. And thus much concerning the trees growing vpon mountains and plains.

Now albeit we are not entred yet into the treatise of those plants and shrubs which grow either in marsh grounds or by riuers sides ; yet before we depart out of Egypt we must not forget the plant *Papyrus*, but describe the nature thereof, considering, that all ciuilitie of this our life, the memoriall and immortalitie also of men after death, consists specially in paper which is made thereof. *M. Varro* writes, that the first inuention of making paper was denised vpon the conquest of Egypt, achieved by *Alexander* the Great, at what time as he founded the city *Alexandria* in Egypt, where such paper was first made. For before that time there was no vse at all (saith he) of paper, but men vsed to write in Date tree leaues first, and afterwards in the dibos and banks of certain trees. Then in proceesse of time they began to register publique records in rolls and sheets of lead : and soon after priuate persons set downe their owne affaires in linnen books, or els in tables couered with wax. For we read in *Homer*, that before the war of *Troy* writing tables were vsed. And at the very time when he wrote, Egypt was not all continent & firr land, as now it is. For, as he saith, all the *Papyrus* whereof paper is made, grew in that branch or arm of Nilus, which answereth onely to the tract or territorie within the iurisdiction *Sebennitis* : but afterward that part also was laid to Egypt, by the shelves and banks made with the inuincation of the said riuer. For, from the Island *Pharos*, which now ioineth close vnto *Alexandria*,

dria by a bridge or narrow causey between, it was a day & nights falling with a good fore wind G
at the pouer, to the main land, as *Homer* hath reported. But afterwards, as *Varro* hath written, by
occasion of a certaine enuious strife and emulation which arose betwene one of the *Ptolomees*:
K. of Egypt, and *Eumenes* K. of Pergamus, about the erecting of their great libraries; when *Pto-*
lomeus suppressed and kept in all the paper made in Egypt, there was parchment deuised by the
said *Eumenes* to be wrought at Pergamus of skins. And finally, the vse was commonly taken vp
of both, to wit Paper and Parchment, which continues the perpetuities and euermore remem-
brance of men and their affaires. But to returne vnto our plant Papyrus, it grows in the mari-
shes of Egypt, or els in the dead standing waters of Nilus; namely in certaine plasches and pits
whereas the water did ouerflow, and remained still after the riuer was fallen and down againe:
and namely such holes and ditches which are not about two cubits deep. The root is wrythen H
and crooked, of the thicknes of a mans arme: & the scape or stalk that riseth from it hath three
sides with 3 corners trianglewise, not about 10 cubits in height, growing taper-wise, small and
sharp in the top, where it beareth an head inclosed and round, in maner of a cabbage. Howbeit
no seed it carrieth within, neither serues the floure for any purpose but onely for chaplets to a-
dorne the images of the gods. The inhabitants of Egypt do vse the root in stead of wood, not
for fuel only, but also to make thereof sundry vessels and vensils in an house. The very bodie
and pole of the Papyr it selfe serueth very well to twist and weaue therewith little boats, and
the rinds thereof be good to make saile-clothes, curtains, mats, and couerlets, clothes also for han-
gings, and ropes. Nay, they vse to chew and eat it both raw and sodden: but they swallow the
iuce only down the throat, and spit out the grosse substance. Moreover, there is Papyrus found I
in Syria, about that very lake and meere whereas the sweet Calamus about named grows. Nei-
ther vsed king *Antigonus* any other ropes about the tackling of his ships, but such as were made
hereof. For as yet the vse of Spartum was not common. Moreover, it is not long since that there
was found growing in Euphrates about Babylon, this plant Papyrus, and knowne to serue for
paper as well as the other in Egypt. And yet for all that, the Parthians will not leaue their old
custome to weaue and purfle letters in their cloathes, after the maner of embroidery. Now
touching the writing paper made of Papyrus: after they haue cut it into certaine trunks, as
long or as short as the size of their paper, they diuide or slice it with the point of a needle or
bodkin for the purpose, into very thin plates or leaues, but they driue them as broad and large K
as possibly they can.

CHAP. XII.

Of diuers kinds of Paper, and how writing Paper is made: also the triall of good or bad
Paper: and the glue or past belonging thereto.

The best sheets or leaues of paper be those which are set out of the very midst or heart of
the stem or stalk of Papyrus: and so consequently better or worse, according as they be
nearer or farther from it. In ancient time the principall paper and the largest was called
Hieratica, [i. sacred or holy] as being employed only about religious and diuine books. But af-
terwards the flatterers of the Emperor *Augustus* named those of the best sort *Augustæ*: like as
the second *Liuiæ*, after the name of his wife. And hereupon it came that the paper Hieratica
waister in a third ranke. Next to them in goodnesse was reputed the paper Amphitheatrike,
which name was given vnto it of the place where it was made. The polishing and trimming of
this paper *Fannius* undertooke, who set up a shop in Rome for the selling of it: and so skillfull
was he and curious in the handling and dressing thereof, that by the time hee had done withall
and brought it to a perfect finenesse, hee made the same of a course and common paper, to be
royall, & fit for the best persons that should vse it: in such sort, as there was none in any request
to speake of, but it: and called after his name it was *Fanniana*. As for that which passed not thro-
row his hands, nor had his workmanship, it retained still the old bare name Amphitheatrike. M
After this kind of paper followed that which they called *Saitica*, of a towne or city in Egypt,
where great abundance was made thereof of the courser pieces and refuse of the said Papyrus.
And yet there was another paper, to wit *Taniotica*, so called of a place neere adioyning, made
of the grossest part neere to the bark and outside: and this they sold for the weight and another
goodnesse that it had besides. As for the merchant Paper or shop-paper, called *Emporetica*, it
was

A was not for to write in, onely it serued as wast Paper for sarples to wrap and packe vp wares in:
also for coffins or coronets to lap spice and fruits in, and thereupon merchants and occupiers
gaue it that name. And with this, the very cane it selfe is to be seene clad outwardly: and the vt-
gaue it that name. And with this, the very cane it selfe is to be seene clad outwardly: and the vt-
most coat thereof is like to a reed or bulrush, fit for no purpose but to make cordage of: and not
very good for that vse neither, vnlesse it be for the water only, which it wil abide very wel. Now
the making of all these Papers, was in this sort, namely, vpon a broad bord wet with the cleare
water of Nilus. For the fatty and muddie liquor therof serues in stead of glew, wherewith at the
first the thin leafe of the cane Papyrus, sliced from the rest, and laid vpon the board to the full
length (in manner of the warpe) according as the trunk will giue leaue, being cut off at both
ends, namely, toward the top and the root, is wet and besmeared: then is there another laid ouer-
B thwart it, after the order of the woofe, with a crosse graine to the other: and so is the web (as it
were) of the Paper performed. Pressed afterwards it is in certaine presses, that both leaues may
stick together: and then the whole sheets are dried in the Sun. Which done, they be so cou-
ched together, that the best and largest lie first, and so consequently in order as they be worse
and of lesse size, vntill you come to the worst. And one scape or trunk lightly of the cane Pa-
pyrus, yeelds not about 20 such sheets. Great difference there is in them for the breadth, nor
pyrus, yeelds not about 20 such sheets. Great difference there is in them for the breadth, nor
withstanding the length be all one. The best, namely which were taken out of the heart of the
cane, beare 13 fingers in breadth. The Hieratica Paper wants two of that number. The Fannian
is but ten fingers broad. The common Paper Amphitheatrike, but nine. *Saitica* yet fewer, and
will not beare the stroke of the hammer. And as for the merchants Paper, it was so short and
C narrow, that it went not about six fingers. Moreover, in Paper these 4 things must be confide-
red, that it be fine, well compact, white, and smooth. Howbeit, *Claudius Caesar* the Emperor abar-
red, that it be fine, well compact, white, and smooth. Howbeit, *Claudius Caesar* the Emperor abar-
ted the credite of the Paper *Augustæ*, that it was no more accounted the best: for indeed so thin
it was, that it would not abide the dent of the pen: besides, it would not hold inke, but shew the
letters on the other side; and was euermore in danger of blurring and blotting, specially on the
back part: and otherwise, vnstightly it was to the eie, for that a man might so easily see thorough
it. And therefore he deuised to fortifie and strengthen the said Paper, and laid another course
or coat (as it were) ouer the former, in manner of a double woofe. Hee enlarged also the breadth
of the Paper: for he caused it to be a foot broad, yea, and some a foot and an halfe, I meane that
kind which was called *Macrocola*, or large Roiall Paper. But herein was a fault, and reason found
D it out: for if one leafe of this large Paper were plucked off, the more pages took harme thereby,
and were lost. And therefore the former *Claudian* Paper, which had but 3 leaues of Papyrus, was
preferred before all the rest. Howbeit, that which was named *Augustane* bare the name for let-
ters misseue, and the *Liuiane* continued still in the owne credite, hauing no property of the first
and principall, but all in a second degree. The roughnesse of Paper is polished and smoothed
either with some tooth, or else with a Porcellane shell: but the letters in such slick Paper, will
soone fade and decay. For by polishing, it will not receiue the inke so deepe as when it is not
smoothed, although otherwise it will shine the better. Moreover, it falls out many times, that
if the humor be not artificially laid, the Paper is very stubborn: but this fault is soon found out
at the very first stroke of the hammer, or else discovered by the smell, especially if good heed
E were not taken in the tempering therof. As for the spots and speckles, the eie will quickly spie
them: but the long streaks, and veines lying close couched between the pasted places, can hard-
ly be discerned before that the letter runs abroad, and shewes how in the spongeous substance
of the Paper wanting that past, the ink will sinke thorough, and make blots, so deceitfull is the
making of this Paper. What remedie then? but to be at a second labor to past it new againe a-
nother way, to wit, with the common past that wee vse, made with the finest floure of wheat, and
tempered with hote scalding water, and a little vinegre mingled therewith. For the joiners glue
and that made of gums, is brittle, and will not abide the rolling vp of these sheets into quiers:
But they that wil go more surely to work, and make an exquisite past indeed, boile the soft and
tender crums or leaue bread in scalding water, and then let it run thorough a strainer, which
F they vse to this purpose. For besides that the Paper hereby will be more firme, and haue lesse
flawes, it surmounts also in sweetnesse the water of Nilus. Moreover, all kind of past whatsoe-
uer for this effect, ought neither to be staler than a day old, nor yet fresher and vnder that age.
After that it is thus pasted, they beat it thin with the hammer: and a second time runne lightly
ouer with new past: and then being thus knit & bound fast again, it is made smooth and void of
wrinkles.

wrinkles, and finally beaten euen with the hammer, and driuen out in length and breadth. After this manner was that Paper made, wherein were written the bookes and records of the two *Gracchi*, *Tiberius* and *Caius*, with their owne hands, long agoe: the which I saw in the house of *Pomponius Secundus*, a noble citizen of Rome, and a renowned Poet, almost two hundred yeares after their death. As for the writings of *Cicero*, of *Augustus* late Emperour of famous memorie, and of *Virgill*, we daily see and handle them, by the meanes of Paper so good and durable.

CHAP. XIII.

¶ Of the bookes of *Numa*.

WE find many examples in stories, which very directly and mightily do testifie against *M. Varro*, as touching Papers. For *Cassius Hemina* (a most faithfull and ancient writer) in the fourth booke of his *Annales*, hath reported, That one * *Cn. Terentius* a scribe or publicke Notarie, as he digged and delued in a ground which he had neare to *Ianiculum*, light vpon a chist, wherein lay the bodie of *Numa*, sometime king of Rome. In the same also were found the bookes of the said king. And (as he affirmeth) this happened in that yeare, when *Pub. Cornelius* the sonne of *Lucius*, surnamed *Cethegus*, and *M. Babius* sonne of *Quintus*, surnamed *Pamphilus*, were Consuls of Rome: betwene which time and the raigne of *Numa*, by iust computation are reckoned 535 yeres. He saith moreover, That those bookes were made of the Paper abouenamed. The greater wonder it was, how such kind of bookes should last so long, especially within the earth, and not putrifie? The thing therefore being so strange, and in manner miraculous, that Paper should continue all that time, I think it not amisse to set down the very words of *Hemina* likewise, as he deliuereth them. The world made a wonder (quoth he) how these bookes could possibly endure so many yeres? but the party who found them yielded this reason: That within the said coffer about the mids of it, there was a stone foure-square: lapped all about and bound euery way with [waxe] candles in manner of a sercloth: vpon which stone, the foresaid bookes were laid: and therefore it was (as he supposed) that they did not rot. Moreover, the bookes also were embaulmed with the rosin or oile of Cedar, which might be a good reason in his conceit, that the moths came not to them. Now these bookes contained the Philosophie and doctrine of *Pythagoras*: and for that they treated of that Philosophical argument, burnt they were, by order from *Q. Petilius* the Pretor for that time being. The same storie in effect doth *C. Piso Censorinus* (a man who had been Censor) report in the first booke of his commentaries: howbeit, he setteth downe their number withall, and saith they were foureteen in all, whereof seuen treated of the Pontificall law, and matters of religion; and as many discoursed of *Pythagoras* his Philosophie. But *Tuditanus* in the thirteenth booke of the *Annales* affirmeth, That they were the decretals only of *Numa*, and contained his ordinances. As for *Varro* himselfe, he writeth in the fift booke of *Humane Antiquities*, that they were in all but twelue. And *Attilius* in his second booke reporteth, That two of them were written in Latine, and contained the Pontificall diuinitie and church-matters: and other twaine penned in Greeke, were full of precepts in Philosophie. He also affirmes in his third booke, for what cause the said bookes by vertue of a publicke decree were consumed with fire. But all Historiographers agree in this, That one of the *Sibyls* brought vnto *Tarquinius* the proud three bookes: of which, two were burnt by her owne selfe: and the third likewise perished with fire, together with the Capitol, during the troubles of *Sylla*. Ouer and besides, *Mutianus*, a man who had been thrice Consul of Rome, hath left on record, that of late, while he was lord gouernor of Lycia, he read in a certain temple an Epistle written by prince *Sarpedon* in Paper, and bearing date from Troy. And I wonder the rather at this, if so be that when *Homer* liued and wrote his Poeme, there was no land of Egypt as now there is: or why, in case there was such vse of Paper then, himself should write, that in the very same Lycia, *Bellerophon* had writing tables giuen him to deliuer as touching his owne death, and not rather letters missewrote in Paper? Wel, howeuer that be, this is certaine, that there is a scarfitie of otherwhiles of Paper also, as well as of other commodities: and this cane or reed Papyrus doth many times faile. For not long since, euen in the daies of *Tiberius* the Emperour, in a dearth and want of Paper, there were commissioners deputed and appointed by the Senat of Rome, for the dispensing and distribution of it among the people: otherwise there had been a great mutinie, and tumult at Rome about Paper.

CHAP.

CHAP. XIII.

¶ Of the trees in *Aethiopia*.

AS touching *Aethiopia*, and namely that quarter which confineth vpon Egypt, it hath in manner no trees at all of any name, saue those that beare wooll or cotton, concerning the nature of which trees, we haue sufficiently spoken in the description of the Indians, and of Arabia: and yet in very truth, the cotton that is brought from these trees in *Aethiopia*, comes neerer to wooll than any thing els; howeuer the trees be otherwise like to the rest of that kinde: and the burse or eod wherein this woollie substance lyes, is greater, and as big as a Pomegranate. Besides these, there be Date trees also, like to such as we haue before described. As touching other trees, and especially the odoriferous woods within the Isles that lie vpon *Aethiopia* round about, we haue said enough in the treatise of those Isles.

CHAP. XV.

¶ Of the trees growing in mount Atlas: of Citron tables: of the commendable perfections, and contrariwise of the defaults thereof.

THe mountaine Atlas (by report) hath a wood in it of peculiar trees that elsewhere grow not, whereof we haue already written. The Mores that border vpon it, are stored with abundance of Citron trees: from whence commeth that excessive expence and superfluitie about Citron tables made thereof. And our dames and wiuers at home (by way of reuenge) vse to twit vs their husbands therewith, when we would seem to find fault with the costly pearls that they do weare. There is at this day to be seen a board of Citron wood, belonging sometimes to *M. Tullius Cicero*, which cost him ten thousand Sesterces: a strange matter, considering hee was no rich man: but more wonderful, if we call to mind the seueritie of that age wherein hee liued. Much speech there is besides of *Gallus Asinius* his table, sold for eleuen thousand Sesterces. Moreover, there are two other, which *K. Iuba* sold: the one was prized at 15000 Sesterces, and the other held little vnder. Not long since, there was one of them chanced to be burnt, and it came with other household stuff but from the cottages in Mauritania, which cost 140000 Sesterces: a good round summe of money, and the price of a faire lordship, if a man would be at the cost to purchase lands so deer. But the fairest and largest table of Citron wood, that to this day hath bene scene, came from *Prothomae* king of Mauritania, the which was made of two demie-rounds or halfe circles, joined together so artificially, that for the closeness of the joint (which could not be discern'd) it was more admirable than possibly it could haue been if it had been naturally of one entire peece: the diameter of it caried foure foot and a halfe, and three inches thicke it was. Likewise another such table there was, surnamed *Nomien*, of one *Nomius* a slave, enfranchised by *Tiberius* the Emperour: the square or diametre whereof, was foure foot within 3 quarters of an inch, and the thickenesse halfe a foot lacking so much. And here I cannot forget and ouerpasse, how that the Emperour *Tiberius* himselfe had a table, which being two inches and three quarters about 4 foot in the diametre, and an inch and an half thicke throughout, he caused to be plated all ouer, for that *Nomius* his freed-servant had one so rich and magnificent, made altogether of a knot: a knot (I say) or a knur in the root of the tree, which is the very beantie of the wood, and giues all the grace to tables made thereof; and namely, if this knot lie altogether within ground, it is without comparison excellent, and farre more rare and singular than any of the timber aboue, either in the trunk and bodie, or in the armes and boughes of the tree. So that (to say a truth) this costly ware bought so deare, is no better than the superfluous excrecence of trees: the largeness whereof, as also of their roots, may be esteemed by the roundnesse that they carie. Now are these Citron trees much like to the female Cypresse (especially that of the wild kind) in leaf, in smel, and in body. A mountaine there is in high Mauritania, called *Anchorarius*, which was wont to yeeld the best and fairest citron trees, although now it be naked and despoiled of them. But to returne to our tables aforesaid; the principall be they which are either crisped in the length of the vein, or beset here and there with winding spots. In the former, the wood curleth in and out along the graine, and therefore such bee named *Tigrinæ*, [i. Tigre-tables.] In the other, there be represented sundrie tufts as it were enfolded

folded and enwrapped round, and those they call Pantherina, [*i. Panther or Luzerne tables.*] There be againe, whereof the worke in wainescot resembleth the waues of the sea: and the better grace they haue, and be more esteemed, if they make a shew of the eyes appearing in Peacocks tailes. Next in account and request to these abouenamed, be those that are frilled with small spots standing thicke, as if many graines were gathered together, which they call thereupon (of some resemblance of little bees or flies) *Apiata*, as if they were speckled & filed with their dung. But be the worke and graine of the wood what it will, the color makes all. Here at Rome we see most store by that colour which is like to mead or honied wine, shining and glittering in the veins of the wood. After which considerations, men regard much the breadth & largenes of the whole plank, standing of one entire peece which makes the table. Some take a great pleasure to see in one Citron board many of those faults which be incident to trees, to wit, the Lignum, for so they call the simple, plain, and bare wood and timber without any branched or curled graine at all, without a shining iustre and glittering glosse, without worke to be seen in any order digested, or at the most (if any be) representing the leaues of a Plane tree. Again, the resemblance either of the vein or color of a kind of Oke wood called *Ilex*. Moreover, the rifts and chinks which timber is subiect vnto, by reason principally of wind and Suns heat: or else hairie streakes that be like to such cliffs and creuisses. Afterwards men were delighted with a kind of Lamprey veine trauesing and running ouer a black crosse way: and with an outward skin or coat marked with speckes or knottie knurs, like to Poppie heads: and generally with a color all ouer, comming neer to black, or at leastwise bespotted with sundrie colors. The Barbarians for to season the wood of this Citron tree, use to burie the green boards or planks thereof within the ground, and besmeare them all ouer with wax. But the artificers and workmen do put them for 7 daies within heaps of corne, and stay 7 daies more ere they be wrought: & a wonder it is incredible, how much of the weight the wood loses by this means. Moreover, of late daies we haue found the experience by shipwracks, that this timber also wil by nothing in the world be sooner dried nor hardened to last a long time without corruption, than by seawater. Howbeit, to maintaine these tables best, and to cause them for to shine bright, the way is to rub them with a drie hand, especially after that a man is newly come out of the baines or hot house. Neither catch they any harme or staine, if wine be spilt thereupon: so as it should seeme they were naturally made for wine. To conclude, a tree this is seruing for the ornaments of this life, and the trim furniture of our house, few or none like to it: and therefore me thinks I do not amisse to continue the discourse thereof somewhat longer than ordinarie.

CHAP. XVI.

¶ Of the tree *Thya*, what it is.

WELL knowne vnto *Homer* was this tree, which in Greeke is named * *οἶνον*, but some call it *Thya*: for among other daintie odors and sweet woods, he reports, That dame *Circe* (whom he would haue to be reputed as a goddesse) burnt of this *Thyon*. And therefore much deceived are they, who vnderstand by that word *Thyon*, perfumes and odoriferous spice, considering that in one and the very same verse, the Poet maketh mention of the Cedar and Larch tree together with *Thyon*, whereby it appeareth plaine, that he spake of trees onely. *Theophrastus*, who after the daies of *Alexander* the Great, was the first that wrote the historie of those acts which happened about the 440 yeare from the foundation of Rome, gaue great honour euen then to this Tree, and reported, That all carpenters worke of temples in old time, was made of the same; as of a timber cuerlasting, and which in rouses would continue without all putrefaction and corruption whatsoever. Moreover, he writeth, That the wood of the root is so curled and frilled, as none more; and that of no timber besides are more curious peeces of works made, nor of greater price. Ouer and besides, he saith, That the fairest and goodliest trees of this kind, doe grow about the temple of *Iupiter Hammon*: and some of them also within the country *Cyrenaica* toward the inland parts. But all this while not a word of the fore-said costly tables speakes he in his whole history: and verily before that of *Cicero*s, there is no record in writers of any such tables: whereby it appeareth, that they be come vp but of late daies. Another tree there is likewise of that name, bearing an apple or fruit, which some cannot abide for the strong fauor and bitternes withall, others again like and loue it as well. This tree also beautifieth and setteth out the house, but I purpose not to bestow many more words thereof.

CHAP.

CHAP. XVII.

¶ Of the tree *Lotus*.

IN the same coast of Africk which regards Italy there growes *Lotos*, which they call *Celtis*. A notable tree it is and of speciall marke: found also here among vs now in Italy, but together with the soile it hath changed the nature. The fairest and goodliest of them be about the Syrtis and the Nasamones: they be as big and tall as Peare trees, howsoeuer *Nepos Cornelius* saith they are but little and low. The leaues be thick cut and indented: otherwise they are like to those of the *Ilex* or Holme tree. Many sorts there be of the *Lote* tree, and those for the most part according to their diuers and seuerall fruits. Howbeit ordinarily the fruit is as big as a bean, and of yellow colour as *Saffron*; yet before it is full ripe it changeth into sundry colors like as grapes do. It growes thick among the branches of the tree in manner of myrtle berries, and not like to the cherries in Italy: and in those plants aboue named the meat thereof is so sweet and pleasant, that it hath giuen the name both to a nation and country, in so much as the people be called *Lotophagi*: and withall, so welcome be all strangers thither, and so well contented with their entertainment, that they forget their owne native soile, for the loue they haue to this fruit when they haue once taken to it. By report, who so eats thereof is free from the diseases of the belly. This fruit is counted the better which hath no kernell within: for there is another kind wherein the said kernell seems as hard as a bone. Moreover, out of this fruit there is prest a wine like to *Mede*, which the aboue named *Nepos* saith will not last about ten daies: who reporteth besides, that the inhabitants do stamp the berries thereof with wheat or frumentie into a past, and so put it vp in great barrels or such like vessels for the prouision of their food. Moreover, we haue heard say that whole armies passing to and fro through Africke, haue fed thereof and had no other meat: the wood is blacke of colour, and much sought for it is to make pipes and fises: of the root whereof hafts of daggers and kniues be made, besides other pretty deuises of small use. Thus much as touching the nature of the *Lote* tree in those parts: for there is an herb also of that name [called *Melilote*.] As for the Egyptian *Lotus* it is a plant bearing a stalke, and growes in the marshes of Egypt: for when the waters of *Nilus* are fallen which drench the country, this plant comes vp in the flat and waterie leuell along the riuer, with a stem like to the [Egyptian] bean, with leaues thrust close and thick together, howbeit shorter and lesse than those of the bean: in the top of which stalk it bears fruit in manner of an head, for cuts and chamfers and euery thing els like those of Poppy: within which be contained certain grains or seeds resembling *Miller*. The inhabitants of that country do pile together in heaps those heads, and so let them putrifie: afterwards they separate them, wash them faire, and when they be dry, stamp and mold them, and thereof make their bread. A strange and wonderful thing it is that is reported besides, namely, That when the Sun goes down, those heads close vp and be couered with leaues, and remaine shut vntill the morning, at what time they open againe: and thus continue this course vntill they be ripe, and that the floure which is white doth fall of it selfe.

CHAP. XVIII.

¶ Of the very stalke, scape or stem, and root of *Lotus*.

IT is said moreover as touching this Egyptian *Lotus*, That in *Euphrates* the very head of the stalk together with the floure, yfeth in the euening to be plunged & drowned vnder the water vntill midnight, and so deep to settle toward the bottom, that a man with his hand cannot reach thereto, nor find any part of it: but after that time it begins to rise by little and little, and by Sun-rising appeares aboue water and opens the floure, and still mounteth higher and higher a good height from the water. This *Lotos* hath a root as big as a Quince, couered with a black rinde or barke much like to the huske of a Chestnut. The substance within is white and delectable to eat, but more pleasant being either foddin in water, or roasted vnder embers, than raw: and Hogs will feed fat with nothing better, than with the pills and parings of this root.

Mm

CHAP.

CHAP. XXI.

¶ Of *Paliurus*, the *Pomegranate*, and the *floure of the Pomegranat*.

THe region of Cyrenaica in Africk makes more account of their *Paliurus* than of *Lotus*: for the *Paliurus* shoots forth more twigs and branches, and hath a redder fruit than the *Lotus*: besides, the fruit and the kernell be eaten apart; and in truth pleasant it is of it selfe alone, but more pleasant with wine; yea, and the iuice thereof giueth a better tast to wine if it be put into it. The inland parts of Africk, as far as to the *Garamants* and the desarts, be wel planted with *Dare trees* faire and great, bearing goodly and pleasant dates, and those especialy in that quarter of Barbary which lieth about the temple of *Iupiter Hammon*. But the territorie of Carthage challengeth to it selfe the *Punick apple*: some call it the *Pomegranat*, & they haue made feuerall kinds thereof, calling that *Apyrinon*, which hath nowoody or hard kernell within: and indeed these *pomegranats* are naturally more white, the graines within more pleasant, and diuided with membranes and pellicles between, nothing so bitter as the other: for in both sorts they be framed and fashioned within like to hony combs. As for those *pomegranats* which haue such kernells or stones, there be siue kinds of them, to wit, sweet, soure, temperat between both, *typtick* or austere, and tasting of wine. But the *pomegranats* of *Samos* and *Egypt* haue this difference one from another, That some haue red floures on the head, and are therefore called *Erythrocoma*: others are white, and such they name *Leucocoma*. The rind of soure *pomegranats* is better for tanners and curriers to dresse their leather with, than of the rest. The floure is called *Balisteum*, both medicinable and also good for to dyt cloth: and hereof cometh the colour of *Punicus* [i. a light red, or a bay] taking the name of the apple *Punicke*, or *Pomegranat*.

CHAP. XX.

¶ Of the *Shrubs in Asia and Greece*.

IN Asia & Greece there grow certain shrubs, to wit, *Epipactis*, which some call *Elleborine*, with small leaues, which being taken in drink are good against poyson, like as the leaues of *Erice* [i. Heath or Lings] withstand the stinging of serpents.

CHAP. XXI.

¶ Of *Thimelaa* or *Chamelaa*, *Tragacanth*: of *Tragium* or *Scorpio*. Also of *Myrice*, *Brya*, and *Galla*.

THe shrub or bush which beares the graine *Gnidium*, that some call *Linum*, is after some writers named *Thymelaa*, according to others *Chamelaa*: there be that call it *Pyrosachne*: some again giue it the name of *Cneston*, others of *Cneoros*. This plant howsoeuer it be named resembleth the wild *Oliue*, but that the leaues be narrower and gummy to the teeth, if a man bite them: for height and bignesse answerable to the myrtle: the seed thereof is for colour and fashion like to the grain of wheat, and serueth only for physicke.

As touching the plant *Tragium*, it is to be found in the *Ile Candy* onely. It hath a resemblance of the *Terebinth*, like as the seed also, which, by report, is most excellent and effectually to heale wounds made by darts and arrowes. The same *Ile* hath the bush *Tragacanth* growing in it, the root whereof is like to that of *Bedegnar*: and the same *Tragacanth* is much preferred before that which grows either in *Media* or *Achaia*. A pound of *Tragacanth* is worth 30 deniers Roman. As for the plant *Tragium* or *Scorpio*, it grows likewise in Asia. A kind of bramble or brier it is without any leaues, bearing fruit of berries much like to red grapes, whereof there is good vse in physicke.

Touching *Myrice*, which others call *Tamarix*; and *Achaia Brya* the wilde; Italy brings it forth: this special propertie it hath, that the same kind thereof only, namely that which grows in gardens, beareth fruit like galls. In Syria & Egypt this groweth plenteously, and the wood thereof we cal *Vnhappy*: but the more vnluckie and vnforgotten be those of Greece: for there groweth *Ostrya*, named also *Ostrya*, a solitary tree about watery and moist rocks, hauing barke and

A and branches like to the *Ash*, but *Peare-tree* leaues, saue that they be somewhat longer & thicker, with long cuts or lines wrinkled and riuiled thoroughout: and the seed in forme and color is like to barley. The wood of it is hard and strong: and some say if any peece thereof be brought into an house where a woman is in trauaile of child-birth, she shall haue difficult labour, and hardly be deliuered: and whosoever lyeth sicke there, shall die a miserable death.

CHAP. XXII.

¶ Of *Euonymus* or the *Spindle tree* of *Adrachne*, *Congygria*, and *Thapsia*.

IN the Island *Lesbos*, there groweth a tree named *Euonymos*, no better nor more lucky than *Ostrya* before said. Much vnlike it is not the *Pomegranat* tree. As for the leafe that it beares, it is of a middle size between that of the *Pomegranat* and the *Bay*; otherwise for shape and fastnesse, it resembles that of the *Pomegranat*. The floure is whiter; the smell and tast wherof is pestiferous and menaces present death: it beares cods like to *Sesamaw*, within which be grains or seeds soure square and thick, but deadly vnto all creatures that eat them. The leafe also is as venomous as the graine, yet otherwise the enues therof a fluxe and gurrie of the belly, which saues their life, or else there were no way but one.

Alexander Cornelius called that tree * *Eone*, whereof the famous ship *Argo* was made; and like it was (by his saying) to the *Oke* that carries *Misselto*, the timber whereof neither water will putrifie, nor fire consume, no more than the *Misselto* it selfe. But so far as euer I could learn, no man knew that tree but himselfe.

As for the tree *Adrachne*, all the Greeks in manner take *Porcellaine* for it; whereas indeed *Porcellaine* is an herbe, called in Greeke *Andrachne*; so as they differ in one letter: but *Adrachne* is a tree of the wild Forrests growing vpon mountaines, and neuer in the plaines beneath; resembling the *Arbut* or *Strawberrie tree*, saue that the leaues be lesse, and neuer fade nor fall. And for the barke, rough and rugged indeed it is not, but a man would say it were frozen and all yce round about, so vnpleasant it is to the eye.

Like in leafe to *Adrachne*, is the tree *Congygria*, but otherwise it is lesse and lower. This propertie it hath, To lose the fruit wholly, together with the soft downe that it beareth, which they cal *Pappus*, a qualitie that no other tree hath, beside it. Like to *Adrachne* also is *Apharce*, and beares fruit twice in one yeare, as well as it. The former is ripe, when the grape begins to bud and bloom; the latter, in the beginning of winter: but what manner of fruit this should be, I haue not found written.

As touching the *Ferula*, it will not be amisse to speake thereof among forrain plants, yea and to range it among trees: for (as hereafter we wil distinguish in the diuision of trees) some plants are of this nature, To shew al the wood they haue, where the bark should be; that is to say, without forth: and where the heart of the wood ought to be, they haue nought but a light and spongy pith, as the *Elder*, or else nothing at all, as *Canes* and *Reeds*. But to come to our *Ferula* aboue named, it growes in hot countries beyond-sea, with a stalk or stem full of knotty joints.

E Two kinds be knowne of them: for that which the Greeks call *Marthex*, groweth tall; but *Narthecia* is alwayes low. The leaues that put forth at the joints, be euer biggest toward the ground: this plant otherwise is of the nature of *Dill*, and the fruit is not vnlike. There is not a plant in the world lighter than it for the bigne: being easie therefore to weld and carrie, the stem thereof serueth old men in stead of stauces, to rest vpon. The seed of this *Ferula* or *Fennell-gyant*, some haue called *Thapsia*, but herein they be deceived, for that *Thapsia* doubtlesse is a kind of *Ferula* by it selfe, leaved like *Fennel*, with an hollow stalk, and neuer exceeds in hight the length of a walking staffe: the seed is like to that of the *Ferula*, and the root white: cut it, there issues forth milke; stampe it, you shall see it yeeld plenty of iuice. Neither is the barke of the root rejected and cast aside, although both it, the milke, and the iuice, be very poisons: for surely the root is hurtfull to them that dig it vp, and if neuer so little of the aire therof breath vpon them (so venomous it is) their bodies will holne and swell, their faces will be all ouerun with a wild fire: to prevent which mischises, they are forced to anoint their bodies with a cerot. Howbeit as dangerous as they be, Physicians make vse thereof in the cure of many inward diseases, so they be wel corrected and tempered with other safe medicines. In like maner they say, that the iuice

of Thapsia is singular good for the shedding and falling of the haire; also against the blacke & blew markes remaining after stripes: as if Nature furnished not Physicians sufficiently with other wholsom remedies; but that needs they must haue recourse to such poisonous and mischievous medicines. But this is the cast of them all, to pretend such colourable excuses, for their handling of poisons: and so impudent and shamelesse are some besides, that they bash not to auow the vse of them, bearing vs in hand, that Physick cannot stand without poison. The Thapsia in Affricke is the strongest of all others. Some vse to slit or cut the stem about harvest, and in the very root make an hollow trough to receiue the juice that runs downe, and when it is dried, they take it away. Others againe do bruiſe and stamp in a mortar, both leafe, stalke, and roor, and when the juice that is pressed therefrom, is thoroughly dried in the Sun, they reduce the same into certain Trochisques. *Nero Caesar* the Emperor in the beginning of his Empire, gaue great credit to Thapsia: for vsing (as he did) to be a night-walker, and to make many ryots and much misrule in the darke, he met otherwhiles with those that would so beat him, as that he carried away the marks black and blew in his face: but (as he was subtil & desirous to auoid the speech of the people) an ointment he had made of Thapsia, Frankincense, and Waxe, wherewith hee would anoint his face, and by the next morning come abroad with a cleare skin, and no such marks to be seene; to the great astonishment of all that saw him. To conclude, the Ferula maketh the best matches to keep fire, by all mens confession: and those in Egypt excell the rest, for that purpose.

CHAP. XXIII.

¶ Of Capparis, or Cynobatos, or Ophcostaphyle: and of Sari.

Likewise in Egypt groves Capparis, a shrub of a harder and more woody substance: well knowne for the seed and fruit that it carries, commonly eaten with meats, and for the most part the Capres and the stalke are plucked and gathered together. The outlandish Capres (not growing in Egypt) we must take good heed of and beware: for those of Arabia be pestilentiall and venomous: they of Affricke be hurtfull to the gums, and principally the Marmarice are enemies to the matrice, and breed ventosities. The Apulian Capres cause vomit, and make lubricities both of stomack and belly. Some call the shrub Cynobatos: others Ophcostaphyle. Moreover, there is a plant of shrubs kind, called Sari, it growes along Nilus, almost two cubits high, it beareth an inch in thicknesse, and hath leaues like to Papyr-reed, and men do chew and eat it after the same manner. As touching the roor, it is singular good for Smiths cole to burne in their forges, so hard it is and durable.

CHAP. XXIII.

¶ Of the Royall thorn of Babylon: and of Cytisus.

I May not ouer-passe that plant, which about Babylon is sowed vpon Thornes only: for otherwise it knowes not how to liue no more than Misseleto, but on trees: howbeit this plant that I speake of, is sowed vpon that Thorne alone called the Royall Thorne. And a strange thing it is of this plant, That it springs and grows the very same day that it is set or sowed. Now the seasonable time of sowing it, is at the very rising of the Dog-star: and notwithstanding the Suns heat, right quickly ouerspreads it the tree or shrub, on which it is cast. The Babylonians vse to aromatize their wine therewith; and for that purpose are they so carefull to sow it. But the foresaid Thorne tree groweth also about the long walls of Athens [reaching from the tower to the hauen Pyraeum.]

Moreover, a shrub there is, called Cytisus, highly commended and wondrous much praised by *Aristomachus* the Athenian, for feeding of sheepe; as also for fattening of swine, when it is drie: and he promisseth and assureth, That an acre of land sowed therewith, although it be none of the best soile, but of a meane and ordinarie rent, will yeeld yearly [communibus annis] 2000 Sesterces to the master. As great profit cometh therby, as of the pulse like Vetches, called Ervum: but sooner will a beast be satisfied therewith, and a very little thereof will serue to fat the same: inasmuch as if horses or any such labouring cattell may meet with that prouender, they will not care for barley: neither is there any other grasse or foddere, that yeeldeth more or better milke,

A milk than it: but that which passeth all, the pasturage of Cytisus, preſerueth sheepe, goats, and such like cattell, sound and safe from all diseases whatsoeuer.ouer and besides, if a nourſe want milke, *Aristomachus* prescribes her to take Cytisus dry, and teeth it in water, and so to drink it in wine, wheteby not onely her milke will come againe in great plenty, but the babe that sucketh thereof will be the stronger and taller. He giueth it also to hens and pullein whiles it is green; or steeped and wet if it chance to be dry. *Democritus* and *Aristomachus* both do promise and assure vs, that Bees will neuer miscarry nor faile, if they may meet with Cytisus to feed vpon. And yet there is not a thing of lesse charge to maintaine than it. Sowne it is commonly in the spring with barley, I mean the seed thereof, as they mean to sow Leekes or Porret seed: or els they set plants and slips thereof from the stalke, in Autumne before mid-winter. If the seed be sowne, it ought to be steeped and moistned before: yea, and if there fall no store of raine after it is in the ground, it had need to be watered. As for the plants when they be a cubit long, are replanted in a trench a foot deepe. Otherwhiles the tender quickesets are planted about the Equinoxes, to wit, in mid-March and mid-September. In three yeares they come to their full growth. They vse to cut it downe in the Spring-Equinox, when it hath done flourishing: a worke that a very lad or old woman may do, euen such as can skill of nothing besides. This Cytisus is in outward hew white: and in one word, if a man would pourtray the likenes thereof, it resembleth for all the world a shrub of Trifolie or Clauer-grasse, with narrower leaues. Being thus gathered, it is euer giuen to beasts once in three daies. And in Winter, that which is dried ought to be wet before they haue it. Ten pound of it is a sufficient foddering for an horse: and for other small cattell according to the proportion. But by the way this is not to be omitted, that it is good to set garlicke and sow onions seed betweene the rewes and rankes of Cytisus where it groweth, and they will thriue more plenteously. This shrub was first discovered and known in the Island Cythnus, and from thence translated into all the other Cyclades: and soon after brought to all the cities of Greece; whereupon followed great increase of milke, & plenty of cheefe. I marvel therefore very much that it is so season and rare in Italy: and a plant it is that feareth neither heate nor cold, no iniury of haile, nor offence by snow; and as *Hippocras* saith, it is not afraid so much as of the enemy; the reason is, because the wood thereof is nothing beautifull to the eye.

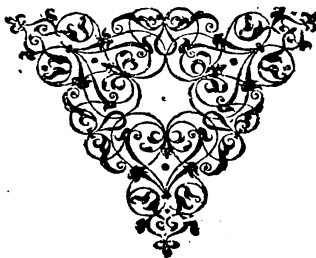
CHAP. XXV.

¶ Of shrubs and trees growing in our Mediterranean sea, in the red sea, and in the Indian sea.

Even the very sea affordeth shrubs and trees: but those of the Mediterranean sea be far lesse than of other seas; for the red sea and all the Levant Ocean is full of woods. That which the Greeks call *αλγη*, hath no other name in any language. As for Alga, is a word appropriate rather to weeds or sea-herbs, called Reik: but this Phycos is a very shrub, bearing broad leaues of a green colour, which some call Praſon, others Zoister. A second kind there is of Phycos, with an hairy leafe like to Fennell, and groweth vpon rockes. As for the former called Zoister, it is found among the shelues and shallow waters not far from the shore: both the one and the other appeare in the Spring, and be gon in Autumne. That of this kind which groweth in Candy about rockes, is much vsed of dyers for the purple color: and namely on the North part of that Island, and among sponges, for that is most commendable for this purpose. A third sort there is like vnto the grasse called *Coich*, or *Dent-de-chien*, hauing a root full of ioynts, and a stalk likewise in maner of a reed.

Another shrub there is in that sea called Bryon, with leaues like Lettice, saue onely they be more wrinkled and crumpled together: but this growes more inward and farther into the sea. Mary in the deepe groweth both Fir and Oke to the height of a cubit. Among these branches, the Cockles and Muskles, and such like shell fishes do settle and sticke vnto them. As for that kind of sea-Oke, some say it is of good vse to dye wooll withall: as also that it beareth Mast or Acorns in the deepe: the knowledge of all which we come vnto by those that diue into the bottom of the sea, and such as haue suffered shipwracke and escaped. Moreover, by report, there be other exceeding great trees, and namely about Sycione. As for the sea vine it groweth euerie where: but the fig tree there is without leaues, & hath a red bark. There be also date trees found

in the sea, but as little as shrubs. Without *Hercules* pillars, or the streight of Gebraltar, there are shrubs to be seen, bearing leaues resembling leek blades: and others leaued like to the bay tree, or to the herbe Thyme: and both kinds being cast vp a land turne into the pumish stone. But in the East parts it is a wonderous matter to thinke, that so soon as euer a man is past Cop-tus, he shall find nothing to grow in all the wildernesse, but only a kind of thorne or thistle, cal- led the thirly or dry thorne, and the same but here and there in very few places: whereas in the red sea whole woods do liue, and namely of Baies and Oliues bearing their berries: also when it raineth, certaine Mushromes, which no sooner be caught with the Suns heat, but they turne into the pumish stone. As touching the shrubs there growing, they be commonly three cubits high, and those so full of sea dogs and cures, that a man shall hardly looke out of the ship in safety, for that many times they will take hold of the very ores and assaile them. The souldiers of *Alexander* the Great who sailed into India made report, That the branches and leaues of the sea trees, so long as they were vnder the water looked green, but when they be taken forth, pre- sently dried with the heate of the Sun, and became salt. Also, that about the shore they found stony rushes and reeds, like vnto naturall rushes indeed. Moreouer, in the deep sea they light on certain little trees branched and full of boughes, in colour of an Ox horne, but the head or top of them was red: handle them in your hand they were as brittle as glasse: put them into the fire they would be red hot like iron: quench them again, they returned to their former colour. In the same tract there be some tides so high, that the sea ouerfloweth and couereth the Woods growing within the Islands, although there be trees in them taller than the highest Planes or Poplars. And those trees beare leaues like Lawrell, and floures for smel and colour resembling the Violet. Their berries be like to Oliues, and those of a pleasant and sweet sauer, which they bring forth in the Autumne: and their leaues neuer shed but continue all the yeare long. The lower sort of these trees the froud couereth all and whole: but the greatest beare vp their heads about the sea, whereunto the mariners do fasten and tie their vessels at a high water: but when it is ebbe, at the very root. Moreouer, by their saying, they saw other trees in the same sea, with leaues euer green vpon them, carying a fruit like to Lupines. King *Iuba* reports, That about the Islands of the Troglodites, there groweth a shrub within the sea, called *Isidos Plocamos*, [*i. Isis haire*] resembling coral, and void of leaues: cut a branch of it from the stock, it becomes hard, changeth colour, and is black: if it fall it is so tender that it will breake like glasse. He speaks moreouer of another called *Charito-blepharon*, which is of great force in amorous matters to procure loue: and thereof women (quoth he) make them carkanets and pendant ornaments to hang about their necks. To conclude, he affirms that this shrub hath a certain intelligence when a man would take hold of it, and therefore waxeth as hard as an horne, inso much as it is able to turne the edge of a knife or bill, that vnneth or hardly it may be cut: but in case it be intrapped and drawne vp with cords without any edge toole, it presently turneth to be a stone.



THE

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B THE FOVRTEENTH BOOK OF
THE HISTORIE OF NATURE,
WRITTEN BY C. PLINIUS
SECVNDVS.

Containing the Treatise of Trees bearing Fruit.

The Proeme.

C **T**Hus far forth haue we discoursed of all fortine and strange trees in a manner, such I meane as know not how to liue in any other places but where they naturally first did grow, and which wil- lingly go not into other countries, nor can abide their soile or aire. Goodleane may I now haue to write of Plants and Trees common to all lands, and namely, to ours of Italy, which may seeme to be the very Hort-yard and naturall garden that bare them all. This onely would I advertise the Readers and Learners to remember, that for this present we purpose to describe their natures and vertues onely, lea- ving out the manner of husbandrie that belongeth vnto them; albeit in their tending and keeping appea- reth the greatest part of their properties, and of Natures workes. And verily, I cannot chuse but marvelle still and neuer giue ouer, how it comes to passe, that the remembrance, yea, and the verie names of some trees which ancient Writers haue deliuered in their bookes, should be quite gone and abolished. For who would D not thinke, that our life should ere this haue gained much by the Maiesie of the Romane Empire, haue dis- covered all things by the meanes of the commerce we haue had with the vniuersall world, by the traffick, ne- gotiation, and societie I say that we haue entered into during the blessed time of peace which we haue enjoyed? considering that by such trade and entercourse, all things heretofore unknowne, might haue come to light. And yet for all this, few or none (beleeue me) there are who haue attained to the knowledge of many ma- ters which the old writers in times past haue taught and put in writing. Whereby wee may easily see, that our ancestours were either far more carefull and industrious, or in their industrie more happie and fortu- nate. Considering withall, that about two hundred yeares past Hesiodus (who liued in the very infancie of Learning and good letters) began his worke of Agriculture, and set downe rules and precepts for husban- E me to follow. After whose good example, many others hauing trauelled and taken like paines, yet haue put vs now to greater labour. For by this means we are not onely to search into the last inventions of later wri- ters, but also to those of ancient time which are forgotten and couered with oblivion, through the supine ne- gligence and generall idlenesse of all mankind. And what reasons may a man alledge of this drowsinesse, but that which hath lulled the world asleepe? the cause in good faith of all, is this and no other, Wee are readie to forgoe all good customes of old, and to embrace nouelties and change of fashions: mens minds now a daies are enuised and occupied about new fangles, and their thoughts be rolling; they wander and roue at random, their heads be euer running; and no arts and professions are now set by and in request, but such as bring F penence into our purses. Heretofore whilst Kings and Potentates contained themselves within the Domi- nion of their owne Nations, and were not so ambitious as now they bee, no marvelle if their wits and spirits kept still at home: and so for want of wealth and riches of Fortune, were forced to employ and exercise the gifts of their minde: in such sort as an infinite number of Princes were honoured and renowned for their singular knowledge and learning. Yea, they were more braue in port, and carried a goodlier shew in the World for their skill in Liberall Sciences, than others with all their pomp or riches: being fully persuaded and assured, that the way to attaine vnto immortalitie and euerlasting Fame, was by literature and not

by great possessions and large seignories. And therefore as learning was much honoured and rewarded in those daies, so arts & sciences tending to the common good of this life daily increased. But afterwards when the way was once made to enlarge their territories farther in the world, when princes and states began to make conquests and grow rich and mighty, the posterity felt the smart and losse thereby. Then began men to chuse a Senator for his wealth; to make a judge for his riches, and the election of a ciuill magistrate and martiall captain, to haue an eye and regard only to goods and substance, to land and lining: when rents and revenues were the chiefe and onely ornaments that made men seeme wise, just, politicke, and valiant. Since time that childlesse estate was a point looked into, and aduanced men into high place of authoritie and power, procuring them many fauorites in hope of succession, since time I say that euery man aimed and reached at the readiest meanes of greatest lūcre and gaine, setting their whole mind, and reposing their full content and ioy in laying land to land, and heaping together possessions; downe went the most precious things of this life, and lost their reputation: all those liberall arts which tooke their name of liberty and freedome (the soueraigne good in this world which were meet for princes, nobles, gentlemen and persons of great state) forwent that prerogative, and fell a contrarie way, yea, and ran quite to wracke and ruine: so as in stead thereof, base flatterie and scrutude be the only waies to arise and thriue by: whiles some practise it one way, some another, by flattering, admiring, courting, crouching, and adoring: and all, to gather good and get money. This is the onely marke they shoot at, this is the end and accomplishment of all their vices, prayers and desires. Inasmuch, as we may perceiue euery where, how men of high spirit and great conceit are giuen rather to honor the vices and imperfections of others, than to make the best of their owne vertues and commendable parts. And therefore we may full truly say, that life indeed is dead; Voluptuousnesse and Pleasure alone is almeys, and I to search into those things, that be perished and utterly forgotten, how small and base seuer some of them be, no more than I was affrighted in that regard, from the treatise and discourse of liuing creatures. Notwithstanding that I see Virgil (a most excellent Poet) for that cause only forbore to write of gardens and hort-yards, because he would not enter into such petty matters: and of those so important things that he handled, he gathered only the principall flowers, and put them downe in writing. Who albeit that he hath made mention of no more than 15 sorts of grapes, three kinds of Oliues, and as many of Peares, and sitting aside the Citrons and Limons, hath not said a word of any apples; yet in this one thing happy and fortunate hee was, For that his worke is highly esteemed, and no imputation of negligence charged upon him. But where now shall we begin this treatise of ours? What deserueth the chiefe and principall place, but the vine? in which respect Italy hath the name for the very souerainety of Vine-yards: inasmuch, that therein alone, if there were nothing els, it may well seeme to surpass all other lands, euen those that bring forth odoriferous spices and aromaticall drugs. And yet to say a truth, there is no smell so pleasant whatseuer, that out-goeth Vines when they be in their fresh and flourishing time.

CHAP. I.

¶ Of Vines, their nature and manner of bearing.



Vines in old time were by good reason for their bignesse reckoned among trees. For in Populonia, a citie of Tuscan, we see a statue of Iupiter made of the wood of one entire Vine, and yet continued it hath a world of yeares vncorrupt, and without worrne. Likewise at Massiles there is a great standing cup or boll to be seene of Vine-wood. At Metapontum there stood a temple of Iuno, bearing upon pillars of Vine wood. And euen at this day there is a ladder or paire of staires vp to the temple of Diana in Ephesus, framed of one Vine-tree, brought (by report) out of the Island Cypres, for there indeed vines grow to an exceeding bignesse. And to speake a truth, there is no wood more dureable and lasting than is the vine. Howbeit, for my part I would thinke that these singular pieces of worke before-named, were made of wild and sauage Vines: for that these our tame and gentle vines here planted among vs, are by cutting and pruning euery yere kept downe: so as all their whole strength is either drawne without-forth into branches, or els downward into the root for to put out new shoots euer fresh out of the ground: and regard is only had of the fruit and iuice that they do yeeld diuers waies, according to the temperature of the aire & climat, or the nature of the soile wherein they be planted. In the country of Campaine about Capua, they be fet at the roots of Poplars, and (as it were) wedded

vnite

A vnto them: and so being suffered to wind and claspe about them as their husbands, yea, & with their wanton armes or tendrils to climbe aloft, and with their ioints to run vp their boughes, they reach vp to their head, yea, and ouertop them: insomuch as the grape-gatherer in time of Vintage, puts in a clause in the couenants of his bargain when he is hired, that in case his foot should faile him, and he breake his neck, his master who sets him a worke should giue order for his funerall fire and tombe at his owne proper cost and charges. And in truth Vines will grow infinitely: and vnpossible it is to part them, or rather to pluck them from the trees which they be ioined and coupled vnto. Valerianus Cornelius making mention of many properties and singularities of a vine, thought this among the rest worthie of speciall note and remembrance, that one onely stocke of a vine was sufficient to compass and inuiron round about a good ferme-house or country messuage, with the branches & pliable shoots that it did put forth. At Rome there is one vine growing within the cloisturs of the Portches and galleries built by the Emperesse Livia, which running and trailing vpon an open frame of railes, couereth and shadoweth the ouert allies made for to walke in: and the same Vine yeeldeth one yere with another a dozen Amphores of good new wine yearly. An ordinarie thing it is, that Vines will surmount any Elms wherefoeuer, be they neuer so tall and lofty. It is reported, that Cynes the embassador of K. Pyrrhus, wondring at the vines of Aricia, for that they grew and mounted so high; would needs taste of the wine that came of their grapes: & finding it to be hard and tart, merrily scoffed and said, That by good right and justice they had done well, to hang the mother that bare such vnpleasant wine vpon so high a gibbet. Beyond the riuer Po in Italy, there is a tree growing which the peasants there call Rumbotinus, & by another name * Opulus; it puts forth great armes and boughs, and those spread abroad and beare a round compass; howbeit, the vines that be planted at the root of these trees, do fill and couer the said boughes: for yee shall haue the very old crooked branches of the Vine (bare as they be and naked of leaues) to wind about the armes, and cawle in manner of a serpent or dragon along the broader and flatter bafe of the boughes, and then the new shoots, top-twigs, and tendrils, wil diuide themselves to the utmost branches and shoots of the tree, that they will lode and clog her withal. These vines again grow sometime no taller than the ordinary height of a man of middle stature, and beeing supported and vnderpropped with stakes and forks, cleaue and cling thick together, and in this order fill whole vineyards. Others also there be, which with their excessive creeping vpon frames, with D their ouergrowne branches, and some artificiall help of the masters hand, spread so far euery way, that they take vp wide and large courts, ouerspreading not only the sides, but the very middest thereof. See what sundry sorts of vines euen Italy alone is able to afford! But in some prouinces without Italy, yee shall see a vine stand of it selfe without any prop or stay at all, gathering and drawing in her boughs and branches together: thus indeed the groweth but short, howbeit so close couched and trussed round, that the thickenesse makes amends for all. And yet other-whiles in some coasts the winds are so big and boisterous, that they wil not suffer them thus to grow vpright; as namely in Affricke, and Languedoc, the prouince of Narbon Vines being thus debarred to run vp in height, resting vpon their owne ioints and branches, and euer like to those that be laid along whiles they are a trimming, by deluing about their roots, and pruning their superfluous branches, traile and creepe too and fro along the ground, as weeds and herbes; and all the way as they spread, suck the humor of the earth into their grapes: by which meanes, no maruell it is, if in the inland parts of Affricke there be found some of those grapes bigger than pretty babes. And in no countrie are the grapes of a thicker skin than those of Affricke, wherupon it may well be, that they tooke the name * Duracina (i. hauing hard skins.) For infinite sorts there be of grapes, according to the difference obserued in their quantity and bignesse, in their colour, taste, stones, or kernels: and yet more stil, in regard of the diuers wines made of them. In one place they are of a fresh and bright purple, in another, of a glittering, incarnate, and rolate colour: and we shall haue them of a faire and liuely Greene. As for the white and black grapes, they be common euery where. The grapes Bumafti haue their name, for that they be so swelling and round, like strutting paps or dugs. The Date-grapes Dactyli, are long, both grape and kernel, fashioned in manner of fingers. Moreover, Nature seems to take her pleasure and make good sport in some kind of them; where yee shall find among them some that be exceeding great, others again that be as small, howbeit pleasant they are, and as sweet as the rest: and such be called Leptorrhag vs. Some last al winter long, being knit in bunches together, & so hangd aloft arch:

arch-wise in manner of a vault: with others they make no more adoe, but put them vp presently as they come from the Vine, into earthen pots, whiles they be fresh & in their vigor, and afterwards they are bestowed, well lapped ouer with their leaues, in other greater vessels ouer them, and for to keep them better, they be stoppt close with kernels heaped and piled vpon, sweating round about, to condite and preserve them in their naturall heat. Others they suffer to be dried in the smoke of smiths forges, whereby they get the very tast of infused wine, so ordered in the smoke. And in truth, *Tiberius Caesar* the Emperor gaue especial credit & name by his example to such grapes dried in the furnaces of Africk. For before his time, the Rhetian grapes & those that came out of the territory of Verona, were ordinarily serued vp to the table first, for the very best. As for the Raisins called *Passæ*, they took that name in Latine of their patience to endure their drying & confiture. Some grapes there be that are condite in Must or new wine, and so they drinke their owne liquor wherein they lie soking, without any other seething. Others againe are boiled in Must aboute said, vntill they lose their owne verdure, and become sweet and pleasant. Moreouer, yee shall see old grapes hang still vpon the Vine their mother, vntill new come: but within glasses, that a man may see them easily through: howbeit, to make them to last and continue in their full strength, as well those which be preserved in barrells, tuns, and such like vessels aforesaid, they vse the helpe of pitch or tarre, which they poure vpon the stalks that the cluster hangs to, and wherewith they stop close the mouth of the said glasse. It is not long since that there was a deuise found, that wine of it selfe (as it came naturally from the grape growing vpon the vine) should haue a smack and sent of pitch. And surely this kind of Pitch wine, brought the territory about Vienna into great name reputation: & before that this vine was known, those of Auern, Burgundy, and the Heluij, were in no request at all. But these deuises as touching vines & wines, were not in the daies of the Poet *Virgil*, who died about 90 yeres past. But behold what I haue to say more of the Vine tree: the vine wand is now entred into the camp, and by it our armies are ranged into battalions: nay, vpon the direction thereof depends the main estate of our soueraigne Empire: for the Centurion hath the honour to carry in his hand a Vine-rod: the good guidance and ordering whereof aduanceth after long time the centeniers (for a good reward of their valorous and faithfull seruice) from the leading of inferior bands, to the captainship of that regiment and chiefe place in the army, vnto which the maine standard of the Eagle is committed: yea, and more than that, the Vine wand chastiseth the trespasses and lighter offences of the souldiers, who take it for no dishonor nor disgrace to be thus punished at their Centurions hand. Ouer and besides, the planting of Vineyards hath taught martiall men how to approach the wals of their enemies, to giue an assault vnder a frame deuised for the purpose, which therupon took the name of Vine. Lastly, for medicinal vertues in phisick, the Vine is so profitable to mans health, that the vse of it alone is a sufficient remedy for the distemperature of mans body, caused by wine it selfe.

CHAP. II.

¶ Of the diuers kinds of wines.

D*emocritus* was the onely Philosopher euer known, who made profession to reduce all the sorts and kinds of vines to a certaine number, and indeed he vaunted and made his boast that he had the knowledge of all things that were in Greece. All others besides himselfe and those coming neerer to the truth (as that appeare more euidently by the variety of wines) resolutely haue set downe, that there be infinit sorts of Vine-trees. Looke not therefore at my hands, that I should write of them all, but onely of the principall: for that in truth there bee in manner as many and as sundry kinds of them, as are of grounds. Wherefore I will content my selfe, and thinke it sufficient to shew those that be singular and most renowned among them, or such as haue some secret propriety worth admiration. And first to begin with the Aminean Vines, all the world giueth them the chiefe praise and greatest name, as wel for their grapes, of so lasting and durable a nature, as for the wine made thereof, which in all places continues long in vigor, & is euer the better for the age. And hereof there be fise sundry sorts. Of which, the kindly Vines named Germanæ, haue both lesse grapes and grains within, but they burgen and bloom better than others: and after the floure is gon, they can abide both rain and tempest: but the second kind (which is the greater) is not so hardy: howbeit, lesse subiect to wind and weather

Ather when they be planted to run vp a tree, rather than to creepe vpon a frame. A third sort are called *Gemellæ*, for that their grapes grow double like twins. & they be very harsh and in taste vntoothsome, howbeit their vertue and strength is singular. The smaller sort of these take harm by the South wind: but all other winds nourish them, as we may see in the mount *Veluvius*, and the little hills of *Surrentum*: for in all other parts of Italy, ye shal neuer finde them but wedded to trees, and growing vpon them. As for the fift kind of these Amminean vines, they be called *Lanata*, so freezed they are with a kind of down or cotton, inso much as we need not wonder any more at the *Seres* or *Indians* for their cotton and silken trees. The first kind of these Amminean grapes come soonest to their ripenesse and perfection, and most quickly do they rot & putrifie. Next to these Amminean vines, those of *Nomentum* are in most account: and for that their wood is red, some haue called them *Rubellæ*. These grapes yeeld no great plenty of wine, but in stead thereof their stones and kernels, and other refuse remaining, grow to an exceeding big cake: howbeit, this property they haue. The frost they will endure passing well, lesse harme they take also by raine than drought, and thriue better in cold than heat: and therefore in cold and moist grounds they excell and haue no fellow. Of these vines, they are more plentifull which beare grapes with smaller stones, and leaues with lesse cuts and iags indented. As touching the *Muscadell* vines, *Apiana*, they tooke that name of bees, which are so much delighted in them, and desirous to settle and feed of them. Of two sorts they are: and both carry cotton & down. Howbeit, this difference is between them, that the grapes of the one will be sooner ripe than the other, and yet there is neither of them both but vchastly enough. These *Muscadell* grapes like wel and loue cold countries: and yet none sooner rot than they, if showers take them. The *Muscadell* wines are at the first sweet: but with age become harsh and hard, yea, and red withal. And to conclude, there is not a grape that ioies more to hang vpon the vine, than it doth. Thus much of the very floure of Vines, and the principall grapes that be familiar and proper vnto our countrey of Italy, as their natiue soile.

The rest be strangers come out of *Chios* or *Thasos*. As for the Greeke grapes of *Corinth*, they be not in goodnes inferior to the Aminean aforesaid. They haue a very tender stone within: and the grape it selfe is so small, that vnlesse the soile be exceeding fat and battle, there is no profit in planting and tending such vines. The quick-fets of the vine *Eugenia* were sent vnto vs from the *Taurominitane* hills in *Sicily*, together with their syname pretending anoble & gentle race. Howbeit, they are neuer in their kind with vs, but only in the Alban country: for if you transplant them, they proue very bastards and changelings presently. And in faith, some vines there be that take such an affection and loue to a place, that all their goodnesse and excellency they will leaue there behind them, and neuer passe into another quarter whole and entire as they be in their own nature. Which euidently is to be seen in the Rhetian vine, & that of *Savoy* and *Daulphnie*, of which in the chapter before wee said, that it gaue the taste of pitch to the wine made thereof: for, these Vines at home in those countries are much renowned for the said tast: but elswhere if they be transplanted, they loose it whole, and no such thing may a man acknowledge in them. Howbeit, plentifull such are, and for default of goodnesse, they make amends & recompence in abundance of wine that they yeeld. As for the vine *Eugenia*, it takes well in hot grounds. The Rhetian likes better in a temperat soile. The *Allobrogian* Vine of *Savoy*, and *Daulphine* delights most in cold quarters: the frost it is that ripens her grapes, and commonly they are of colour black. Of all the grapes aboue rehearsed, the wines that be made, the longer they be kept, the more they change colour, and in the end become white, yea, though they came of blacke grapes, and were of a deep colour at first. Now for all other grapes whatsoeuer, they are reckoned but base in comparison of the former. And yet this is to be noted and obserued, in that the temperature of the aire may be such, and the soile so good, that both the grapes will endure long, and the wine beare the age very well. As for example, the Vine *Fecenia*, and likewise *Biturica*, that bloometh with it, which beare grapes with few stones within: their floures neuer miscarry, for they euer preuent and come so timely, that they be able to withstand both winde and weather. Howbeit, they do better in cold places than in hot: in moist also, than in dry. And to say a truth, there is not a vine more fruitfull, & yeelding such store of grapes growing so thick together in clusters: but of all things it may not away with variable and inconstant weather: let the season be staied and settled, it matters not then whether it be hot or cold, for wel it will abide the one & the other alone, hold it neuer so long. The lesser of this kind is held for the better.

Howbeit

Howbeit, in chusing of a fit soile for this vine, it is much ado to please and content it: in a fat ground it soone rots; in a light and lean, it will not grow at all: very choise it is: therefore, dainty, and nice, in seeking a middle temper betwene, and therefore it taketh a great liking to the Sabine hills, and there it loues to be. The grapes that it bears, be not so beautiful to the eye, but pleasant to the tooth: if you make not the more hast to take them presently when they be ripe, they will fall off, although they be not rotten. This vine puts forth large and hard leaues, which defend the grapes well against haile-stones.

Now there are besides certain notable grapes of a middle colour between black and purple, and they alter their hue oftentimes; whereupon some haue named them *Varianæ*: and yet the blacker they be, the more they are set by: they beare grapes but each other yeare, that is to say, this yeere in great plenty, the next yeere very little: howbeit, their wine is the better when they yeeld fewer grapes. Also there be 2 kinds of vines called *Pretianæ*, differing one from the other in the bignesse of the stones within the grape: full of wood and branches they are both: their grapes are very good to be preserved in earthen pots: and leaved they be like to *Smallach*: they of *Dyrhachium* do highly praise the Roial vine *Basilica*, which the Spaniards call *Cocolobis*. The grapes grow but thin vpon this plant: they can well abide all South winds, and hot weather: they trouble and hurt the head, if a man eat much of them. In Spaine they make 2 kinds of them; the one hauing a long stone or grain within, the other a round: these be the last grapes that are gathered in time of vintage. The sweeter grape that the *Cocolobis* bears, the better is it thought: howbeit that which was hard and tart at the first, will turne to be pleasant with keeping; and that which was sweet, will become harsh with age: and then they resemble in tast, the *Albane* wine; and men say, there is an excellent drinke made thereof, to help diseases and infirmities of the bladder. As touching the wine *Albuelis*, it bears most grapes in the tops of trees, but *Vistula* is more fruitfull beneath toward the root: and therefore if they be set both vnder one and the same tree, a man shall see the diuersitie of their nature, and how they will furnish and enrich that tree from the head to the foot. There is a kind of blacke grape named *Inerticula*, as a man would say, dull and harmlesse; but they that so called it, might more iustly haue named it *The sober grape*: the wine made thereof is very commendable when it is old, howbeit nothing hurtfull: for neuer makes it any man drunke; and this property hath it alone by it selfe. As for other vines, their fruitfulness doth commend them; and namely aboute all, that which is called *Heluenaca*, whereof be two kinds, the greater, which some name *The long*; and the smaller called *Arca*: not so plentifull it is as the former, but surely the wine thereof goes downe the throat more merrily. It differs from the other in the perfect and exquisite roundnesse of the leafe, as it were drawn by compasse: but both the one and the other is very slender, and therefore of necessity they must be underpropped with forkes, for otherwise they will not beare their owne burden, so fruitfull they be. They delight greatly to grow neare the sea-side, where they may haue the vapors of the sea to breath vpon them: and indeed their very grapes haue a sent and smell of a brackish dew. There is not a vine can worse brooke Italy. Her grapes are small, they hang thin and rot euen vpon her: and the wine made thereof, will not last aboute one Summer: and yet on the other side there is not a vine that liketh better in an hungry and lean ground. *Gracinus* (who otherwise compiled his worke out of *Cornelius Celsus* in manner word for word) is of this opinion, That this Vine could loue Italy well enough, and that of the owne Nature it mislikes not the Countrey: but the cause why it thriueh no better there, is the want of skil and knowledge to order and husband it as it ought to be; for that men strue to overcharge it with wood, and load it with too many branches: and were it not that the goodnesse of a fat and rich soile maintained it still, beginning to faint and decay, the fruitfulness thereof were enough to kill it. This vine (by report) is never blasted: a singular gift verily of Nature, if it be true, That any plant or tree should be so exempt from the iurisdiction (as it were) of the Heauens, that they had no power to doe it harme. The Vine *Spionia*, which some call *Spinca*, feareth no extremities of heat: her grapes prosper well in Autumne and much abundance of rain: This is the only grape that is nourished with foggie mists, and therefore it likes no place well but the territorie of *Ravenna*. The vine *Venacula* (which is counted one of the best for kindly blooming & shedding the flowers, and for grapes most meet to be preserved and kept in pots) the *Campaines* rather name *Sirculus*; others *Stacula*: and they of *Tarracina* call it *Numisiana*: and as they say, the grape thereof hath no singularity nor vertue in it self, but only according to the soile where

A it groweth: howbeit those that grow about *Surrentum*, haue the most strength, and are excellent to be preserved in vessels; I mean, as far as vp to the hill *Vesuvius*: for there also is the vine *Murgentina*, the best of all those that come out of *Sicily*, which some call *Pompeiana*, of *Pompeii*, a town within the kingdome of *Naples*: & being got once into *Latium*, it beares grapes abundantly: like as the vine *Horconia* in *Campaine*, yeeldeth plenty of grapes with the best, but good they are for nothing saue onely to be eaten at the table. As for the grape *Marica*, it will last and indure a long time; it feareth neither winde nor tempest, nor any blast of planet: blacke it is, and hath black stones: howbeit the wine that it maketh, waxes red with age, namely, if it be long kept.

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CHAP. III.

¶ Of the diuers kinds likewise of Vines, according to the properties of the places and regions where they grow.

Hitherto we haue treated of the sundry sorts of vines in general: now wil we write of them according to the nature of the places and regions, which are proper and familiar vnto them; or, as they be mingled one with another, by transplanting or grafting. And first and formost, the vine *Tudernis*, also *Florentia* (bearing the name of the city *Florence*) are peculiar to the *Tuscans*: but about *Aretium*, there is no talke both for plenty and goodnesse, but of the *Talpana*, *Etesia*, and *Consennia*. The *Talpana* grape is blacke as the *Mouldwarpe*, whereof it taketh the name, but yet doth it yeeld a white wine. The *Etesia* vine (so called of the wines *Etesia*) is a deceitfull plant, and often misleth and faulteth; but the more grapes it beareth, the better wine it yeeldeth and more commendable: may this is strange and wonderful in it, In the mids of this fruitfulness of hers, she giueth ouer suddenly and dieth. The vine *Consennia*, bringeth blacke grapes: the wine will not last, but the grapes will keepe and continue passing long: the vintage thereof is fiftene daies after all other: it beareth ordinarily her full burden, but the fruit is onely good for meat to be eaten, and not for wine to be drunke. The leaues of this vine (in manner of the wilde vine *Labrusca*) before they fall, become as red as blood. This property happeneth to some others besides; but take it for a certaine token of the worst vines. The vine and grape *Irtiola*, is proper vnto *Vmbria*, to the territorie of the *Meuenates*, and the *Picene* countrey: like as that which they call *Pumula*, to the *Amiternine* region. They haue among them also another kinde, named *Bannanica*: and although it oftentimes doth not take, yet they loue the plant and cherish it. There is a grape which they call the *Borough* or *Burgois* grape, after the name of the burrough town *Pompeii*; and yet there is more plenty of them about the city *Clusium*: the *Tiburtins* also, named their grapes after their town *Tybur*: yet of late daies they haue found another sort, which of the resemblance of oliues, is called the *Oliue* grape: and in truth, this is the last grape of any account, to this day known to haue bin found out. The *Sabins* and *Laurentines* only are acquainted with the grape *Vinaciola*: for wel I wot, that the vines *Gauranæ* came first out of the territory of *Falerij*, and thereupon were named *Falernæ*: but transplant them from thence whithersoever you will, they wil very quickly degenerat in all places, and proue bastard. Moreover, some haue made a seuerall kind by it self of the *Tarentine* vine, which brings forth an exceeding sweet grape. As for the grapes called *Capnias*, *Bucconiatas*, & *Tarrupia*, there is no vintage of them in the vineyards of the hills about *Thurinum*, before the cold frost. As for the citizens of *Pisa*, they set great store by the grapes *Pharicæ*: like as *Modenna* by those called *Prusiniæ*, which are very black stone & al yet the wine thereof with 4 yeeres will turn to a paller and whitish colour. A strange thing it is which men report of a certaine grape, that euermore will turne with the Sunne: and thereupon it is called *Streptos*: as also that we in Italy are delighted with the French grapes: and they in France beyond the Alpes, are as much in loue with ours in the *Picene* countrey. *Virgil* hath made mention of other grapes, namely, *Thasie*, *Mareotides*, and *Lageræ*, besides many other outlandish plants, not at this day to be found throughout all Italy: howbeit there be yet many vines of good mark & wel accepted of, not for any wine that they yeeld, but only for their grapes which they carry to wir, *Ambrosiaca*, and *Duracina*, which may be kept hanging still vpon the vine, without any vessel to inclose them: so durable be they and hardy, against cold, heat, wind, and raine, or any weather whatsoeuer. As for the vine *Orthampelos*, it needs neither tree to climb on, nor

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forkes

forkes to support it, but is able to maintain and vphold it selfe vpright. But the Dasty lides (so called for that they beare not wood aboue a finger thicke) cannot so do: for they must be shored and vnderpropped. Of all vines, the Columbine yeeld most gleaning, for that the gatherers leaue behind them greatest store of small grapes: and so do the purple grapes, named also Bimammia (as one would say, with two teats or bigs) more than the rest; seeing that they beare not small grapes, but put forth new great ones indeed, after the other be gathered and gone. In like manner, the vine Tripedanea, which took that name of the measure of 3 foot. Semblably the vine Scirpula, the grapes whereof seem as if they were Raisins of the sun, dried already. Moreover in the maritime Alps toward the sea-side, there is a kind of Rhetian vine, but far inferior to that other aboue-mentioned and so much commended for the relish of pitch that it giueth to the wine made of her grapes: for these about the Alps be little and small, and albeit they beare grapes thicke, yet the wine thereof comes far short of the other, and is more degenerate: howbeit the skin of the grapes is of all other the thinnest, hauing but one kernel within, which they call Gigarton, and the same very small; and a man shall not find a bunch, without one or two passing great grapes aboue the rest: there is also a kind of black Aminean grape, which some name Syriaca: likewise the grape of Spain, which of the base and common kinds carries the greatest credit, and is most commended. As touching both vines and grapes that run and traile vpon frames; there be those which are called Efcaria, good only for to eat, and namely those which haue grains or stones like to Ivie berries, as well white as black. Grapes resembling great dugs, named therupon Bumasti, both black and white, are carried vpon frames in like sort. But all this while we haue not spoken of the Egyptian and Rhodian grapes, ne yet of the Ounce-grapes, whereof every one weighs a good ounce, and thereupon took that name. Item, the grape Pucina, the blackest of all others: the Stephanitis also, wherein Nature hath seemed to disport her selfe, for the leaues run among the grapes in manner of a garland plaited with them. Moreover, the market-grapes called Forenses, they grow and are ripe with the soonest; vendible at the very first sight, and sold with the best, and most easie to be carried from market to market. But contrariwise, the ash-coloured grape Cinerea, the silk-russet grape Ravuscula, the ashe-hued grape Afnisca, please not the eye, but are presently reiecte: and yet the Fox-tailed grape Alopecis, (for that it resembles Rainards taile) is not so displeasing nor so much discommended as the former. About a cape or crest of the hill Ida, which they call Phalacra, there is a vine named Alexandrina, small of growth, and puts forth branches of a cubit in length: the grapes be black, as big as beans; the pepin or kernell within, soft, tender, and exceeding small; the bunches are crooked, full of grapes, passing sweet; and finally the leaues little, round, and not cut or jagged at all. Within these seuen yeres last past, about Alba Eluia, a city in Languedock or the prouince of Narbon, there was found a vine, which in one day both floured and shed her floures: by which meanes most secured it was from all dangers of the weather. They call it Narbonica, or the vine of Languedock: and now it is commonly planted all that prouince ouer, and every man desireth to store his vineyard therewith.

CHAP. IIII.

¶ Notable considerations about the husbandrie and ordering of Vineyards.

That noble and worthy Cato, the first of that name, renowned among other dignities for his honorable triumph, and the incorrupt administration of his Censorship, and yet more famous and renowned to posterity for his singular knowledge and learning: and namely for the good precepts and ordinances tending to all vertues and commendable parts, which he left in memory for the people of Rome: & principally touching agriculture [as he was by the common voice and generall accord of that age wherein he liued reputed for an excellent husbandman, and one who in that profession had neither peere nor second that came neere vnto him.] This Cato (I say) hath in his workes made mention but of a few kinds of vines: and yet some of them already be growne out of knowledge, so as their verie names are quite forgotten. Yet neuertheless his opinion and judgement would be set downe in particular, as it may be gathered out of his whole treatise: to the end that we might both know in euery kind of vine which were of most account in his daies (to wit, in the 600 yere after the foundation of Rome, about the

A the time that Carthage and Corinth were forced and woon, when he departed this life:) and also learn how much we haue profited and proceeded in good husbandry and agriculture, from his death vnto this present day, namely for the space of 230 yeres. As concerning vines and grapes therefore, thus much hath Cato deliuered in writing, and in this manner following. All places or grounds (quoth he) exposed to the Sun-shine, and which in other regards shall be found good for to plant vineyards in, (yet they be employed for the lesse Aminean, for both the Eugeniai vines, and the smaller Heluine: Vine; In euery tract that is more grosse, thicke, and mistie, looke that you see the greater Aminean, or the Marigentine: the Apician also, and the Lucane Vine. All other vines, and the common mingled sort especially, will agree well enough with any ground. The right keeping of grapes, is in a small binne wine of the second running. The grapes Duracina, and the greater Amineans, are good to be hanged, or else dried before a blacke-smithes forge, and so they may be well preserved and good for Raisins of the Sun. Note what the precepts of Cato be; neither are there any of this argument more ancient, left vnto vs written in the Latine tongue. Whereby we may see, that we liue not long after the very first rudiments and beginnings of knowledge in these matters. [But by the way, the Amineans, last named, Varro calleth Scantians.] And in very truth, few there be euen in this our age, who haue left any rules in forme of Art, as touching the absolute skill in this behalfe. Yet such as they be, and how few foeuer, we must not leaue them behinde, but so much the rather take them with vs; to the end it may be knowne, what reward & profit they met with, who travelled in this point of husbandry: reward, I say, and profit, which in euery thing is all in all.

C To begin therefore with Acilius Sthenelus [or Stelenus,] (a mean commoner of Rome, descended from the race of Libertines or Slaues newly enfranchised) he attained to the highest glory and greatest name of all others: for hauing in the whole world not aboue 60 acres of land lying all in vineyards within the territory of Nomentum, he plaied the good husband and so well therein, that he sold them again at the price of 400000 Sesterces. There went a great bruit and fame likewise of one Veruleus Aegialus, in his time a man but of base condition by birth, and no better than the former, (namely, come of the stocke of freed-men) who by his labor & husbandry, greatly enriched a domain or siting at Liternum in Campaine: and the more renowned he was by occasion of the fauour of so many men affectionate vnto Africanus, whose very place of exile he held in his hands and occupied so well: for vnto Scipio, the aboue-said Liternum, appertained. But the greatest voice and speech of men was of Rheimnius Palamon (who otherwise by profession was a famous and renowned Grammarian) for that he by the means and helpe of the foresaid Sthenelus, bought a ferme within these twenty yeres for 600000 Sesterces in the same territorie of Nomentum, about ten miles distant from Rome, lying somewhat out of the high way. Now is it well knowne farre and neare, of what price and account all such fermes are, and how cheape such ware is lying so neere to the city side: but amongst the rest, this of Palamons in that place was esteemed most cheap and lowest prised, in this regard especially, That he had purchased those lands, which through the carelesnesse & bad husbandry of the former owners, lay neglected and fore-let, & were not of themselves thought to be of the best soile, chosen and piked from among the worst. But being entred once vpon those grounds as his owne iucode and possession, he set in hand to husband and manure them, not so much of any good mind and affection that he had to improve and better any thing that he held, but vpon a vaine glory of his own at the first, whereunto he was wonderously giuen: for he makes fallows of his vine-plots anew, and delueth them all ouer again, as he had seen Sthenelus to do with his before: but what with digging, stirring, and medling therewith, following the good example and husbandry of Sthenelus, hee brought his vineyards to so good a passe within one eight yeres, that the fruit of one yeres vintage was held at 400000 Sesterces, and yeelded so much rent to the lord: a wonderfull and miraculous thing, that a ground should be so much improved, in so small a time! And in very truth, it was strange to see what numbers of people would run thither, onely to see the huge and mighty heaps of grapes gathered in those vineyards of his: and all idle neighbors about him, whose grounds yeelded no such increase, attributed all to his deepe learning, and that he went to it by his book, & had some hidden speculation aboue other men; objecting against him, that he practised Art Magicke, and the blacke Science. But last of all, Annas Seneca, esteemed in those daies a singular clerke, and a mighty great man (whose ouermuch Learning and exceeding power cost him his ouerthrowing in the end) one who had good skill and

judgement in the world, and vsed least of all others to esteeme toies and vanities, brought this ferm into a greater name and credit: for so far in loue was he of this possession, that hee bought out *Palamon*, and was not ashamed to let him go away with the pricke and praise for good husbandry, and to remoue him into other parts where he might shew the like cunning: and in one word, paid for these foresaid vineyards of his fourfold as much as they cost, not about ten yeres before this good husbandry was bestowed vpon them. Certes, great pity it is, that the like industry was not shewed and imploied in the territories about the hills *Cecubus*, & *Setinus*, where (no doubt) it would haue well quit all the cost, considering that many a time afterwards, euery acre of vineyard there, yeelded seuen Culei, that is to say, 140 Amphores of new wine one yere with another. But lest any man should thinke, that wee in these daies haue surpassed our ancestors in diligence, as touching good husbandrie; know he, that the aboue named *Cato* hath left in writing, How of an acre of vineyard there hath arisen ordinarily * ten Culei of wine by the yere. Certainly these be effectual examples and pregnant proofes, that the hardy and aduenturous voiajes by sea, are not more aduantageous; ne yet the commodities and merchandise, and namely Pearls, which be fet as far as the red sea and the Indian Ocean, are more gainefull to the merchant, than a good ferm and homestead in the countrey, well tilled and carefully husbanded.

As touching the wines in old time, *Homer* writes, that the Maronean wine made of the grapes growing vpon the sea coasts of Africk, was the best, & most excellent in his daies. But my meaning is not to ground vpon fabulous tales & variable reports, as touching the excellency or antiquitie of wine. True it is, that *Aristeus* was the first, who in that very nation mingled honey with wine, which must needs be a passing sweet and pleasant liquor, made of two natures so singular as they be of themselves. And yet to come againe to the foresaid Maronean wine, the same *Homer* saith, That to one part thereof, there would be but 20 parts of water: and euen at this day, that kind of wine continues in the said land of the same force, and the strength thereof will not be conquered nor allaid. For *Mutianus* who had bin thrice consul of Rome, & one of those that latest wrote of this matter, found by experience (being himselfe personally in that tract) that euery sextar or quart of that wine, would beare 8 of water: who reports moreouer, that the wine is of colour blacke, of a fragrant sweet smell, and by age comes to be fat and vnctious. Moreouer, the Pramian wine (which the same *Homer* hath so highly commended) continueth yet in credit and holds the name still: it comes from a vineyard in the countrey about *Smyrna*, neere to the temple of *Cybele* the mother of the gods. As for other wines, no one kind apart excelled other.

One yere therewas, when all wines proued passing good; to wit, when *L. Opimus* was Consul, at what time as *C. Gracchus* a Tribune of the Commons (praefising to sow sedition within the city among the common people) was slaine: for then such seasonable weather happened, and so favorable for ill fruit, that they called it (*Coctura*) as a man would say, the ripening time; so beneficiall was the Sun to the earth: and this fell out in the yere after the natiuity and foundation of the city of Rome, 634.

Moreouer, there be some wines so durable, that they haue beene knowne to last two hundred yeaes; and are come now by this time to the qualitie and consistence of a rough, sharpe, and austere kind of hony: and this is the nature of all when they bee old: neither are they potable alone by themselves, vnlesse the water be predominant; so tart they are of the lees, and so musty withall, that they are bitter againe. Howbeit a certaine mixture there is of them in a very small quantity with other wines, that giues a pretie commendable tast vnto them. Suppose now that according to the price of wine in those daies of *Opimus*, euery Amphore were fet but at an hundred Sesterces, yet after the vsurie of six in the hundred yearly (which is the ordinary proportion and a reasonable interest among citizens, for the principall that lieth dead and dormant in stock) by the hundred and sixtieth yere after the said Amphor was bought (which fell out in the time that *C. Caligula Caesar* the son of *Germanicus* was Emperor) no maruell if an ounce in measure of the same wine (to wit, the twelfth part of a Sextarius) cost * so many Sesterces: for as we haue shewed by a notable example, when we did set downe the life of *Pomponius Secundus* the Poet, and the feast that he made to the sayd Prince *Caligula*, there was not a * Cythus of that wine drawne, but so much was paid for it. Loe what a deale of money lieth in these wine-cellar, for keeping of wine! And in very truth, there is nothing more gainfull nor groweth to a better

A better reckoning than it, for twenty yeres space after it is laid vp: neither is there greater losse againe by any thing, if ye passe that terme, by reason that the price will not grow and arise accordingly: for seldom hath it bin knowne to this day (and neuer but at some excessiue riot and superfluous expence of wine) that an Amphore hath beene sold for a thousand Sesterces. True it is indeed, that they of Vienna only haue made better reckoning of their wines, and sold them deerer; I meane those that giue a taste of pitch (the feuerall kinds whereof wee haue deliuered before;) but they are thought so to do among themselves only, and for the loue of their countrey, that it might haue the names of wines, so deerer and costly. To conclude, this wine of Vienna, is reputed colder than the rest; when the question is of cold drinke, and that the body is to be cooled.

CHAP. V.

¶ Of the Nature of Wine.

THE nature and property of wine, is to heat the bowels within, if it be drunke; and to coole the exterior parts, if it be applied outwardly. And here it shall not be amisse to rehearse in this very place, that which *Androcydes* (the noble, sage, and wise Philosopher) wrote vnto *K. Alexander* the Great, for to correct and reforme his intemperate drinking of wine, whereto he was very prone and ouermuch giuen. My good Lord (saith he) remember when you take your wine, that you drinke the very blood of the earth: Hemlock (you know sir) is poison to man, euen so is wine to Hemlock. Now if that Prince had bin so wise as to haue obeyed these precepts of his, certes, he could neuer haue killed his best friends as he did, in his fits of drunkennesse. In sum, this may be truly said of wine, that being taken soberly and in measure, nothing is more profitable to the strength of the body; but contrariwise, there is not a thing more dangerous and pernicious, than the immoderate drinking thereof.

CHAP. VI.

¶ Of kindly Wines made of the best Grapes.

WHo doubteth, that some Wines be made more pleasant and acceptable than others? nay out of the very same vat ye shall haue wines not alike in goodnesse, but that some go before their brethren, pressed though they be at one time, and from the same kinde of grape: which may be long either of the vessell whereinto they be filled, or of some accidental occasion: and therefore as touching the excellency of wine, let euery man be his own taster and judge. The Emperesse *Julia Augusta* would commonly say, That she was beholden to the Pucine wine for liuing as she did 82 yeaes: for the neuer vsed to drink any other. This wine came of the grape that grew along the Adriaticke sea, or Venice gulfe, vpon a stony and raggy hill, not far from the source or spring of the riuer *Timavus*, nourished with the vapors breathed from the sea; and many Amphores there were not drawne thereof at a vintage: and by the iudgement of all men, there is not a wine more medicinable than it is. I would thinke verily therefore, that the wine *Pyctanon* (which the Greekes so highly praise) is the very same; for it cometh from the coasts of the Adriaticke sea. The Emperor *Augustus Caesar* preferred the *Setine* wine before all others: and after him in manner, all the Emperors his successors, for the ordinary experience they found thereby, That lightly the liquor of that wine would not hinder digestion nor breed raw humors in the stomach: and this wine cometh of the grape about the towne *Forum Appij*. Before that time, the wine *Cæcubum* was in best account; and the vines which yeelded it, grew to the Poplars in the marsh grounds within the tract of *Amyclæ*. But now is that Wine cleane gone, as well through the negligence of the peasants of that countrey, as the streights of the place: and so much the rather, by reason of the ditch or trench which *Nero* caused to be made nauigable, beginning at the lake or gulfe *Baïanus*, and reaching as far as to *Ostia*. In the second degree of excellency, are ranged the wines of the *Falerne* territorie, and principally that which came from the vineyards *Fauſtian*: and this excellency it grew vnto, by passing good order and careful husbandry. Howbeit this wine also in these daies beginneth to grow out of name and request, whiles men loue rather to haue plenty from their vines, than otherwise lay for the goodnesse thereof. Now these *Falerne* vineyards, begin at the Campanie bridge on the left hand as men go to the city colony erected by *Sylla*, and lately laid to *Capua*, & vnder the iurisdiction thereof.

* 15 according to Ful. Præstant.

* Bud. 22. Scit.

* Jan ounce and a halfe.

therof. But the Fauſtian vineyards lie about 4 miles from a village neere Cedia, which village is from Sinueſſa ſix miles diſtant. And to ſay a truth, this Fauſtian wine is inferiour to none in reputation: ſo piercing and quicke it is, that it will burne of a light flame; a propertie that you ſhall not ſee in any other wine. Three forts there be of theſe Falerne wines: the firſt be hard and harſh; the ſecond ſweet and pleaſant; the third, thin and ſmall. But ſome haue diſtinguiſhed them in this wiſe: thoſe that come from the top of the hills, be called Gaurane wines; from the mids, Fauſtian; and laſt of all from the bottom and foot thereof, the Falerne. But by the way this would not be forgotten, That the grapes whereof be made theſe wines of excellent excellēt, are nothing pleaſant to the taſt for to be eaten. As touching the Albane wines from about Alba neere the city of Rome, they reach to the third ranke in goodneſſe, for a certain varietie they haue in their taſt: ſweetiſh they be, and yet otherwhiles they haue an vnripe & harſh relliſh of the wood, & taſt like the hedge-wine. In like maner the wines of Surrentum, & namely thoſe of grapes growing only in vineyards, are excellent good for weak perſons that be newly recouered of ſickneſſe; ſo ſmall they are, and wholeſome withal. And in truth, *Tyberius Caſar* was wont to ſay, That the Phyſitians had laid their heads together, and agreed to giue the Surrentine wine ſo great a name; for otherwiſe it was no better than a very mild and pleaſant vine-gér, and *C. Caligula* (his ſucceſſor in the Empire) vſed to ſay of it, That for a wine that had loſt the heart and was a going, it was very good. The Maſſike wines, which come from the Gaurane hills looking toward Puteoli and Bajæ, come nothing behind the reſt, but ſtrive to match them euery way. For as touching the Statane vineyards, that confine and border vpon the Falerne, their wines doubtleſſe are now come to be the principall and chiefe of all the reſt: whereby it is evidently ſeen, that euery territory and vine-plot hath their times and ſeaſons, like as all other things in the world, one while riſe and another while fall. For in times paſt the Calene wines made of the grapes growing hard by Rome, were wont to go before all others: as alſo the Fungane vines had their time, as well thoſe that are planted in vineyards, as they which runne vpon trees: like as thoſe of the other ſide, neere alſo to the city of Rome, & namely from Veliternum and Priuernum. For as touching the wine of Signia, it is held for a medicine only; and by reaſon of an aſtringent verdure that it hath, it is excellent good to ſtay the flux of the belly. In the fourth place of this race of vines, *Julius Caſar* (late Emperor of famous memory) hath raunged, (for to ſerue the publick and ſolemne feaſts of the city) the Mamertine wines, from about Meſſana in Sicily: for he was the firſt (as appears by his letters miſſiue) that gaue credit and authority vnto them. And of thoſe, the Potulane wines (ſo called of them who firſt planted the vines whereof they came) are moſt commended, and namely thoſe that are vpon the next coaſt of Italy. Within the ſame Sicily, the Taurominitane vines are highly eſteemed, inſomuch, as many times they go for Meſſana wine, and are ſo ſold by whole potles. Now for all other wines from about the coaſt of the Tuſcane ſea Northward, good reckoning is made of the Prætutian and ſuch as come from Ancone: alſo of the Palmefian wines, which haply tooke that name, for that the firſt plant of that vine came from a palme or Date tree. But in the midland parts of Italie within the firme land, good regard there is of the Ceſenatian and Mecænian wines. Within the territory of Verona, the Rhetian wine carrieth the price: which *Virgil* ranged next after the Falerne wines. Anon you come to the wines Adriane, and thoſe that grow far within the tract of the Venice gulfe. Now from the nether ſea about Lions, ye haue the Latinienſian, the Grauiſcane, and the Statonian wines. Throughout all Tuſcane, the wines about Luna beare the name: like as thoſe of Genes, for Liguria. Betweene the Pyrenean hills and the Alpes, Maſſiles hath the commendation for wines of a double taſt: for the vines there, do yeeld a certain thick and groſſe wine, which they call Succoſum, [i. full of iuice and liquor] good to ſeaſon other wines, and to giue them a prety taſt. When ye are paſſed once into France or Gaule, the wine of Beterre is in chiefe requeſt. As for the reſt within Languedoc and the Prouince of Narbon, I am not able to auouch any thing for certainty, ſuch a brewing and ſophiſtication of them they make, what with ſuming, perfuming, and colouring them: and would God they put not in ſome herbes and drugs among, that be not good for mans body. For certaine it is that they commonly buy Aloe to giue the wine both another taſt and alſo a counterfeit color. Moreover in the farther and more remote coaſts of Italy toward the Auſonian ſea, there be wines which are not without their praiſe and commendation, and namely thoſe of Tarentum, Seruitium, and Conſentia: likewiſe of Tempſa, Bauia, and Lucania: howbeit the Thurine wine goeth before

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A for them all. As for the wines of Lagaria, which be made of the grapes not farre from Grimenitum, there goes a right great name of them, by reaſon that *Meſſala* vſed ordinarily to drinke thereof, and thereby was ſuppoſed to preferue his health ſo well. Of late daies there be certain wines in Campaine growne into credit (like as they haue gotten new names) by good ordering and husbandrie, or by chance, I know not whether; namely, thoſe of Tribellia, foure miles from Naples, of Caulium neare to Capua: and laſt of all, the Trebulaine wines within their own territory: for before time they were euer counted no better than common wines for euery man to drinke, no more than the Trifolines, from whence they vaunt of their deſcent. As for the wine of Pompeij, a towne in the kingdome of Naples, neither it nor the vine whereof it commeth, will laſt about ten yerres at the moſt: after which tearme, the elder they both be, the worſe they are. Beſides, they are found by experience to cauſe the head-ach, inſomuch, as if a man drinke thereof ouer-night, he ſhall be ſure not to haue his head in good time vntill noone the morrow after. By which examples aboue rehearſed, it is plaine in my conceit, that the goodneſſe of the wine ſtandeth much vpon the ſoile and the climate, and not in the grape: ſo as a needleſſe and endleſſe matter it is to reduce all kind of wines to a certaine number, conſidering that one and the ſelfe ſame Vine planted in diuerſe places, hath ſundrie operations, and maketh varietie of wines. Now as concerning the wines of Spaine, the Lakatane vineyards are much ſpoken of for the plenty and abundance of wine that they yeeld: but thoſe of Tarracon, Arragon, and Laurone, are much praiſed and renowned for the fine and neat wines which they make. As for the wines that come out of the Iſlands, and namely, the Balears, they are comparable to the very beſt in Italie.

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I am not ignorant, that moſt men who ſhall read this Treatiſe, will thinke that I haue omitted and ouerpaſſed many wines: for euery man likes his own, and as ones fancie leadeth, ſo goes the voice and the cry, and there runs the Hare away. It is reported, that one of *Augustus Caſars* freed men (reputed for the fineſt taſter that he had about his court, and who knew beſt what would content his palat, and pleaſe his tooth) vpon a time when he taſted the wine that was for the Emperors board, at what time as he made a feaſt, ſaid to one of the gueſts at the table, That the ſaid new wine indeed had a new and ſtrange taſt, and was none of the beſt, and thoſe that were innathe, howbeit (quoth he) this is for the Emperors cup, and willingly will he drinke of no other, notwithstanding it be but a homely wine made hereby in the country, and not far ſerched. And now for a ſmall concluſion of this matter, I cannot denie but that there be other wines which deſerue to be numbred among thoſe that are right good and commendable; howbeit, ſuffice it ſhall to haue written of theſe, which by the common opinion and conſent of the world are held for the better.

CHAP. VII.

Of Wines beyond ſea.

IT remaineth now to ſpeake of outlandiſh Wines beyond the ſea. Firſt and formoſt therefore next to thoſe wines renowned by the Poet *Homer*, and whereof we haue written before, beſt eſteemed alwaies were the wines of the Iſlands Thafos and Chios: and namely that of Chios which they call Aruium or Aruiſium. *Eraſſtratus* the moſt famous Phyſician of his time, matched with theſe the Lesbian wine; and his authoritie gaue credite vnto it: and this was much about the ſix hundred yeare after the foundation of Rome. But in theſe daies there is now iſe to that of Clazomene, euer ſince that they began to put therto leſſe ſea-water for to ſeaſon it, than their cuſtome was. As for the wine of Lesbos, it hath a ſent and relliſh of the ſalt water naturally of it ſelfe. Neither is the wine that comes from the hil Tmolus in any regard, as a wine to be drunke alone, but it ſerues as a ſweet cuit to mingle with other wines that be hard: for thereby their Greene verdure will ſeeme more mild and pleaſant, yea, and withall to haue their ripe age: for no ſooner is it tempered therewith, but they taſt preſently elder than they be. Next to theſe in goodnes, follow in their courſe the wines of Sycione, Cypres, Telmeſſus, Tripolis, Berytus, Tyrus, and Sebennys. As for this wine laſt rehearſed, it is made in Egypt, a country much renowned for three kinds of grapes there, to wit, Thafia, Ethalos, and Peuce. Next in price & account be theſe following, the Hippodomantian, the Myſtick, Cantharite, & the Gnidian wine of the firſt running and vnpreſſed, alſo that of Caraccaumene, a region ſo called, for that it ſeemeth

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meith all burnt; of Petra, and Mycones. As for the wine Mefogarus, it is knowe to make head-ach: neither is the wine of Ephesus wholesome and healthfull, because it is sophisticated with a kind of cuithall fadden, called Desfrutum, and sea-water. As for the wine of Apamea, by report it comes very neare to a kind of Mede, and will very well agree withall, like as Pratutium in Italy. For otherwise, this is the property in generall of all sweet wines, that they will not well fort together, & be good still. Touching the wine Protagium, it is now grown out of remembrance: and yet the Physicians of Asclepiades his sect and schoole, gaue praise vnto it next the Italian wines. The learned Physician Apollodorus, in his treatise that he compiled of good wines, which he recommended vnto King Ptolemaeus for to drinke, as meet for the health of his person, (for default of Italian wines then vnknew) highly praised the wines in Pontus, & principally that which is called Naspercenites next to it the Oræotik; the Oeneates, that of Leucadia, of Ambracia; and (which he prefereth aboue all the rest) the wine of Peparethus: and yet he said, that there went the lesse name and opinion of it, because after sixe yeares it loseth the strength and pleasant tast that it had.

CHAP. VIII.

¶ Seven kinds of salt wine.

Thus far forth haue we discoursed of the very floure of good wines, according to the regions where naturally they come of the grape. Now are we to treat of wines compounded. And first, among such wines is that, which they call Biazon (an inuention of the Greeks) which aboue all others is most esteemed, and great reason, for deuised it was for the cure of many maladies, as we shall shew hereafter in our treatise of Physick. The making wherof is in this manner: Take grapes gathered somewhat before they be ripe: let them lie to drie and parch in the hot Sunne for three daies, and be turned duly thrice a day: vpon the fourth day presse them forth for wine, put the liquor vp in barrels, and so let it worke in the Sun. Howbeit, hereto they put a good quantity of salt sea-water. But this deuise was learn'd first of a false theeuish knaue who hauing robbed his maister and drunk vp a good deale of his wine, filled vp the vessel again and made just measure with sea-water. Whiter wine if it be ordered in this sort, is called Leucochrum by the Greeks: but in other nations, the like wine so made is named Tethalassomenon. As for Thalassites, it is a kind of wine so called, for that the vessels, when the wine is new tunned, be cast into the sea, and there let to remaine for a time, by which means the wine will soon seeme old and readie to be drunke. Furthermore, we also here among vs hath shewed the way how to make the Greekeish Wine Coum, of our owne Italian Wine: but aboue all he hath set down an expresse rule, to let it first take the maturitie and perfection 4 yeres in the Sun. As for the wine of Rhodes, it is much like to that of Coos, But the Phorinean wine is more salt than the wine of the Isle Coos. Finally, all transmarine or beyond-sea wines are thought in seuen or six yeares at the least, to come vnto their middle age.

CHAP. IX.

¶ Fourteen sorts of sweet wines.

Alwaies the sweeter that they be in tast, the lesse fragrant & odoriferous they be: the thinner and smaller that they be, the more euer they smell to the nose. Of wines there be four principall colours, white, yellow, red, and blacke. As for Psythium and Melampsythium, they be certaine kinds of quins, hauing a generall tast apart by themselves, not resembling wine indeed. And for Cicibelites made in Galatia, it tastes alwaies like new wine: so doth Halantium in Sicily. For as touching Syraem, which some call Hepsema, & we in Latine Sapa, [i. Cuit] it is a meer artificiall thing, the deuise of mans wit, and no worke of Nature: namely, when new wine is foddren away a third part: for when it boiles to the halfe, we then call it Desfrutum. And in very deed, all these be inuentions to sophisticate and counterfeit honie. But those before named retain the naturall tast of the grape and the soyle whereof they doe consist. Next to these cuit-wines of Candie, those of Cilicia, Affrick, Italy, and the prouinces confronting therupon, are held for the best. Certain, it is, That they be made of one grape, which the Greekes call Strica, and we Apiana, [i. the Muscadell] and of another named Scirpula: the which haue been suffered

fered a long time to hang in the Sunne vpon the Vine vntill they be scorched and parched: or else ouer the vapor of scalding oile. Some there be that make them of any sweet grapes whatsoeuer, so that they be let to concoct before in the Sun, vntill they be white and drie, so farre forth, as little lesse than half of their weight be consumed: which done, they stamp them and so gently presse them. Then looke how much liquor they haue pressed forth, so much pit water they put to the cake that is pressed; that thereof they may haue a cuit of a second running. But they that be more curious & take vpon them to make a daintier cuit, dry the grapes in maner aforesaid; but they take forth the stones and graines within: they strip them also from the steeles and railes that they hung by, and so after they be well drenched and infused in some excellent wine vntill they be swelled and plumpe, they presse them. And certainly this fashion is simply the best of all others. Put to the cake thereof, water as before, and after the same manner yee shall haue a cuit of a second sort. Now there is a kind of wine which the Greeks call Aigleuces, that is to say, alwaies sweet like new wine, of a middle nature between the common simple wine and the sweet: and this commeth not vnto it by kind, but by heed taken in the boiling; for it is not suffered to seeth and work: and this is the term, whereby is signified the alteration of new Must into wine. To hinder therefore that it work not, (as naturally it will) they haue no sooner tunned or filled it out of the Vat, but immediatly they dousse the vessels full of new Must in the water, and let them there continue till mid-December be past, and that the weather be settled to frost and cold, and likewise the time expired of the working within the said vessels. Moreouer, there is another kind of wine naturally sweet, which in Prouance and Langue doc is called Dulce [i. sweet] & namely, in the territorie of the Vocontians. For this purpose they let the grapes hang a long while vpon the Vine, but first they wryth the Steele that the bunch hangs to. Some make incision into the very Vine branch, as far as to the pith and marrow within (to diuert the moisture that feeds the grape); others lay the clusters a drying vpon tile-houses: and all this is done with the grapes of the Vine Heluenaca. There be that range in a ranke of these sweet wines, that which they call Diacyton. For which effect, they drie the grapes against the Sun (howbeit in a place well enclosed) for 7 daies together, vpon hardles, 7 foot likewise from the ground: in the night season they saue them from all dewes, and so on the eighth day they tread them in the wine presse: and thus they draw forth a wine of an excellent sauer and tast both. A kind of these sweet wines, is that which they name Melitites, [in manner of a Brager, Meade, or Metheglin.] Howbeit, different it is from the mead or honied wine which the Latines call Mulsium, made of old wine that is hard, and a little honie: whereas the foresaid Melitites consists of 5 gallons of new tart wine still in the verdure, whereto is added one gallon of honie, and a * cyath of salt, and so boiled all together. But I must not forget to place among these sundry kinds of drinke, the liquor Protropum, for so some call new wine running it self from the grapes, before they be troden and pressed. But to haue this good, and so to serue the turne, so soon as it is put vp into proper vessels for the purpose, it must be suffered to work: and afterwards to reboile and work againe for fortie daies space the Summer following, euen from the very beginning of the dog daies, and so forwards

CHAP. X.

¶ Of weak and second Wines, three kinds.

The second wines, which the Greeks call Deuteria, Cato and we Romans name Lora) cannot properly and truly be called Wines, being made of the skins and seeds of grapes steeped in water: howbeit, reckoned they are among course household wines for the hines and meinie to drinke. And three kinds there be of them. For sometime to the tenth part of the new wine that hath bene pressed out, they put the like quantity of water, and suffer the foresaid residue of the grapes to soke therein a day and a night: which done, they presse it forth againe. A second sort there is, which the Greeks were wont to make in this manner: They take a third part of water in proportion of the wine that was pressed forth, and after a second pressing, they seeth it to the waisting of the third part. The third is that which is pressed out of the wine lees, and this Cato calls Phœcatum, [i. Vine of lees.] But none of these wines or drinks will endure aboue one yeare.

CHAP.

CHAP. XI.

¶ *What neat wines began of late to be in request in Italie.*

IN this treatise of wines I cannot omit this obseruation: That whereas all the good wines properly so called and known in the whole world, may be reduced in four score kinds or thereabouts, two parts of three in this number, may well be counted wines of Italie: which in this regard farre surpasseth all other nations. And hereupon ariseth another thing more deeply to be noted, That these good wines were not so ripe nor in such credit from the beginning, as now they be.

CHAP. XII.

¶ *Observations touching wine.*

TO say a truth, Wines began to grow in reputation at Rome, about fixe hundred yeares after the foundation thereof, and not before. For king *Romulus* vsed milk when he sacrificed to the gods, and not wine: as may appear by the cerimonial constitutions by him ordained, as touching religion; which euen at this day be in force, and are obserued. And king *Numa* his successor made this law *Posthumia* in his later daies, *Let no man besprinkle the funerall fire with wine.* Which edict no man doubteth, but he published and enacted in regard of the great want and scarcitie of wine in those daies. Also by the same Act he expressly did prohibite to offer in sacrifice to the gods, any wine comming of a Vine-plant that had not bene cut and pruned: intending by this deuise and pretence of religion, to enforce men to prune their Vines, who otherwise would set their minds on husbandrie only and plowing ground for corne, and be slow enough in hazarding themselves for to climbe trees, whereunto Vines were planted. *M. Varro* writeth, That *Alcegius* the king of Tuscane aided the *Rutilians* of Ardea in their warres against the Latines, for no other hire and wage but the wine and the vines which then were in the territorie of Latium.

CHAP. XIII.

¶ *Of the ancient vsage of wine: and the wines in old time.*

IN ancient time, women at Rome were not permitted to drink any wine. We read moreover in the Chronicles, That *Egnatius Maccennius* killed his owne wife with a cudgell, for that hee tooke her drinking wine out of a tun; and yet he was cleared by *Romulus*, and acquit of the murder. *Fabius Pictor* in his *Annales* reports, That a certaine Romane dame, a woman of good worship, was by her owne kinsfolke famished and pined to death, for opening a cupbord, wherein the keis of the wine-sellar lay. And *Cato* doth record, that hereupon arose the manner and custome, That kinsfolke should kisse women when they met them, to know by their breath whether they smelled of Temetum: for so they vsed in those daies to tearme Wine: and thereof drunkenesse was called in Latine Temulentia. *Cn. Domitius* (a iudge in Rome) in the like case pronounced sentence judicially against a woman defendant, in this forme, *That it seemed she had drunke more wine without her husbands knowledge, than was needfull for the preservation of her health,* and therefore afterward definitiue, *That she should lose the benefit of her dowrie.* Certes, the Romanes for a long time made great spare of wine. *L. Papyrius* lord Generall of the Romane armie, when he was at the point to joyne battell with the Samnites, made no other vow, but this, *That he would offer vnto Iupiter a little cup or goblet of wine, in case he atchieued the victorie and wooon the field.*ouer and besides, we find in histories, that among donatiues and presents, certaine sextars or quarts of milke haue bene many times giuen, but neuer any of wine. The same *Cato* abouenamed, after his voiage into Spain (from whence he returned with a notable victorie, and in a triumphant manner) in a solemne speech that hee made vnto the people, protested in these words and said, *No other wine I haue drunke since I went, than the very mariners haue.* How farre vnlike was he to men in these daies, who sitting at the table, haue their cup of strong wine by themselves, and giue vnto their guests, for the most part, other small wines to drinke: or if they suffer them to drinke all one and of the best at the beginning of the feast, they will

A will be sure to change and to serue them with worse soon after. In old time, the best wines vsed at feasts were aromatised and spiced with sweet Myrrh, as appears in the Comedie of *Plautus*, entituled *Perfa*. And yet it should seeme there, that sweet Calamus was to be added besides. And hereupon it commeth, that some haue thought, how our forefathers in times past tooke most delight in such spiced cups and Ippocras wines. But *Fabius Dorsetus* the Poet sufficiently declareth and decideth this point in these verses, when he saith,

Mittebam vinum pulchrum, Murrhinum.

I sent neat wine,
Which hight Myrrhine.

B And againe in his Comedie *Acharistio*:

Panem & Polentam, vinum Murrhinam.

Both bread and grewell I did present,
And Myrrhine wine of pleasant sent.

I see moreover, that *Scavola*, *Lalius*, and *Atteius Capito* were of the same mind. For in the Comedie of *Plautus* entituled *Pseudolus*, thus it is written:

*Quod si opus est ut dulce promat
Indidem, ecquid habet? (Char.) Rogas?
Murrhinam, passum, Defrutum, mella.*

Of dulcet wine if there be need,
What hope is there from thence to speed?
Char. Why aske you that? he furnish'd is
With Murrhin, Cuits, and Meade ywis.

By which a man may see evidently, that Murrhina was not onely counted a wine, but reckoned also among the sweet and delicate wines.

CHAP. XIII.

¶ *Of wine store-houses: and of Opimian wine.*

That there were wine sellars at Rome, and that they vsed there to tun vp Wine in the 633 yeare after the foundation thereof, appeareth plaine by a good prooffe of the Opimian wine: and euen in those daies Italy knew her owne good, and what it was to maintaine vineyards. Howbeit, as yet were not those wines in credit, which now are so ripe and in so great account. And therefore it is, that all the wines of that time bear the only name of that one Consul, and be called Opimian. And thus afterwards also in proceffe of time, the wines that came from beyond the seas for a long space, were in much request, euen vntil our grandfathers daies: yea, and after that, the Falern wines were in name and called for, as may appear by that Verse of the Comical Poet;

Quinque Thasi vini inde depromam, Falerni bina.

To measures fise of Thasian wine,
I will draw twain of Falerne fise.

In the 675 yeare after the foundation of Rome, *Pub. Licinius Crassus*, and *L. Iulius Caesar*, Censors for the time being, published an Edict, and proclaimed, *That no man should sell any Greek wine, or Aminean, but after eight Asles the Amphor or Quadrantum.* For these be the verie expresse words of the said Edict. Now was Greeke Wine of so great price and estimation, that a man was but allowed one draught thereof at a meale, were the cheare neuer so great, and the feast right sumptuous. But what wines were in request ordinarily at the board, *M. Varro* doth shew in these words: *L. Lucullus* (quoth hee) while he was a boy, neuer saw at his fathers bord

Greeke

Greekewine serued vp but once at a meale, how good foeuer the fare was otherwise. Howbeit, G himselfe when he returned out of Asia, in a congiarie or largesse that he gaue vnto the people, made a dole and distribution of more than an hundred thousand measures of gallons apiece. C. *Sentius*, whom of late daies we saw Pretor of Rome, testified, that he neuer saw any wine of Chios brought into his house, before the Physition prescribed and set it down for the *Cardiaca passio*, or the trembling of the heart, whereto he was subiect. But contrariwise *Hortensius* when hee died left about ten thousand barrels full of that Wine vnto his heire. And thus much out of *M. Varro*.

CHAP. XV.

¶ Of *Cæsars* bountie and liberalitie in Wine.

B Vt what should we say of *C. Iulius Cæsar* Dictator? In that solemne feast of his which hee made at his triumph, did not he distribute among his guests Falerne wines by whole barrels, and Greek wine of Chios by the rundlets? After his returne out of Spain with victorie and triumph, he likewise gaue away a largesse of wine as well Chian as Falern. But at the royall dinner which he made when he entred vpon his third Consulship, he caused all the Hall to be serued thorowout with Falern, Chian, Lesbian, and Mamertine wines: which was the first time that euer any man saw the seruice of 4 feuerall wines at one feast. Now in farther proces of time, and namely about 700 yeares after Rome cities foundation, all other Wines began to beare a name and come in request.

CHAP. XVI.

¶ Of Artificiall or made Wines.

C Onsidering all that hath bin written, I nothing maruel at such an infinite number of compound and artificiall wines deuised in old time, all for the vse of Physick, wherof we will now treat in more ample maner. To begin therefore with wine-Verjuice, called *Omphacium*, how it should be made, for perfumes and odoriferous ointments, we haue shewed in the former booke. As for the wine named *Oenanthinum*, it is made of *Labrusca*, that is to say, the wild Vine, in this wise: Take two pound of the floures of the wild vine aforesaid, let the same be steeped in a measure of new wine containing about 12 * gallons, for the space of 30 dayes, and then be changed out of that vessell into another. Moreover, the root and grapes of the sayd wild Vine are good for curriers to dresse their leather. The same grapes a little after they haue done blooming are taken to be a singular remedie for to coole those that be troubled with hot and ardent diseases, for naturally they be, as men thinke, exceeding cold: and indeed many of these grapes die in the hot time of Summer before the rest which are called *Solstitiales*: but all of them neuer come to full and perfect ripenesse. Now if you would keep *Pullein* from pecking grapes, take these of the wild Vine before they be throughly ripe, mingle and seeth them with their meat: for this will take away all their appetite that way, and breed a loathing after all grapes.

To come now vnto the artificiall wines before named: the first of them, namely that which they call *Adynamon* [i. without strength] is made of very wine in this sort: Take of new white wine 20 Sextars [i. quarts:] of water halfe as much: let them boile together vntill the measure of water before said be consumed. Some take of sea water ten Sextares, of raine water as much: and when they be mingled together, suffer them to worke in the hot Sun for the space of fortie daies. This drinke they vse to giue vnto patients, for such maladies as they feare wine would be hurtfull to. A second made wine there is called *Miller Wine*, after this sort: Take of *Miller* seed that is ripe, huske, head, and all, a pound and a quarter, put it into two gallons of Must, or new wine: after that it hath lien there infused seuen moneths, let the liquor run from it into another vessell, and keepe it for your vse. As touching the wines of *Lotus*, as well the tree and shrub, as the herbe, we haue shewed sufficiently how they ought to be made. Moreover, there be many wines made of sundry fruits, which we will write of hereafter more at large: with a supplement and addition of such interpretations only as be necessarie. And in the first place commeth the date wine, which the *Parthians*, *Indians*, and all the Nations of the East in general

A nerall do ordinarily vse. A *Modius* or pecke of ripe and sweet dates, which they call *Chideæ*, they let lie to steep in 3 gallons of water, and so presse for a liquor for the Date wine. Also the Fig-wine *Sycites*, of the fig which some call *Palmiprium* (as a man would say, Dates fellows, or next to Dates) others *Catorchites*, is made after the same fashion. But if a man list not to haue it so sweet, in stead of water they vse to put so much of the stones, skins, & seeds of grapes. Of the Fig of Cyprus there is an excellent Vinegre made, yea and a better than it of the *Alexandrine* Figs, to wit, growing vpon the *Sycamore*. Likewise a wine is made of the fruit in Syria called *Silique*; as also of peares and all kind of apples. As for the wine of *Pomegranates*, the Greeks name it *Rhoites*: besides the fruit of the *Corneil* or wild Cherry tree, *Medlars*, *Seruices*, dry *Mulberries*, and *Pine-nuts*, doe yeeld feuerall sorts of wine. As for those pine nuts, they must lie steeped in new wines, before the wine be pressed out of them. The rest all be pleasant enough of themselves, and will serue alone for to make wines. The maner of making *Myrtle* wine, according to the receipt and prescription of *Cato*, we will declare soon hereafter. For the Greeks haue another way of their owne, to wit, when they haue sodden in white Must or new wine the tender branches of the *Myrtle*, together with the leaues, and then stamped the same, they put a pound thereof in three gallons more of Must, and cause it to boile vntill such time as a third part of the wine be consumed. Now that which is made after the same maner of the wild *Myrtle* berries, they call *Myrtidanum*; and this will colour and staine ones hands blacke.

Furthermore, the herbs of the garden do afford vs many wines, namely *Radish*, *Sperage*, *Savory*, & *Majoran*, *Origan*, *Smallach* seed, *Southernwood*, wild *Mints*, *Rue*, *Nep*, or *Calamint*, running *Thyme*, or *Horehound*. To make these wines, take of the herbs abovesaid two handfulls, and when they be stamped, put them into a little barrell of new Wine containing twelue or thirteene gallons, together with a wine quart of Cuit sodden to the thirds, and a pint of seawater. But for the wine of *Navews*, you must take eleuen drams of them, and two quarts of new wine, and so put them together in maner aforesaid. In like sort also the wine *Squilliticum* is made of the root of *Scilla*, or the sea Onion.

To proceed vnto wine made of floures, you haue first and formost wine *Rosat*, after this maner: Take the weight of 40 deniers [i. six ounces] of Rose leaues well stamped, put them into a linnen cloth, together with a little weight, that they may settle downward, & not flote aloft; let them hang thus in 20 Sextars [i. three gallons] and two wine quarts of Must; keep the vessel close stopp'd in any case for 3 moneths, then open it and strain the said floures vnto the liquor. In like maner is there a wine made of the Celtick *Spikenard*, as also of the *Nard* sauage. I find also, that they vse to make a kind of spiced wine or *Ipocras*, not for sweet perfumes and ointments only, but also for to drinke. At first (as I haue shewed) they made these aromaticall wines with myrrh only, but soone after they added thereto *Nard* Celtricke, sweet *Calamus*, and *Aspalathus*, either slicing these drugs, or putting them by gobbets into new Must or some dulcet wine. Some aromatise their wine with *Calamus*, *Squinanth*, *Costus*, *Spikenard*, *Amomum*, *Casia*, *Cinamon*, *Saffron*, *Dates*, and *Azara-bacca*, put therto in like maner by gobbets. Others take *Spikenard* and *Malabathrum*, of each halfe a pound to two gallons of new wine. Much after the same maner we spice our wines now adaies also, but that we adde pepper and hony thereto: which some call *Condite*, others *Pepper* wines. Moreover, there is denised a Wine called *Nectarites*, made of *Elecampane*, named by some *Helenium*, of others *Medica*, *Symphiton*, *Idaea*, *Orestion*: and there be also that term this herb *Nectaræa*. Now the order of it is to take of the root forty drams, to six Sextars of Must or new wine, and hang it in a cloth together with a weight in maner aboue said. Moreover, there be wines made of other herbs, to wit, of wormwood, in this sort: Take of *Ponticke* Wormwood one pound, seeth it in forty Sextars [about six gallons and a halfe] of new Wine, vntill a third part be consumed: or without boiling, put certain handfulls or bunches thereof into a vessell of Wine, and so let it lie infused. After the same sort is *Hyssop* wine made, to wit of three ounces (which is a quarter of a pound) of *Cilician* *Hyssop* cast whole as it is into two gallons of Must, and so let them worke together: or else stampe the *Hyssop*, and so put it into wine. But both these wines are made another maner of way, namely by sowing or setting wormwood & *Hyssop* at the very root of the Vine-plant: for so *Cato* teacheth vs to make *Ellebowe* wine, of blacke *Ellebowe* or Beare-foot growing at the Vine root. And in like maner also is made the *Scammonite* wine. A wonderfull nature and

propertie these vines haue, to draw and sucke into them the very taste of other herbs and plants that are set neere vnto them: for euen so all the grapes about Padua haue a rellish of the Willows and Others that grow there in the marish grounds. Thus the men of Thafos do plant and sowe either Ellebore, or wild Cucumbe, or els Scammonia, about their Vines, to make thereof their diuelliſh wine Pthorium, so called, because it causes a sleep, and procures vntimely birth. Of more herbs besides there be other wines made, the vertues of which herbs we wil set downe elsewhere in place conuenient: and namely of Stoechos, the root of Gentian, of Tragoriganum, of Dictamnus, of Arabacca, of Daucus, or yellow Carot, Sauge, Panace, Acorus, or Galan- gal, Conyza, or Cunilago, Thyme, Mandragoras, and Squinanth. More such wines were yet, which the Greeks called Scyzinum, Itæmelis, and Lectisapagites; but as they be growne now out of vse, so the manner of making is vnknown.

As touching wines made of trees & shrubs, their maner was to seeth the berries of the green wood of both the Cedars, the Cypres, the Bay, Iuniper, Terebinth, Pine, Calamus, and Lentisk, in new wine. In like maner, the very substance of Chamelæa, Chamæpithys, and Germander. Last of all, the floures also of the said plants serue to make wines, namely, by putting into a gal- lon of new wine in the vat, the weight of ten deniers or drams of the floures.

CHAP. XVII.

¶ Of Hydromel and Oxymel, [i. Honied water, and Honied vineger.]

There is a wine called Hydromel, made of water and hony onely: but to haue it the better, some do prescribe rain water, and the same kept fve yeares for that purpose. Others who are more wise and skilfull herein, do take raine water newly fallen, and presently seethe it vntill a third part be boiled away: then they put therto a third part also of old hony in propor- tion to it: and so let them stand together in the Sun for forty daies together, from the rising of the Dog- star. Others, after they haue remained thus mingled and incorporate together ten daies, put it vp & reserue it close stopp'd, for their vse; and this is called Hydromel, which be- ing come to some age hath the very tast of wine, & no place affords better than Phrygia.

Moreover, Vineger was wont to be tempered with hony, [See how curious men haue bin to try conclusions in euery thing!] which they called Oxymel; and that in this manner: *Recipe*, of hony ten pounds or pints: of old vineger fve pints; of sea salt one pound; of rain water fve Sextares [i. a gallon within one quart:] boile them al together at a soft fire, vntil they haue had ten plawes or walmes: which done, poure them out of one vessell into another, and so let the li- quor stand and settle a long time vntil it be stale. All these wines & compositions thus brued, *Themison* (an Author highly renowned) hath condemned and forbidden expressely to be vsed. And to say a very truth, it seems that the vse of them was neuer but in case of necessity: vnlesse a man would beleue and say, that Ipcras, spiced wines, & those that be compounded of oint- ments, are Natures work; or that she brought forth plants and trees to no other end, but that men should drink them down the throat. Howbeit, the knowledge surely of such experiments be pleasant and delectable vnto men of great wit and high conceit, whose noble spirits cannot be at rest, but euer inuentiue and searching into all secrets. Now to conclude this point, certain it is and past all question, that none of all these compositions, vnles it be those which come to their perfection by age and long time, will last one yeare full out, nay most of them will not keep good one moneth to an end.

CHAP. XVIII.

¶ Certaine strange and wonderfull sorts of wine.

Wine also hath prodigious and miraculous effects: for, by report, in Arabia there is a wine made, which being drunk will cause barren women to beare children; and con- trariwise driue men into madnes. But in Achaia principally about Carynia, the wine makes women fall into vntimely trauell: nay if a woman great with childe do eat but the verie grapes, they will slip the fruit of their wombe before their time: and yet both grape and wine differ not in tast from others. They that drinke the wine comming from the cape Tæzen, ate thought vnable for generation. It is reported, that the Thasiens do make two kinds of wine of contrarie

A contrarie operations; the one procures sleep, the other causeth watching. Among them there is a vine called Theriace, the grape whereof, as also the wine, cureth the stings and biting of ser- pents, as it were a most especiall Treacle. As for the vine Libanios, it carrieth the odour and smell of Frankincense, and therefore is vsed in sacrifices to the gods. But contrariwise another named Apendios is vtterly condemned for that purpose, and no wine thereof is imployed at the altar: they say also that no fowle will touch the grapes thereof. There is a kind of grape in Egypt which they call Thasia, exceeding sweet it is, and looseth the belly. But contrariwise there be in Lycia that binde as much and cause costiueneſſe. The grapes Ecbolides in Egypt if they be eaten, cause women with child to be deliuered before their time. Some wines there be that as they lie in the very cellar will turn and proue soure about the rising of the Dog- star; but afterward wil recouer their verdure and become quick and fresh again. In like maner there be wines which vpon the sea will change: howbeit the agitation thereof causeth those Wines which endure it to the end to seem twice as old as they be indeed.

CHAP. XIX.

¶ What Wines they be that may not be vsed in sacrifices: and what waies there are to sophisticate new wines.

Forasmuch as our life stands much vpon religion and diuine seruice, wee are to vnderstand, That it is held vnlawfull to offer vnto the gods before sacrifice, the Wine of any vine that hath not bin cut and pruned; or that hath bin smitten or blasted with lightening, or stan- ding neere to a jebbit or tree whereon a man hath hanged dead; or the grapes whereof haue bin troden by men whose legs or feet haue been wounded; neither is that wine allowable for this purpose, which hath bin pressed and run from the refuse of grape stones and skins once bruised and crushed in the presse; or last of all, if the grapes haue bin filed by any ordure or dung fal- len from about thereupon. Moreover, Greeke Wines are reiected from this holy vse because they haue water in them. Furthermore, the vine it self is holden good to be eaten, namely, when the burgens and tendrils be first sodden, and afterwards preserued and kept in vineger, brine, or pickle.ouer and besides, it were very meet and conuenient to speake also concerning the man- ner of preparing and ordering of wine, seeing that the Greeks haue trauailed in that point seue- rally, and reduced the rules belonging therto, into the form of an Art; and namely, *Euphronius*, *Aristomachus*, *Coniades*, & *Hicesius*, are therein great professors. The Africans vse to mitigate and allay the tartneſſe of their wines with plaſtre, yea and in some parts of their country with lime. The Greeks contrariwise do fortifie and quicken them with clay, with powder of marble, with salt or sea water: and in some places of Italy they vse to the same effect, the shauings and sca- rings of stone-pitch. Also it is an ordinary thing in Italy and the prouinces thereto conſining, for to condite their new wines & to season them with roſin: yea and in some places they min- gle therewith the lees of other old wine or vinegre. Oftentimes also they make sliber-sauces of it selfe without any other mixture; namely, when they boile new wine sufficiently to the pro- portion of the strength, vntill the hardneſſe do euaporate, and that it wax mild and sweet: but being thus ordered, it will not last, they say, about one yere. In some countries they vse to seeth their new wine to the consumption of a third part, and make it Cuit, with which they are wont to delay the sharpnes and strength of other wines, & make them pleasant. But both in this kind of wine and in all other, the vessels ought to be prepared for the purpose, & seasoned with pitch: the treatise of which we will put off vnto the next booke, where we purpose to treat thereof, and the manner of making it.

CHAP. XX.

¶ Of diuers kinds of Pitch and Rosins: the manner of the seasoning and conſecture of new Wines. Also of Vineger and salt.

Among trees that yeeld from them a liquid substance, some there be in the East countries, and others in Europ, which ingender Pitch and Rosin. Asia likewise between both, hath of either side it some such trees. As for the East, the Terebinths put out Turpentine, the best and cleereſt Rosin of all others: next to them, the Lentiskes also haue their Rosin, which

they call Mastick. After which, the Cipres brings forth a third rosin, but it is of a most sharpe and biting taste. All these trees (I say) carry rosin only, and the same thin and liquid; but the Cedar sendeth forth a thick substance, and good to make pitch & tar. As for the rosin or gum Arabick, it is white in colour, strong of smell, vntoward and troublefom to him that shall boile it. That of Iury is harder, yea, and of a stronger sauer than Turpentine. The Siriack gum resembleth the hony of Athens. The Cyprian excelleth all others: of a fleshy substance it is, & like in colour to hony. The Colophonian is deeper of colour, and reddish: beat it to powder in a mortar it proueth white: but it carieth a strong smel with it, which is the reason that the perfumers and makers of ointments haue no vse thereof. As for that which the pitch trees of Asia do yeeld, it is passing white, and the Greeks call it Spagas. All rosins generally will dissolve in oile. Some think verily, that Potters clay will likewise do the same. But I am abashed & ashamed to report, how in these daies the same pitch whereof we speake, should be in so great account as it is, for making of pitch plaisters, to fetch off the haire of mens bodies, & all to make them more smooth and effeminate. Howbeit, the maner of seasoning new Must therewith (that when it is perfect wine, it may smell of pitch, and bite at the tongues end) is to bestrew it with the powder of pitch at the first working, the heate whereof is commonly past and gone in nine daies. And some think that the wine will be the stronger, if the raw and green floure of the Rosin, as it issueth fresh out of the tree, be put therein, for it will quicken a small and weak wine. Now this mixture and medicine of wine [called Crapula] made thus of rosin, hath contrary effects: for if the wine be ouer-heady and strong, it allaieth & mortifieth the hurtful force thereof: but if it be too weak, or drink dead & flat, it reuiueth againe, and giueth it a strong taste. In Liguria, and principally along the Po, they vse to season their wines, and bring them al to their feuerall perfections in this maner. If the wine when it is new be mighty and strong, they put in the more of this medicine or confection called Crapula: if it be mild and small, then the lesse goes into it: and keeping this gage with their hand, they make both good. Some would haue one wine brued with another, the weaker with the stronger, and so (forsooth) there must needs arise a good temperature of both together: and verily there is not a thing in the world againe which hath in the nature thereof so great varietie.

In some countries, if new wine worke of it selfe a second time, it is thought to be a fault and means to corrupt it: and indeed vpon such a chance & vnhappy accident, it loseth the verdure and quick tast: whereupon it gets the name of Vappa, and is clean turned to be dead or soure: in which regard alfo we giue a man that name by way of scorne and reproch, calling him Vappa, when he is heartlesse, void of reason and vnderstanding. If it were vineger indeed it were another matter: for surely though wine degenerate into it by way of corruption and putrefaction, yet a vertue and force it hath good for many speciall vses, and without which it were not possible to liue so delicatly at our table as we do. Moreouer, the world is so much giuen to keepe a bruising, tempering, and medicining of wines, that in some places they sophisticate them with ashes, as it were with plaister: in other, they fortifie, recouer, and make them againe by such deuises as are before specified. But to this purpose they take the ashes to chuse, of vine cuttings, or of the oke wood, before any other. And forsooth if there be occasion to occupie sea water for this purpose, they prescribe them to fetch it far from land in the deep sea; & kept also from mid-March or the Spring Equinox, or at leastwise from mid-Iune, or summer Sunne-lead, and drawn in the night, & when the North wind blowes: but if it be got neere the time of vintage, then it ought to be wel boiled before it wil serue the turn. As for the pitch in Italy, that of Brutium or Calabria is reputed for the best, to trim those vessels which are to keepe wine. There is made of the rosin of the tree Picca (as also in Spain there comes from the wild Pines) a certain pitch which is the very worst, for the rosin of those trees is bitter, dry, & of a strong sauer. The difference and sundry kinds of pitch, as also the maner of making the same, we will declare in the book next following, in the treatise of wild and sauage trees. The faults and imperfections of pitch, ouer and besides those euen now rehearsed (to wit, bitterness, drynes, & strong sent) are known by the founnesse, stinking smoke, and the very adustion thereof. But ye shall know good pitch by these experiments, if the pieces broken from it do shine, if between the teeth it relent and be clammy like glew, and haue a pleasant sharpnes and soure tast withall of the vineger. In Asia the pitch is thought best which comes of the trees in mount Ida. The Greeks esteeme the trees of the hil Pieria chief for this purpose: and *Virgil* commends that of Narycia before all.

But

A But to retorne againe to our brewing and sophistication of wines, they that would seeme to be cunninger, or at leastwise more curious than their fellowes, do mingle therewith blacke Masticke, which is engendred in Pontus, and is like to Bitumen, and thereto adde the root of Iris or the floure de luce, and oile. For this is found by experience. That if the vessels be sered with wax, the wines therein will not hold, but turne soure quickly. Moreouer, we daily see, that better it is to put vp wine into those vessels, wherein vinegre hath been kept afore, than into such as had dulcet or honied wine. *Cato* sets downe a receit to trim and concinnate wine (for that is the very tearme which he vses) in this manner: Take of lie ashes sodden with cuit boiled to the halfe, one fortieth part, temper it with a pound and a half of penniroyall, or salt: and otherwhiles with marble braied & beaten into powder among. He makes mention also of brimstone, but rosin he names with the last. But about al he wills to refresh and renew the wine when it now begins to come to maturity and perfection, with new wine which he calls Tortivum, and I take it, that he means that which ran last out of the wine-presse: which he prescribeth also to be put vnto new wines for to get them a fresher color, as the very tincture of wine: and so it will be also of a more fattie substance, and goe down more glib and merrily. See, see, how many deuises of medicines and slobber sauces the poore wine is forced to endure, and all to please our pallat, our eye, and other senses: and yet ywis we marue that it is so hurtfull to our bodies. Well, would you haue an experiment to know when wine is going, or enclining to be dead and soure; dip therein a thin plate of lead; if it change color, take it for a signe, that it is in the way of decaying. Of all liquors, wine hath this propertie to vinegre, to pal, & into change in vinegre. But a thousand medicines it doth afford, and books of Physick are full thereof. Moreouer, wine lees being dried, will serue as a match to keep fire: and without any other fewell to feed it, ye shall haue it burne and flame of it selfe. The ashes thereof is of the nature of Nitre, and hath the same vertues: and in this regard somewhat more, for that it is found to be more fattie and vntuous.

CHAP. XXI.

Of wine-cellar.

NOW when wine is made and tunned vp in maner afore said, there is as great difference and diuerfitee in the bestowing of it in cellars. They of Piemont about the Alpes, doe put vp their wines in wooden barrels, bound well with hoops, for warmth; and moreouer, if the winter be very cold, they make fires in their cellars or butteries, to keep them for being frozen. I will tell you a strange wonder, yet true and to be verified, not by hearefay but plain sight. There were seen vpon a time whole heaps & huge lumps of wine congealed into ice, by occasion that the hoops of the hogheads burst that contained the wine: and this was held for a prodigious token. For indeed wine of it owne nature will not congeale and freeze, only it will lose the strength, and become apalled in extremitie of cold. In warmer climats and more temperat, they fill their wines into great stands and steanes of earth, which they set into the ground, either ouer the head all whole, or else by halfe, deeper or shallower, according to the situation & temperature of the region. Likewise they giue the wine open aire in some places: whereas in other they keep it close within house in rauenies and cellars. And thereto belong these and such like rules. First, that one side of the wine-cellar, or at leastwise the windows, ought to stand open to the North, or to the East in any wise, where the Sunne riseth at the time of the Equinoctiall. *Item*, that there be no muckhills nor priuies neer: no roots of trees, nor any thing of a strong and stinking sauer: for that wine is of this nature, to draw any smell very quickly into it: and about all, Fig. trees (as well the wild as the tame) be hurtfull to wine-cellar. *Item*, as touching the order of placing the wine-vessels, they ought to stand a pretty distance one from another: for fear of contagion, for that wine is alwaies most apt to catch infection very soon. Moreouer, it matters much of what proportion and fashion the pipes, tubs, and such vessels be made. Those with great bellies and wide mouths, are not so good. Also they must be nealed with pitch, presently vpon the rising of the dog-star: afterwards doused and washed all ouer either in the sea or else salt water, then to bee seasoned and strewed with vine ashes or cley, and being scoured, they ought to sweeten them with a perfume of Myrrhe, which were good to be done also to the very cellars oftentimes. Furthermore, if the wines be weak and smal, they had need to be kept in tubs and hogheads, let downe within the ground: but the strong and mighty wines may lie about

ground in the open aire. Provided alway, that wine vessels be neuer filled top full: but the void part that is left, and stands aboue the wine, would be thoroughly dight with thicke wine made of withered grapes, or sodden wine to the halfe, and saffron mingled withall, yea, and old pitch, together with cuit. Thus also ought the lids and bungs of the vessels to be ordered, with an addition besides of mastick and pitch. In the deep of Winter they must not be vnstoppd and opened in any case, vnlesse the weather be faire and cleare: Neither when the wind is Southerly, or the Moon in the full. This also is to be noted, that the floure or mantle which the wine casts vp to the top, is good when it is white, if it be red, it is a very bad signe, vnlesse the wine it selfe be of that color. Moreouer, if the vessels be hote, or the lids do sweat, it is no good signe. Note also, that the wine which soone begins to mantle and cast vp a floure incontinently, or to veeld another smell than the own, wil not continue long good. As for the cuits, whether they be sodden to the half or the thirds, they ought to be boiled & made when the skie is without a Moon, that is to say, in the change, and vpon no day else. Moreouer, the decoction must be in leads, and not in coppers; with walnuts, among to receiue al the smoke, which otherwise might infect the cuit. In Campaine they let their best wines lie abroad in vessells, euen in the open aire, to take the Sun, the Moone, raine, and wind, and all weathers that come: and this is thought to bee best for them.

CHAP. XXII.

¶ Of auoiding Drunkenesse.

If a man marke and consider well the course of our life, we are in nothing more busie and curious, nor take greater paines, than about wine: as if Nature had not giuen to man the liquor of water, which of all others is the most wholsom drink, and wherewith all other creatures are wel contented, but we thinking it not sufficient to take wine our selues, giue it also to our Horses, Mules, and labouring beasts, and force them against Nature to drink it. Besides, such pains, so much labor, so great cost and charges we are at, to haue it, such delight and pleasure we take in it; that many of vs think, they are borne to nothing else, & can skill of no other contentment in this life: notwithstanding, when all is don, it transports & carries away the right wit & mind of man, it causes fury and rage, and induces, nay, it casts headlong as many as are giuen thereto, into a thousand vices and misdemeanors. And yet forsooth, to the end that we might take the more cups, and poure it downe the throat more lustily, we let it run thorough a strainer, for to abate and gield (as it were) the force thereof: yea, and other deuises there be to whet our appetite thereto, and cause vs to quaffe more freely. Nay, to draw on their drinke, men are not afraid to make poisons, whiles some take hemlocke before they sit downe, because they must drinke perforce then, or els die for it; others, the powder of the * pumish stone, & such like stuff, which I am abashed to rehearse and teach those that be ignorant of such leaudnesse. And yet wee see these that be stoutest and most redoubted drinkers, euen those that take themselves most secured of danger, to lie sweating so long in the baines and brothel-houses for to concoct their surfet of wine, that otherwhiles they are carried forth dead for their labour. Ye shall haue some of them again when they haue been in the hot house, not to stay so long as they may recouer their beds, no not so much as to put on their shirts: but presently in the place, all naked as they are, puffing & laboring still for wind, catch vp great cans and huge tankards of wine (to shew what lustie and valiant champions they be) set them one after another to their mouth, pour the wine downe the throat without more adoe, that they might cast it vp againe, and so take more in the place, vomiting or reuomiting twice or thrice together that which they haue drunke, and still make quarrell to the pot: as if they had been borne into this world for no other end but to spill and make good wine: or, as if there were no way els to spend and wast the same, but thorow mans body. And to this purpose, were taken vp at Rome these forreine exercises, of vaulting and dancing the Morisk; from hence came the tumbling of wraisters in the dust and mire together; for this, they shew their broad breasts, beare vp their heads, and carrie their neckes far backe. In all which gestikulacions, what do they else but profess that they seek means to procure thirst and take occasion to drink? But come now to their pots that they vse to quaffe and drink out of: are there not grauen in them faire pourtrais think you of adulteries? as if drunkenesse it selfe were not sufficient to kindle the heart of lust, to pricke the flesh, and to teach them wantonnes. Thus is wine drunke out of libidinous cups: and more than that, he that can quaffe best and play the drun-

A drunkard most, shall haue the greatest reward. But what shall we say to those (would a man think it?) that hire one to eat also as much as he can drink, and vpon that condition couenant to yeeld him the price for his wine drinking, and not otherwise. Ye shall haue another that will inioine himselfe to drinke euery denier that he hath won at dice. Now when they are come to that once and be thoroughly whittled, then shall yee haue them cast their wanton eies vpon mens wiues; then fall they to court faire dames and ladies, and openly bewray their folly euen before their jealous and sterne husbands; then (I say) the secrets of the heart are opened and layed abroad. Some ye shall haue in the mids of their cups, make their wils, euen at the very board as they sit: others againe cast out bloudy and deadly speeches at randon, and cannot hold but blurt out those words which afterwards they eat againe with the sword point: for thus many a man by a lauish tongue in his wine, hath come by his death and had his throat cut. And verily the world is now growne to this passe, That whatsoeuer a man saith in his cups, it is held for sooth; as if Truth were the daughter of Wine. But say they escape these dangers: certes speed they neuer so well, the best of them all neuer seeth the Sun-rising, so drowsie and sleepey they are in bed euery morning, neither liue they to bee old men, but die in the strength of their youth. Hence comes it, that some of them looke pale, with a paire of flaggie blab-cheekes; others haue bleared and fore eies; and there be of them that shake so with their hands, that they cannot hold a full cup, but shed and poure it downe the floore. Generally they all dreame fearfully (which is the very beginning of their hell in this life) or els haue restless nights: & finally, if they chance to sleep (for a due guerdon and reward of their drunkenesse) they are deluded with imaginary conceits of *Venus* delights, defiled with filthy and abominable pollutions: and thus both sleeping and waking they sin with pleasure. Well, what becomes of them the morrow after? they belch foure, their breath stinketh of the barrell, and telleth them what they did ouer night; otherwife they forget what either they did or said, they remember no more, than if their memory were vtterly extinct and dead. And yet our iolly drunkards giue out and say, That they alone inioy this life, and rob other men of it. But who seeth not, that ordinarily they lose not onely the yesterday past, but the morrow to come? In the time of *Tiberius Claudius* the Emperor, about 40 years since, certaine out-landish Physitians and Monte-banks, who would seem to set themselves out by some strange nouelties of their own, & so get a name, brought vp at Rome a new deuise and order, to drinke fasting, and prescribed folk to take a good hearty draught of wine before meat, and to lay that foundation of their dinner. Of all nations, the Parthians would haue the glory for this goodly vertue of wine-bibbing: and among the Greeks, *Alcibiades* indeed deserved the best game for this worthy feat. But here with vs at Rome *Nouellius Torquatus* a Milanais, wan the name from all Romans & Italians both. This Lombard had gone through all honourable degrees of dignity in Rome, he had bin Pretor, and attained to the place of a Proconsull. In all these offices of state he wooon no great name: but for drinking in the presence of *Tiberius*, three gallons of wine at one draught and before heooke his breath againe, he was dubbed knight by the syname of *Tricongius*, as one would say, * The three gallon knight: and the Emperor, sterne, seuer, and cruell otherwise though he was, now in his old age (for in his youthfull daies he was giuen ouermuch to drinking of wine) would delight to behold this renowned and worthy knight, with great wonder and admiration. For the like rare gift and commendable qualitie, men think verily that *C. Piso* first rise; and afterwards was aduanced to the Prouost ship of the city of Rome, by the said *Tiberius*, & namely, for that in his court being now emperor, he sat 2 daies and 7 nights drinking continually, and neuer stirred foot from the boord. And verily *Drusus Caesar* (by report) in nothing more resembled his father *Tiberius*, than in taking his drink. But to return again to noble *Torquatus*, herein consisted his excellency, That he did it according to art (for this you must take withall, there is an art of Drinking, grounded vpon certain rules and precepts.) *Torquatus* (I say) drank he neuer so much, was not known at any time to falter in his tongue, neuer eased himself by vomiting, neuer let it goe the other way vnder boord: how late soeuer he sat vp at the wine ouer night, he would be sure to relieue the morning watch & sentinel. He drank most of any man at one entire draught before the pot went from his head: and for smaller draughts besides, he went before all other in number; his winde he neuer tooke while the cup was at his mouth, but iustly obserued the rule of drinking with one breath; he was not known to spit for all this: & to conclude, he would not leaue in the cup, so much as would dash against the paucement, & make the least sound to bee heard: a special point and precise law

* not the thrice gallant knight
* Whereupon he was called
Tiberius Nero, for *Tiberius Nero*.

to prevent the deceit of those that drinke for a wager. A singular glory no doubt in him, and a rare felicity. *Tergilla* challenged *M. Cicero* the younger, son to that *M. Cicero* the famous Orator, and reproched him to his face, that ordinarily he drunk 2 gallons at once: and that one time above the rest when he was drunke, he flung a pot at *M. Agrippa* his head. And truly this is one of the fruits and feats of drunkenness. But blame not young *Cicero*, if in this point yet he desired to surmount him that slew his father, *M. Antonius* I mean; for he before that time strained himselfe, and strove to win the best game in this feat, making profession thereof, as may appear by a booke that he compiled and set forth with this title, *Of his owne drunkenness*: wherein hee was not ashamed to avow and justifie his excess and enormities that way: and thereby approoved (as I take it) vnder pretence and colour of his drunkenness, all those outrages of his, all those miseries and calamities that he brought vpon the whole world. This treatise he vomited and spued out a little before the battell of *Actium*, wherein he was defeated: whereby it may appear very plainly, that as he was drunken before with the blood of citizens, so still hee was the more blood-thirsty. For this is a property that necessarily followeth this vice, That the more a man drinketh, the more he may, and is alwaies dry. And herein spake to good purpose a certain Embassadour of the Scythians, saying, That the Parthians the more they drunke, the thirstier they were.

As touching the nations in the West part of the world, they haue their drinks also by themselves made of *corn steeped in water, whereof they will drinke to the utterance, and be drunk: and namely in Spaine and France, where the manner of making the same is all one, howsoever they haue* diuers names: and in Spain they haue devised means that these drinks (Ale or Beer) will abide age, & continue stale. In Egypt likewise they haue inuented such kind of drinks made of corn: so that no part or corner of the world there is, but drunkenness reigneth. And verily these liquors howsoever they be named, they vse to drinke entire as they bee, and made of the very strength of Malt: neuer delaying the same with water, as we do wines. But it may be sayd, That Nature hath endowed & enriched those countries with abundance of corn, and therefore they may wel do it. Oh how industrious we are to maintain our vices! There is a deuise found, (would euer any man haue thought it?) how water also should make men drunke. Two liquors there be, most pleasing and acceptable to mens bodies, wine within, & oile without. Both proceed from two speciall trees, howbeit, of the twaine, Oile is necessary, and Wine may be better spared. And verily, men haue not bin idle in the making of good oile: howbeit, they haue bene more addicted and giuen to make Wines for drink; as may appear by this, that reckoning but the generall kinds thereof, a man may find 195 sorts of wine: but if a man would subdiuide and distribute those heads into their branches, he should meet almost with twice as many: but of Oyles there been not so many kinds by farre. Whereof we purpose to treat in the booke next following.



THE

THE FIFTEENTH BOOK OF
THE HISTORIE OF NATURE,
WRITTEN BY C. PLINIUS
SECVNDVS.

CHAP. I.

¶ The natures of trees that beare Fruit.



Here were no Olie trees grew in Italy, but vpon the coast side, and that within 40 miles of the sea, about the 440 yere after the foundation of the city of Rome; if it be true that *Theophrastus* saith, who was one of the most famous and renowned Authors among the Greeks. *Fenestella* writeth moreover, and affirmeth, that during the raigne of *Tarquinius Priscus* (which was much about the 183 yere from the foundation of the city of Rome) there were no Olie trees at all to be found, either in Italy, Spaine, or Africke: whereas now at this day they are seene all Italy ouer, yea and be come as far as the regions beyond the Alps, euen into the mids and very heart of France and Spaine. Indeed, in the yere after the foundation of Rome 505 (which was when *Appius Claudius*, the nephew of that great *Appius Claudius* surnamed the Blind, and *L. Iunius* were Consuls together) a pound of the oile was sold for twelue Asles: and not long after (namely, in the 680 yere) *M. Seius* the son of *Lucius* (one of the *Aediles Curule* for the time being) brought downe the market so well, that a man might haue bought ten pound for one As; and at that price he serued the people of Rome throughout all that yere. Lesse cause therefore a man hath to maruell hereat, who knoweth how not past 22 yeres after that (namely when *C. Pompeius* was the fourth time Consul) Italy was able to furnish other nations and prouinces with oile of Oliues. *Hesiodus* also (who was especially addicted to the study of husbandry, and of all things thought it most necessarie to be taught and published for the good of mankind) wrote thus much concerning the Oliue, That neuer a man was knowne to that day for to haue gathered the fruit of that Oliue tree, which himselfe had planted: so late of growth were those trees in his time, and so slowly came they forward. But now adaies they come vp of kernels and stones set in plots of ground for the purpose: and being transplanted againe, they beare Oliues the second yere after. *Fabianus* saith, That Oliues loue not to grow either in the coldest or the hottest grounds.

Virgill hath set downe 3 kind of Oliues, to wit, *Orchita* [i. the great round Oliues:] *Radij*, [i. the long Oliues:] and those which are called *Pausae*. He saith moreover, That the Oliue trees require no tending or dressing at all, and need neither the hooke to be pruned, nor the rake and harrow to be moulded, ne yet the spade to be digged about. Doubtlesse, the goodnesse of the soile, and the temperature of the climat especially, are very requisit and much materiall alone, without farther helpe: howbeit they vse to be cut and pruned, yea, they loue also to be scraped, polished, and clenfed between where the branches grow ouer-thicke, euen as well as vines, and at the same season.

The time of gathering Oliues ensueth presently vpon the vintage of grapes; but greater industry and skil is required to the making and tempering of good oile, than about new wine: for ye shall haue one and the self same kind of oliue to yeeld a different iuice, and diuers oiles: first and foremost, of the Greene oliue and altogether vnripe, there is drawne the Oile-oliue; which bath of all other the best verdure, and in tast excelleth the rest: and of this oile, the first running that commeth from the presse, is most commended: and so by degrees better or worse, as the oile

oil is drawn before or after, out of the presse: or, according to a late inuention, by treading them with mens feet in little panniers, and vpon hardles made of small and fine oziars. This is a rule, The riper that the oliue is, the fatter will the oil be, and more plentifull; but nothing so pleasant in tast. And there fore the best season to gather Oliues, both for goodnesse and abundance of oil, is when they begin to shew black. And such halfe-ripe Oliues we in Latine call *Drupæ*, and the Greekes *Drypetæ*. To conclude, it skilleth very much whether the berries be ripe vpon the tree, or mellow within their presse: also whether the tree be watered, that is to say, the oliues hanging thereupon be drenched and refreshed with sprinkling water, or haue no other moisture than their owne, and that which they receiue by dews and raine from heauen.

CHAP. II.

¶ of oyle.

Oile-Oliue commeth to haue a rank and vnpleasant tast if it be old kept and stale, contrary to the nature of wine, which is the better for age. And the longest time that oil will continue good, is but one yere. Wherein surely if a man would well consider, he may obserue the great providence of Nature. For seeing that wines are made to seruise intemperance and drunkennesse, there is not that necessitie to drinke much thereof, and to spend them out of hand: and more than so, the daintie tast that they haue when they be stale, induceth men to lay them vp and keep them long. But contrariwise, she would not haue vs make such spare of oil: and therefore by reason of the generall vse and need thereof, the hath made it vulgar and common to all.

As touching this benefit and gift of Nature bestowed vpon mankind, Italy of all other nations in the world carrieth the name for the goodnesse thereof: but principally the territory or county of *Venafrum*, and namely, that quarter lying toward *Licina*, which yeelds the oil called *Licinianum*: wherupon there be no oliues comparable to them of *Licina*, both for to seruise the perfumers, in regard of the pleasant smell which that oil doth giue, so appropriat vnto their ointments: as also to furnish the kitchen and the table (as they say that be fine toothed, & haue a delicate taste:) which is the cause (I say) that this oil carrieth the only name. And yet these oliues of *Licina* haue this priuiledge besides, that birds loue not to come neere them. Next to these *Licinian* oliues, the question is between them of *Itiria* & *Batica*, whether of them should go away with the price for their goodnesse: and hard it is to say, which is the better of the two. A third degree there is vnder these two aboue named, namely, of the Oliues that come from all other prouinces, setting aside the fertile soile of that tract in *Africke*, which yeeldeth so great increase of corn. For it should seeme that Nature hath set it apart for graine onely, seeing it so fruitfull that way: and hath not so much enuid it the benefit of wine and oil, which she hath denied those parts, as thought it sufficient that they might glory, and haue the name for their haruests. As for other points belonging to oliues, men haue erred and bin deceived very much: neither is there in any part concerning our life, to be found more confusion, than is therein: as we will shew and declare hereafter,

CHAP. III.

¶ The nature of the Oliue berries: also of yong Oliue Plants.

This fruit called the Oliue, consists of a stone or kernell, of oil, a fleshy substance, and the lees or dregs: now by these lees (called in Latine *Amurca*) I mean the bitter liquor of the grounds that the oil yeelds. It comes of abundance of water: and therefore as in time of drought there is least thereof, so in a rainy and watery constitution, you shall haue store and plenty. As for the proper juice of the oliue, it is their oil, and the chiefe is that which comes of those that are vnripe, like as we haue shewed before, when we treated of *Ompharium*, or the Oliue verjuice. This oilie substance doth increase and augment within the Oliue vntill the rising of the star *Arcturus*, to wit, 16 daies before the Calends of *October*; after which time, their stones and carnos matter about them do rather thriue. But marke, when there follows a glut of raine and wet weather presently vpon a dry season, the oil in them doth corrupt and turn all (well neare) into the lees aboue said, which may easily be perceiued by the colour: for it causeth

A feth the Oliue berrie to looke blacke. And therefore when this blacknesse begins to appeare, it is a sign that they haue somewhat (although very little) of the lees; but before that, they had non at all. And herein men are foulyly decieued taking this marke for the beginning of their ripenesse: which blacke hew indeed is a signe of their corruption, and betokens that then they are in the way to be stark naught. They erre also in this, that they suppose an Oliue the more grown it is in carnositie, to be the fuller of oil: whereas in very truth, all the good iuice in them is converted then into the grosse and corpulent substance thereof, and thereby also the stone and kernell come to be big and massie: which is the cause, that they had need of watering at that time, most of all. Which being done by great paine and labour of man, or happening through raine and plenty of showers, vnlesse there insue a drie season & faire weather to extenuate that grosse substance into which the Oliue had turned the foresaid iuice and humor, all the oil is consumed and lost. For it is heat & nothing els (as *Theophrastus* saith) which ingendreth oil: & therefore both about the presse at first, & also in the very garner where Oliues be laid after, they vse to keep good fires, by that means to draw the more oil forth. A third default there is in oil, and that comes of two much sparing and niggardise: for some men there are, who being loth to be at cost to pluck and gather Oliues from the tree, wait still and looke that they should fall of themselves. And such folke as would seeme yet to keepe a meane herein, namely, to take some paines and be at a little cost; beat and pell them downe with perches and poles: whereby they do offer wrong to the poore trees, yea, and hinder themselves not a little the yere following, when they shall find how much it is out of their way, thus to break their boughes and branches.

C Whereupon the law in old time provided well for this inconuenience, by an expresse inhibition to all gatherers of Oliues, in these words, *No man so hardie as to breake, strike, and beat the Oliue tree*. But they that go most warily and gentl to worke, stand vnder the tree, and with some canes shake the boughes and branches therewith, or lightly smite them: but in no case let driue and lay at them either with full down-right or crosse-blowes. And yet as heedfull as they be in so doing, this good they get by striking and knapping off the young shootes and sprigs which should beare the next yere, that they haue the trees carry fruit but once in two yeres for it. The like hapneth also, if a man stay till they fall of themselves: for by sticking on the tree beyond their due time, they rob the oliues to come after, of all their nutriment wherewith they should be fed, and detain the place likewise where they should come forth and grow. An euident prooffe hereof is this, That oliues vnlesse they be gathered before the ordinary & yerearely western winds do blow, they gather heart again vpon the tree, & wil not so easily fall as before. Men vse therefore to gather the *Pausan* Oliues first after Autumne, which are fullest of carnosity, not so much by nature, as by misgouernement and disorder: soone after, the round *Orchideæ*, which haue plenty of oil, & then the oliues *Radij*: and these, forasmuch as they be most tender, and soonest ouercome with abundance of the lees (which we called before *Amurca*) are thereby forced to fall. Howbeit, such oliues as be thick skinned and hard; tough also and admitting no wet & rain (by which means they are the least of all others) wil abide on the tree til *March*: and namely, the *Licinian* Oliues, the *Cominian*, *Contian*, & *Sergian*, which the *Sabins* call *roial*: all which change not colour & look black before the foresaid Western wind blowes, that is, about the 6 day before the Ides of February; for by that time folk think they begin to ripen. Now for as much as the best & most aproued oil is made of them, it seems that reason also being conformable to this defect of theirs, justifies, & aproues the same in the end. And this is commonly receiued and held among them, that cold winters breed scarcity and dearth: but full maturity brings plenty; namely when they haue leisure to ripen on the tree: howbeit this goodnes is not occasioned by the time, but by the nature rather of those kind of oliues, which be long ere they turn into the foresaid dregs *Amurca*. Men are also as much deceived in this, that when Oliues be gathered, they keep them vpon boarded floors in sellars and garner, & will not presse them before they haue swet: whereas, in truth, the longer they lie, the lesse oil they yeeld, & the more dregs of lees. For by this means the ordinary proportion they say is, to presse out of euery *Modius* of Oliues, not aboue 6 pound of oil. But no man makes any reckoning of the lees, how much it increases in measure day by day, in one & the very same kind of Oliues, the longer that they be kept ere they be pressed. In one word, it is a common error settled euery where, that men do think the abundance of oil is to be esteemed according to the signes of the oliues: considering that the plenty of oil consists not in the greatnes of the fruit: as may appeare by those that

of some are called Roiall, of others Majorina, and Phaulia, which euery man knoweth, are the biggest and fairest Oliues to see to, & yet otherwise haue least oile in them of any others. Likewise in Ægypt the oliues are most fleshy & full of pulp, howbeit, least oleous. As for the country Decapolis of Syria, the oliues indeed be very small there, & no bigger than Capers: yet commended they are for their carnosity. And for that cause, the oliues from the parts beyond sea are preferred before the Italian, for goodnesse of meat, and as better to be eaten; yet those of Italy yeeld more oile. And euen within Italy, the Picene and Sidicine oliues surpass the rest. For in truth, these are first confected and seasoned with salt: or els (as all others) prepared & condite either with lees of oile, or wine cuir. Some oliues there be, which they suffer to swim alone as they be, in their owne oile, without any help and addition of other things; and such be called Colymbades. And the same they vse otherwhiles to bruise and cleanse from their stones, and then confect them with green herbs, which haue some pleasant & commendable taste. Others there are, which being otherwise very green and vnripe, are presently brought to maturity, and made mellow, by lying infused and foking in hot scalding water. And a wonder it is to see, how Oliues wil drink in a sweet liquor, and how by that means they may be made toothsome, yea, and to carry the taste of any thing that a man would haue them. Among oliues there be also that are of colour purple, like to those grapes which change colour when they begin to ripen. Moreover, besides the aboue named sorts of oliues, there be some named Superba [i. proud.] Also there are Oliues to be found, which being dried by themselves onely, are passing sweet, yea, and more delicate than raisins: many these are very season, and yet such are in Africke and about the city Emerita in Portugall.

As touching the very oile it self, the way to preserve it from being ouerfat and thick, is with salt. If the barke of an Oliue tree be slit and cut, it will receive the rellice and smell of any medicinable spice, and the oile thereof wil seem aromatized: otherwise pleasant in taste it is not, like as wine is: neither is there such difference in so many kinds of oliues as there is in wine: for surely we cannot at the most obserue about three degrees in the goodnesse of oiles, namely, according to the first, second, and third running out of the presse. Finally, the thinner that oile is, and the more subtile, the finer and daintier is the smell thereof: and yet the same same sent, in the very best of them all, continueth but a small time.

CHAP. III.

¶ The nature of Oile Oliue.

The property of oile is to warm the body, and to defend it against the iniuries of cold: and yet a soueraine thing it is to coole and mitigate the hot distemperature of the head. The Greekes, whom wee may count the very fathers and fosters of all vices, haue peruered the true and right vse thereof, to serue for all excess and superfluitie; euen as far as to the common anointing of their wraisters with it, in their publick place of exercise. Known it is for certain, that the gouernors and wardens of those places, haue sold the oile that hath been scraped from the bodies of the said wraisters for 80 Sesterces at a time.

But the stately maiesty of Rome contrariwise hath done so great honour to the Oliue tree, that euery yere in Iuly, when the Ides come, they were wont to crowne their men of armes and gentlemen marching by their troupes and squadrons in solemn wise, with chaplets of Oliue, yea and the manner was of captains likewise to enter ouant in pety triumphes into Rome, adorned with Oliue coronets. The Athenians also honoured their conquerors with Oliue garlands. But generally the Greekes did set out their victors at the games of Olympia, with branches of the wild-oliue.

CHAP. V.

¶ The manner how to order Oliues.

Now will I report the precepts and rules set down by Cato, as touching oliues. His opinion is, that the greater long Oliue Radius of Salentum, the big Orchites, the Pausia, the Sergiana, Cominiana, and the Albicera, should be planted in hot and fat grounds. He adds moreover (as hee was a man of singular dexterity and prudent spirit) which of them in the neigh-

A neighbour territories and places adjoining, were taken for the best. As for the Licinian Oliues, he saith, They would be planted in a weely and cold hungry ground: for if it be a fat soile and a hot, the oile wil be corrupt and naught, and the very tree it self wil in short time be killed with ouermuch fertility and bearing too great a burden. Moreover, they will put forth a red kind of mosse, which eateth and consumeth the tree. To conclude, his mind is, that Oliue hort-yards should be exposed to the sun, yet so, as they regard the West wind also in any case, for otherwise he commendeth them not.

CHAP. VI.

¶ How to keep Oliues, and the way to make oile of them.

Cato alloweth of no other means to keep and preserve oliues (and specially the great ones, made like cullions, named thereupon Orchita, and the Pausia) but either in brine and pickle when they are Greene, or else among Lentisk branches when they are bruised and broken. The best oile is made (saith he) of the greenest and sourest oliues. Moreover, so soon as euer they be fat, they must be gathered from off the ground; and if they be fouled and beraied with the earth, they ought to be washed clean, and then laid to dry three daies at the most. Now if it fall out to be weather disposed vnto frost, they should be pressed at 4 daies end. He giueth order also, to bestrew and sprinkle them with salt: saying moreover, that if they be kept in bordered sollors or garners, the oile will be both lesse in quantitie, & worse withal. So it wil be also, if it be let lie long in the lees, or together with the cake and grounds, when they be bruised and beaten: for this is the very fleshy and grosse substance of the Oliues, which cannot chuse but breed filthy dregs. And therefore he ordaineth, that oftentimes in a day it should be poured out of one vessell into another, & so by setting clarified from the grounds, & then to put it vp afterwards into pans and panchions of earth, or els into vessels or kinnels of lead, for brasse metall wil mar oile. All this should be done within close presses and rooms, and those kept shut, where no aire or wind may come in, that they might be as warm and hot as stoues. He forbids also to cut any wood or fuel there, to maintain fire; for that the fire made of their stones and kernels, is most kindly of any other. To the end also that the grounds & lees should be liquified and turn into oile, euen to the very last drop, the oile should be let run out of those vessels or kinnels afore said into a vat or cistern; for which purpose the vessels are often to be clenfed, & the ozier paniers to be scoured with a sponge, that the oile might stand most pure & clear. But afterward came vp the deuise to wash oliues first in hot water, & then immediately to put them whole as they are, into the presse, for by that means they squeeze forth lees & all: and then anon to bruise and crush them in a mil, & so presse them in the end. Moreover, it is not thought good to presse the second time about 100 Modij, which is the full proportion of one presse, & it is called Factus. That which after the mil comes first, is named the floure of the oile, or the Merc-gout. Lastly, to presse 300 Modij, is thought to be foure mens work ordinarily in one night and a day.

CHAP. VII.

¶ Of Oile Artificiall

IN Cato his time there was no artificiall Oiles, I mean, no other but that of the Oliue; and therefore I suppose it was, that he made no mention thereof: but now adaies there be many kinds. First will we treat of those that are made of trees, and principally before all the rest, of the oile of the wild oliue: thin it is, and much more bitter than that of the other gentle & true Oliue, but good for medicines onely.

Very like to it, is that which is made of Chamelæa, an herb or shrub growing in stony places to the height of a span & no more, with leaues and berries resembling those of the wild oliue.

The next is that which commeth of Cici, or Ricinus, [i. Palma Christi] a plant which groweth plentifully in Ægypt, which some call Croto, others Trixis or wild Sesam; but long it hath not been there. In Spaine likewise this Ricinus is found of late to rise suddenly to the height of an Oliue tree, bearing the stalke of Ferula or Fennel-Geant, clad with leaues of the vine, replenished with seed resembling the graines or kernels of small and slender grapes, and of a pale colour withall: we in Latine call it Ricinus, of the resemblance that the seed hath to a tickle,

which is a vermin that annoies sheepe. For to gather an oile thereof, the manner is to seeth the seeds in water, the oile wil swim aloft, and so it is scummed off. But in Egypt (where there is a bundance thereof) they neuervse any fire or water about it; only they corn it well with salt, and then presse out the oile, which is very fulsome and naught to be eaten, good only for lamps.

The oile of Almonds, which some call Metopium, is made of the bitter Almonds, dried stamped, and reduced into a masse or lumpe, which being sprinkled and soaked with water, and then beaten againe in a mortar, is put into a presse or mill, and the oile drawne therout.

There is an oile made also of the Bay, together with the oile of ripe oliues ready to drop from the tree. Some take the Bay berries only, and thereout presse oile de-Baies; others vse the leaues and nothing els: and there be againe, who with the leaues take also the rind of the Bay berries; yea and put thereto Storax Calamita, and other sweet odors. Now for this purpose, the Laurell with broad leaues growing wild, and bearing blacke berries, is the best.

Like unto this oile, is that which they make of the blacke Myrtle; and the broad leaved kind thereof is the better: the berries of it ought to lie infused first in hot water, and afterwards to be boiled. Some seeth the tenderest leaues that it hath in Oile-Oliue, and then presse them forth. Others put the leaues first in the oile, & then let them stand conseeded in the sun, and there take their ripening.

After the same manner is the oile made of the garden Myrtle; but that of the wilde which hath the smaller seed is the better: and this Myrtle some call Oxymyrine, others Chamemyrsine; and some againe name it for the smalnesse, * Acaron, for short it is and full of little branches.

Moreouer, there be oiles made of the Citron and Cypress trees: likewise of wall nuts which they call Caryonion: also the fruit of the Cedar, named Cedrelaon.

Semblably of the graine called Gnidium, to wit, the seed of Chamelæa and Thymelæa, well elensed and stamped. In like manner of the Lentisk. As for the oile Cyprinum, how it should be made of the Egyptian nut, and of Ben for to serue perfumers, hath bin shewed before. The Indians (by report) do make of Chest-nuts, of Sesame seed, & Rice. The people Ichthyophagi as they liue by eating fish only, so they make oile of fishes. And in case of necessity, otherwhiles men vse to draw an oile out of the berries of a Plane tree also, beeing steeped in water and salt, which serues for lamp oile. Yea and there is an oile made of the wild vine Oenanthe, as we haue said already in the treatise of Ointments.

As touching the oile which the Greeks call Gleucinum, it is made with new wine and oile-oliue, boiled at a soft fire. Others there be that let the wine consume all into oile, and without any fire at all, do compass the vessell wherein this composition is made, with the cake and the refuse of grapes when they be pressed, and couer it all ouer for the space of 22 daies, so as twice a day they be all mixed thoroughly together. Some there be who put therto not only Majoram, but also the most precious and exquisite odors that they can meet withal: and our common fencing-halls, and places of publick exercises be perfumed with these sweet oiles, and do smell of them; but such they be as are the cheapest of all other.

Ouer and besides, there is made an oile of Aspalathus, sweet Calamus, Balme, Iris or Flour-de-lis, Cardumome or grains of Paradise, Melilot, French Nard, Panace, Marjoram, Elecampane, and the root of Cinamon, taking all these and letting them lie infused in oile, and so pressing out the iuice thereof. So is oile Rosat made of Roses: the oile of Squinanth of the russh, which is most like to the Oile Rosat. Likewise of Henbane, Lupines, and the Daffadill: the Egyptians get great store of oile out of Raddish seed, or the grasse called Gramen (which is Dent-de-chien or Quich-grasse) and this oile they call Chortinon. After the same manner the Sesame-seed doth yeeld an oile, as also the Nettle, which in Greeke they call Cnecion, or rather Cnidium. As for the oile of Lillies, it is made in some places, where they feare not to let it stand abroad in the aire infused to take both Sun and Moon-shine; yea and frosty weather.

They that inhabit between Cappadocia and Galatia, do compound a certain oile of herbes growing among them, which is a foueraigne remedy for sinewes either wounded or otherwise grievied, and they call it Selgiticum: it is much in effect like to that oile which is made in Italie of Gums, by the people Eguini.

Now for the oile of Pitch, which they call Picinum, it is made of the vapors and smoke that arise from Pitch whiles it boileth, and receiued in fleeces of wooll spread ouer the pots mouth wherein

A wherein the said Pitch is foddren: which fleeces afterwards are well wrung, and the oile is pressed out thereof. The best oile is that which commeth from the Brutian or Calabrian pitch: the same is most fat of all others, and fullest of Rosin. The colour of the oile is reddish.

Vpon the coasts and maritime parts of Syria, there is an oile engendereth of it selfe, which the Greeks call Elaomeli: a fatty and greasie substance it is, thicker than honey, and thinner than Rosin, of a sweet tast, issuing out of trees; and is onely medicinable and good in Phyticke.

As touching old oile, it serues in right good stead for sundry sorts of maladies. It is thought also very singular for to preserve luorv from putrefaction, for this is certaine, that the image of Saturne at Rome is full of oile-oliue all within.

CHAP. VIII.

¶ Of the lees or dregs of Oile-oliue, called Amurca.

Cato hath highly commended aboue all, the lees of Oile-oliue: for he would haue the barrels, hog heads, and other vessels which hold oile, to be therewith besmeared, that they should not drink vp the oile. He deuised also, that the threshing floors should be wrought and tempered with oile lees, that they might not chawne & gape, nor no Ants breed within the chinks and cranies thereof. Moreouer, he thinks it very good that the mortar, plaister, and parget vsed about the wals of corn barns, as also their floors, should be well sprinkled and tempered with the said lees; yea, and the presses and wardrobes where apparell is kept, ought to be rubbed therewith to keep out mothes, worms, spiders, and such vermine that do hurt to cloths. He

affirmeth besides, that is good against certain diseases of four-footed beafts, as also to preserve trees, yea and excellent for inward vlcers of a mans body, but especially those of the mouth. Beeing foddren, it is singular good (as he saith) for to annoint and make gentle and supple all bridle reins, leather thongs, shoes, and axletrees of carts and wagons; likewise to keepe all vessels of brasie from rust, and also to giue them a bright and pleasant colour: moreouer, all the wooden implements of an house generally throughout, and vessels made of earth and clay, wherein one would keep dry figs in their verdure, would be annointed therewith: or if one were desirous to preserve the Myrtle, leaues, fruit, and all, vpon the branches, or any such thing, there is nothing better than the said Amurca. Last of all, he saith, that what wood soeuer for fell is dipped in these lees, it will burne cleare without any smoke.

M. Varro affirmeth, that if a Goat chance to lick with his tongue, or to brouse an oliue when it buddeth the first spring, the same tree will surely be barren and lie in great danger to miscary and die. Thus much of the Oliue tree, and of the oile of Oliues.

CHAP. IX.

¶ All kinds of Fruit good to eat, and their Nature.

E AS for all other fruits of trees, they are hardly to be numbred and reckoned by their forme and figure, much lesse by their sundry tastes and diuers iuices that they yeeld, so intermingled they are together by varietie of grafting one into another.

CHAP. X.

¶ Of Pine-nuts, or Pine-apples, foure sorts.

THE Pine nuts (which are the biggest of that kind and hanging highest vpon the tree) doe contain and nourish slender kernels enclosed within certaine hollow beds full of holes, and besides clothed and clad with another coat or husk of a dark murrey colour: wherein may be seen the wonderfull care and providence of Nature, to bestow the seedes so soft. A second kinde there be of these Nuts called Terentines, hauing a shell or huske verie brittle and easie to be cruised between ones fingers; and as soon are they pecked through with birds bills, who after that manner filch and steale them from off the tree. A third sort yet there is of them, that come of the gentle pitch trees, hauing their kernels couched within a thin husk or skin more like than a shell, and the same so soft, that it may be chewed and eaten together with the kernell. Now there is a fourth fruit growing of the wild Pine, and called those nuts are of the Grecians, Pitydia

dia; and these be singular good against the cough. The Taurines in Calabria, haue a deuice to conſect Pine-nut kernels, by ſeething them in hony; and being thus condite, they call them Aquiceli. To conclude, at the ſolemne and feſtiuall games holden at Iſthmus, they who win the beſt prize, are woont to be crowned with a chaplet of the Pine.

CHAP. XI.

¶ Of the Quince.

Next to Pine apples, for big and large, are the Quinces which we call Coronea, the Greeks Cydonea, becauſe they were firſt brought out of Candy. So heauy and maſſie they be, that they bend the boughs to the ground as they hang vpon the tree, and will not ſuffer their mother to grow.

Many kinds there be of Quinces, to wit, Chryſomela, of a colour inclining to gold, and diuided by certain cut lines. Secondly, there be the quinces of our own country, & ſo called: theſe be whiter, and of an excellent ſmell. They alſo that come out of the realm of Naples, be highly eſteemed. Now there be a ſmaller ſort of the ſame kind called Struthea (i. the Peare-quince) and thoſe do caſt a more odoriferous ſmell: late they beere they come to ripeneſſe or perfeſtion; whereas contrariwiſe the green quinces called Muſtea, be as haſty and ſoon melow. Now if a man do graffe the great quinces vpon the Struthea, the tree wil bring forth a kind of quinces by themſelues called Muluiana; and theſe are the quinces alone of all other that may be eaten raw. In ſum, all the ſort of theſe are come now adae to be entertained within the waiting or preſence chambers of our great perſonages, where men giue attendance to ſalute them as they come forth euery morning; and in bed-chambers alſo they are to garniſh the images ſtanding about the beds-head and ſides.

There are beſides ſmall wiild quinces, next to the Peare quince Struthea, for pleaſant and odoriferous ſmell; and they grow commonly in hedge-rows.

Moreouer, as wel Peaches as Pomegranats, notwithstanding they be of a diuers kind, yet wee call Mala (i. apples.) As for the Pomegranats, we haue ſpoken of nine ſorts of them in our treatiſe of their trees, and others in Africk: and theſe are full of certaine graines or kernels lying incloſed vnder their rinde; whereas Peaches haue in ſtead thereof, a groſſe ſtone or woody ſubſtance within the carnous pulpe of the fruit. To conclude, there be certaine peares weighing a pound, in regard of which poiſe and bigneſſe that they beare, called they are Libralia.

CHAP. XII.

¶ Of the Peach, and ſoure kinds thereof.

OF all Peaches, the principall be thoſe which are named Duracina, for the ſolid ſubſtance of the meat within them. As for the French and Aſiaticke Peaches, they beare the name of the regions and nations from whence they come. This fruit ordinarily waxeth ripe after the fall of the leaſe, or Autumne: but the Abricoſts are ready to be eaten in Summer. Theſe haue not bin known full 30 yeares, and at their firſt comming vp, were ſold for Roman deniers a peece, whereof there be two ſorts; Supernatia, which we haue from the high countries, & namely the Sabines; and Popularia, which grow common euery where. Theſe fruits be harmleſſe, and much deſired of ſicke folke: and for that they are in ſuch requeſt, there would be giuen otherwhiles 30 ſeſterces for one of them, which is a price as high as of any other fruit whatſoeuer: whereat we may maruell the rather, for that there is not any ſooner gone, and laſteth leſſe while than they: for being once gathered from the tree, they will not be kept about two daies at the moſt, and therefore muſt of neceſſitie be ſold and ſpent out of hand.

CHAP. XIII.

¶ Of the Plum-tree, eleuen kinds of them.

TO come now to Plums, there is a world of them: ſome of ſundry colours, others black, and ſome againe white. There be that are called Hordearia, becauſe they be ripe in barly-harueſt: and ſome there be of the ſame colour, yet later ere they ripen, and bigger beſides; and

and for that they be of ſmall reckoning, named they are Aſinina [i. * Aſſe-plums.] Ye ſhal haue of them that be black, howbeit the yellow wheat-plum like virgin-wax, and the purple, are better eſteemed. Moreouer, there are a kind of Abricoſts come from a forraine nation, and they be called thereupon Armeniaca, which alone for their ſmell alſo are commendable. But there is a peculiar brauerie and a ſhameleſſe, which thoſe Plums haue by themſelues that are graſſed in Nut-tree ſtocks; they retain the face and forme ſtill of the mother graffe, but they get the taſte of the ſtock wherein they are ſet, as it were by way of adoption: of them both they carry the name, and are called nut-plums. Now, as wel theſe, as Peaches, yellow wheat-plums, & the wild Bullaiſe, may be kept and preſerued as grapes in Autumne, within certain barrells or earthen veſſels; and ſo they will continue good till new come. As for all other plums, as they be ſoon ripe, ſo they are as ſoone gone.

B It is not long ſince, that in the realm of Granada and Andaluſia, they began to graffe plums vpon apple-tree ſtocks, and thoſe brought forth plums named Apple-plums: as alſo others called Almond-plums, graſſed vpon Almond-ſtocks; theſe haue within their ſtone a kernel like an Almond: and verily there is not a fruit again wherein is ſeene a wittier deuice to conioine and repreſent in one and the ſame ſubieſt, two diuers ſorts.

As for the Damafcene-plums (taking name of Damafco in Syria) we haue ſufficiently ſpoken thereof in our treatiſe of ſtrange trees: and yet long ſince they haue bin knowne to grow in Italy: which although they haue a large ſtone and little carnoſity about them, yet they neuer wither into wrinkles and riuels when they be dry, for that they want the full ſtrength of the kind Sun which they had in Syria.

C We ſhould do wel to write together with them, of the fruit Sebeſten, which alſo come from the ſame Syria, albeit now of late they begin to grow at Rome, being graſſed vpon Soruices. As touching peaches in generall, the very name in Latine, whereby they are called Perſica, doth euidently ſhew that they were brought out of Perſia firſt; and that it is a fruit not ordinary either in Greece or Natolia, but a meere ſtranger there. Contrariwiſe wilde plums (as it is well knowne) grow euery where. I maruell therefore ſo much the more, that *Cato* made no mention thereof, conſidering that of purpoſe he ſhewed the maner, how to preſerue and keep diuers wilde fruits, till new came: for long it was firſt ere Peach trees came into theſe parts, and much adoe there was before they could be brought for to proſper with vs, ſeeing that in the Iſland Rhodes (which was their place of habitation next to Egypt) they beare not at all, but are altogether barren. And whereas it is ſaid, That Peaches be venomous in Perſia, & do cauſe great torments in them who do eat thereof; alſo that the KK. of Perſia in old time cauſed them to be transported ouer into Egypt by way of reuenge to plague that country; and notwithstanding their poiſonous nature, yet through the goodnes of that ſoile they became good and holeſom: all this is nothing but a meere fable & a loud lie. True it is indeed, that the beſt writers who haue been painful about others to ſearch out the truth, haue reported ſo much concerning the tree Perſea; which is far different from the Peach tree Perſica, & beareth fruit like to Sebeſten, of color red, and willingly would not grow in any country without the Eaſt parts: and yet the wiſer & more learned Clerkes do hold, That it was not the tree Perſea which was brought out of Perſia into Egypt, for to annoy and plague the country, but that it was planted firſt by K. *Perſeus* at Memphis. Whereupon it came, that *Alexander* the Great ordained, That all victors who had won the prize at any game there, ſhould be crowned with a chaplet of that tree, to honor the memoriall of his great grandfathers father. But how euer it be, certaine it is that this tree continueth greene all the yere long, and beareth euermore fruit one vnder another, new and old together. And to returne again to our Plum-trees, euident it is that in *Cato's* time they were not knowne in Italy, but all the Plum-trees which we now haue, are come ſince he died.

CHAP. XIII.

¶ Of nine and twenty kinds of Fruits, contained vnder the names of Apples.

OF Apples (that is to ſay, of fruits that haue tender ſkins to be pared off) there bee many ſorts. For as touching Pome-citrons, together with their tree, we haue already written. The Greeks call them Medica, according to the name of the country from whence they firſt came in old time. As for Iujubes, alſo the fruit Tuberes, they bee likewiſe ſtrangers as

well as the rest; and long it is not since they arrived first in Italy; the one sort out of Africk, the other, namely Iujubes, out of Syria: & *Sextus Papinius* (whom my self in my time saw Consul of Rome) was the first man that brought them both into these parts; namely in the later end of *Augustus Caesar* the Emperor, and planted them about the rampiers of his campe, for to beautifie the same. Howbeit, to say a truth, their fruit resembled rather berries than apples; yet they make a goodly shew vpon the rampiers: and no maruell, since that now adayes whole groves of trees begin to ouertop and furrmount the houses of priuat persons.

Concerning the fruit Tuberes there be two sorts thereof, to wit, the white and the reddish, called also Sericum, of the colour of silke.

The Apples named Lanata are held in manner for strangers in Italy, and are knowne to grow but in one place thereof, and namely within the territory of Verona. Couered they be all ouer with a kind of down or fine cotton, which albeit both quince and peach be clad and ouergrown with in great plenty, yet these alone cary the name thereof: for otherwise, no special propertie are they known by to commend them.

A number of apples there are besides, that haue immortalised their first founders and inventers, who brought them into name, & caused them to be known abroad in the world; as if therein they had performed some worthy deed beneficiall to all mankind. In which regard, why should I think much to rehearse & reckon them vp particularly by name? for if I be not much deceived, thereby will appeare the singular wit that some men employed in grafting trees; and how there is not so small a matter, so it be wel and cunningly done, but is able to get honor to the first author, yea, and to eternise his name for euer. From hence it comes, that our best apples take their denominations of *Matius*, *Cestius*, *Manlius*, & *Claudius*. As for the quince-apples, that come of a quince grafted vpon an apple stock, they are called Appiana, of one *Appius* who was of the *Claudian* house, and first deuised and practised that feat. These apples cary the smel with them of quinces: they beare in quantitie the bignesse of the *Claudian* apples, and are in color red. Now lest any man should think that this fruit came into credit by reason only of partiall fauor, for that the first inuentor was a man descended from so ancient & noble a family, let him but think of the apples Sceptiana, which are in as great request as they for their passing roundnesse; and they beare the name of one *Sceptius* their first inuentor, who was no better than the son of a slave lately enfranchised. *Cato* maketh mention of apples called Quiriana, as also of Scantiana, which he saith the maner is to put vp in vessels and so keep them. But of all others, the last that were adopted, and tooke name of their patrons and inuentors, be Petisia: though they be little, yet are they passing sweet and pleasant to be eaten.

Other apples there are that haue ennobled the countries from whence they came, and caried their names, to wit, Camerina and Gracula. All the rest took name either vpon some occasion or propertie that they haue: to wit, of brotherhood, as the twin-apples Gemella, which hang one to another by couples, and neuer are found single, but alwaies grow double: of their color, as the Serica, which for their fresh hew are so called: of kinred and affinitie, as the Melapia: for their resemblance and participation of apples and peares together, as a man would say, Peare-apples, or pom-poures: of their hasty ripenesse, as the Mustea [i. hasty apples;] which now of their sweet tast of hony, are called Melimela [i. hony apples;] also of their exquisite roundnesse like a bal, as the Orbiculata [i. the round apples.] That these apples came first from their native country Epirus, appeareth by the Greeks, who call them Epirotica. Again, some there be that take their denomination of their forme, resembling womens paps or breasts, as namely Orthomastica, [i. the Breast-apples.] Others, for that their condition is to haue no pepins or seed within them, be called of the Belgians, Spadoma, as one would say, Guelded apples. As for the Meliosolia, [i. the leafe apples] they be so called, because they haue one leafe and otherwhile twain breaking forth of their side in the very mids. The ragged apples Pannucea take this name, for that of all others they soonest be riuelled. The Puffes named Pulmonea are hoven foolishly, and swell I cannot tell how, with little or nothing in them. Some in colour resemble bloud, they are so red, because at first they were grafted vpon a mulberry. But all apples ordinarily are red on that side that regardeth the Sun.

As for wildings and crabs, little they be all the sort of them, in comparison: their tast is well enough liked, and they cary with them a quick and sharp smel: howbeit this gift they haue for their harsh sourenesse, that they haue many a foule word and shrewd curse giuen them, and that they

A they are able to dull the edge of any knife that shal cut them. To conclude, the Dacian Apples are of all others in manner least accepted, notwithstanding they be first mellow, and would be gathered betimes.

CHAP. XV.

¶ Of Peares. And of the varietie of grafting.

Vpon the same cause there be Peares also reproched with the name of Pride, and are called the Proud-peares: little they are, but quickley ripe, and as soone gone. Of all others the Crustumine peares be most delicate and pleasant in tast. Next to them in request are the B Falern peares, so called for their great abundance of liquor, as it were wine, whereof they be full. And these are likewise named the milk-peares: but such of them as are of color black, be called the Syrian peares. As for other peares, they haue sundry names according to the countries where in they grow. Howbeit these peares following, retain their name still in all places, and represent alwaies the memoriall of those that first planted or grafted them, to wit, Decimiana of one *Decimus*, a known citizen of Rome: of which is also a bastard kind which they call Pseudodecimiana. Likewise, the Dolobellian peare, of one *Dolobella*: and those are of all other the longest tailed. As touching the Pompeian peares, which be also called the Pap or Teat-peares, the Licrian, the Seuerian, and of their race the Tyrannian, they differ one from another in the length of their steale. The red Faonian peares be somewhat greater than the abouenamed Proud-peares. As for the Laterian and Anitian, which be not gathered nor ripen vntill Autumne be past, they haue a prettie tart and fourish tast, but nathelesse pleasant ynough. The Tyberian peares beare the name of *Tiberius* the Emperor, for that of all others he loued that fruit best: they might go for Lycerians well ynough, so like they be vnto them, haue onely that they grow big, and are more deeply coloured with the Sunne.

Moreover, there are peares which are knowne by no other name than of the countries where they grow, namely, those of America which be more lateward than any other: the Picentine, Numantine, Alexandrine, Numidian, Grecian, and among them the Tarentine. Also the Signine peares, which many call Testacea, of the color of earthen pots that they resemble; like as others be named Onychium, for that they represent the Onyx stone, or a mans naile; as likewise those which be called Purple-peares.

D Furthermore, peares take their name of the odour which they yeeld: thus there be Myrapia, to wit, Aromaticall-peares, Laurell, and Nard-peares. Of the time also when they be ripe, as the Barley-pears: of the forme of their neck, as the Bottle-peares called Ampullacea: of their thick skin, as the Coriolana. As for the Gourd-pears, they are by nature of a brutish or savage kind; so harsh, so soure and eager a liquor they doe yeeld.

Many sorts of peares there are, whereof we can giue no certain reason for their denomination, namely, the Barbarian and Venerian peares, which also be called Colored: likewise, the roiall peares, which hang or rather sticke flat to the tree, so short a steale they haue. The Patritian also and Voconian peares, which are both green and long. Moreover, *Virgil* hath spoken of the E Voleman peares or wardens, which he had from *Cato*, who also nameth the Sementine or the hasty and soon ripe peares. So as in this point verily the world is growne alreadie to the highest pitch, inso much, as there is not a fruit, but men haue made trial and many experiments, for euen in *Virgils* daies the deuise of grafting strange fruits, was very rife: considering that he speaks of the Arbut tree grafted on Nut-trees, the Plane vpon Apple-trees, and the Elme vpon Cherrie stockes. In such sort, as I see not how men can deuise to proceed farther. And certes for this long time, there hath not bene a new kind of Apple or other fruit heard of.

And yet as industrious as men haue been that way, they are not permitted to graffe all manner of trees indifferently one in another, no more than it is lawfull to graffe vpon bushes and thornes: seeing that it is not so easie a matter to appease lightnings: for looke how many sorts of trees are thus engrafted contrarie to nature, so many kinds of lightnings and thunderbolts by report, are flashed and shot at once.

Peares naturally are more sharpe-pointed at one end than Apples. And among them, the Greeke peares, the Gourd and Laurell peares are last of all others ripe, for they hang vpon the tree vntill Winter, and they mellow with very frost: like as the Amerine and Scantiane apples.

Furthermore, peares are kept and preferred as grapes, and after so many waies: but none of them

them are put in barrels as plums be. Finally, Peares and Apples both, haue the properties of wine: and in like sort Physicians be wary how they giue them to their patients. Howbeit, when they be foddren in wine and water, they serue in stead of a broth or grewell: & so do no fruitels but Pome and Peare-Quinces.

CHAP. XVI.

¶ The manner how to preserve Apples.

The generall rules to keep and preserve Apples, are these, *Imprimis*, That the solars be wel plankd and boarded in a cold and drie place; provided alwaies, that the windows to the North do stand open, especially euery faire day. *Item*, to keep the windows into the South shut, against the winds out of that corner: and yet the North winds also where they blow, doe cause Apples to shrink and riuell illsaouredly. *Item*, That Apples be gathered after the Equinox in the Autumne: and neither before the full of the Moone, nor the first houre of the day. Moreouer, that all the Apples which fell, be seuered from the other by themselves, and laid apart: also that they be bedded vpon straw, mats, or chaffe vnder them: that they be so couched as that they touch not one another, but haue spaces between to receiue equall aire for to bee vented. To conclude, this is well knowne, that the Amerine Apples, doe last and keepe good long, whereas the honie Apples will abide no time.

CHAP. XVII.

¶ How to keep Quinces, Pome-granats, Peares, Soruisses, and Grapes.

For the good keeping and preserving of Quinces, there must be no aire let into them where they are enclosed: or else they ought to be conserved in foddren honey, or boiled therein.

Pomegranats should be plunged into sea-water boiling, and so hardened therein: and after that they be dried in the Sun three daies, (so as they be not left abroad in the night to take dew) they would be hanged vp in a solar, and when a man list to vse them, then they must be wel washed in fresh water. *M. Varro* sets downe the manner to keep them within great earthen vessels, in sand. And if they be not ripe, he would haue the earthen pots bottomes broke off, and so the Pomegranates to be put in, and covered all ouer with mould: but the mouth thereof must be well stopp'd for letting any aire in, provided alwaies, that the Steele and the branch wherto the fruit groweth, be pitched. For so (quoth he) they will not giue ouer to grow still, yea, and proue bigger than if they had remained vpon the tree. As for other Pomegranats [i. that are ripe] they may be wrapped and lapped one by one in fig-leaues, such as are not fallen, but plucked from off the tree Greene, and then to be put into twigge paniers of oifiers, or else daubed ouer with potters clay.

He that would keep Peares long, must put them in earthen vessels turned with the bottomes vpward, well varnished or annealed within, covered also with saw dust or fine shauings, and so entered. As for the Tarentine Peares, they abide longest on the tree ere they be gathered. The Anitian Peares be well preserved in cuit-wine.

As for Soruisses, they are kept also in trenches within the ground, but the couer of the vessel whereinto they are put, ought to be well plastered all ouer, and so stand two foot covered with earth: also they may be set in a place exposed open to the Sun, with the bottome of the vessels vpward: yea, and within great barrels they may be hung vp with their branches and all, after the manner of grape-clusters.

Some of our moderne writers handle this argument more deeply than others, and fetch the matter farre off, giuing out rules in this manner, saying, That for to haue Apples or Grapes *de garde*, that is to say, fit to be preserved, and to last long; the trees that beare the one and the other, ought to be pruned and cut betimes, in the waine of the Moone, in faire weather, and when the winds blow drie. Likewise they affirme, That fruits to be preserved, would be chosen from drie grounds: gathered before they be full ripe: and this would be looked vnto in any hand, that the Moon at the gathering time, be vnder the earth, and not appearing in our hemisphere. And more particularly, for Grape bunches they would be gathered with a foot or heele from the old hard wood, and the Grapes that are corrupt and rotten among the rest, be clipped off with a paire

A paire of sheers, or plucked out with pincers: then to be hung vp within a great new earthen vessel well pitched, with the head or lid thereof thoroughly stopp'd and plastered vp close, to exclude all aire. After which manner, they say Soruisses and Peares may be kept, but so, as in any case the twigs and steeles whereby they hang, be well besmeared with pitch. Moreouer, order would be giuen, that the barrels and vessels wherein they are kept, be far ynough from water. Some there be again who keep Grapes together with their branch, after the same maner in plaster: but so, as both ends of the said branch sticke in the head of the sea-Onion Squilla: and others let Grape-clusters hang within hog sheads and pipes hauing wine in them: but so, as the Grapes touch not the wine in any case. There be also that put Apples and such fruits in shallow pans or pancheons of earth, and let them swim and floe aloft vpon the wine within their vessels: for besides that this is a way to preserve them, the wine also (as they think) will thereby get a pleasant & odoriferous taste. Others ye haue besides, that chuse rather to preserve al these fruits, as well Apples, Peares, &c. as Grapes, couered in Millet seed. Howbeit, the most part dig a trench or ditch two foot deep in the ground, they floore it with sand in the bottome, and lay their fruits thereupon; then they stop the top with an earthen lid, and afterwards couer al with earth. Some there are which smeare their bunches of Grapes all ouer with potters clay; and when they are dried in the Sun, hang them vp in solars for their vse: and against the time that they should occupie them, steep them in the water, and so wash off the foresaid clay. But for to keep Apples that are of any worth, they temper the same clay with wine, and make a mortar, thereof, wherein they lap the said Apples. Now if those Apples be of the best kind and right

B foueraigne, after the same sort they couer them with a crust of the like past or mortar, or else clad them within a coat of wax: and if they were not fully ripe afore, they grow by that means and break their crust or couer what euer it be. But this would not be forgotten, that they vse alwaies to set the Apple or fruit vpriight vpon the taile, howsoeuer they be kept. Some there are who gather Apples and such like fruit with their slips and sprigs, hide them within the pith of an Elder tree, and then couer them in earth, as is before written. And others there are, who for euery Peare or Apple, haue a seuerall earthen pot, and after that their lids be well closed and stopp'd with pitch, then they enclose them again with great vessels or tuns. Nay ye shal haue some to lap them with flocks and wooll; and so put them in cases, and them they see wel luted with mortar made of clay and chaffe tempered together. Some order them in the same sort, but they put them in earthen pans: and others make no more adoe, but dig a hole in the ground, floore the bottom with a course of sand, put the Apples or fruit within, & then anon when they are thus buried, couer all with mould. These be that vse Quinces in this wise; they take them, anoint them with wax comming out of Pontus, and let them afterwards to ly covered in hony.

Columella mine Author reporteth, That fruits will keep well in earthen pots thoroughly pitched, and afterwards set in pits, and drenched in cisternes of water. In the maritime coasts of Liguria next to the Alpes, they vse to take Grapes after they be dried in the Sun & wrap them within bands of rushes and reeds, put them vp in little barrels, and stop them close with plaster. The Greeks haue the same fashion: but they take for that purpose, the leaues of the Plane-tree, of the vine it selfe, or else the fig-tree, after they be dried one day in the shade: and when they be in the barrell, betweene euery bed of grape clusters, they couer a course of grape kernels, and such refuse remaining after the presse. And in this manner are the grapes of Coos and Berytus preserved: and for sweetnesse and pleasant taste, there are no better to be found. And some there be, that for to counterfeite these excellent Grapes, besmeare them with lie ashes so soon as euer they be pulled from the Vine, and presently drie them in the Sunne: which done, they enwrap them within leaues, as hath been said before, and so couch them close within the cake of pressed grapes. Neuerthelesse, there be diuers that chuse rather to keepe Grapes in the saw dust or shauings of Firre-wood, Poplar, or Ash. Some are afraid to let grapes hang neer to Apples, Pomegranates, and such like fruit, and therefore giue in charge to let them presently after they be gathered, for to be hung vp in garners or boarded lofts: supposing that the dust which they gather from aboue, is the best couer to defend and preserve them. The remedie to keepe Wespes from them, is to spurt or squirt oile out of a mans mouth vpon them. And thus much concerning the way to preserve Grapes and other fruits aforesaid. As for Dates, we haue spoken sufficiently before of them.

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OF all other fruits that haue tender pills or skins, and are called in Latine, Poma, Figges are the biggest: for some of them are found to be as great as Peares. As touching the Sycomores of Egypt and Cypres, and of their admirable fruit we haue written yuough in the treatise of forraigne Trees. The Idean Figs that come from the mountaine Ida, are of color red, of the bignesse of Oliues, only rounder they be, & in tast resemble Medlars. In the region about Troas neare to the said hill Ida, they call that fig-tree Alexandrina. It is as thicke as a mans arme about at the cubite or elbow, and full of branches: the wood thereof is tough and strong, howbeit, pliable to wind and bend which way a man would haue it. Void of milky substance it is, clad with a green barke, bearing leaues like the Tillet or Linden tree, but that they be soft. *Onesicritus* writes, that the Fig-trees in Hyrcania beare more pleasant fruit than ours in Italie, without all comparifon: also that they carrie a greater burden, and be farre more plentifull, inso-much, as one of them ordinarily yeelds 270 Modij of Figs. We haue here also in Italie many Fig-trees brought out of other forraigne countries, to wit, from Chalcis and Chios: wherof there be many sorts. For both our Lydian Figs which are of a reddish purple color, and also the Mammillane or teat-Figs, haue a resemblance of the said Chalcidian and Chian Figs, yea, and the Calistruthion Figs beyond others not a little, in goodnes of tast: and these of all the rest are the coldest. As touching the Affricane Figs, which many men preferre before all others, they hold the name of Affricke, as if it were their native countrey: and yet there is a great question thereabout, and I wot not well what to say thereof, considering that it is not long agoe that Affricke begun first to haue Fig-trees. For the Alexandrine Figs are of the blacke kind, hauing a white rift or chamfre, and are surnamed Delicate. The Rhodian Fig is likewise blacke of hue: and so is the Tiburtine, which also is of the hasty kind, and ripe before others.

Moreouer, there be certaine Figs which beare the names of those that brought them first into Italy: namely, the Liuian and Pompeian, and such are fittest to be dried in the Sun and so to be kept all the yeare long for a mans vse: like as the illfaouored, foolish and gaping Figs Mariscæ: as also those that are speckled with spots like the leaues of Laconian reeds.

There are besides the Herculean, Albicerate and Aratian white Figges, which of all other are most flat and broadest, and withall haue the least taile or Steele wherby they hang. The Porphyrite Figs first shew vpon the tree, and ordinarily be longest tailed. The smallest Figs called the popular Figs, which also are of all others the basest & of least account, come next after and beare the Porphyrites companie. Contrariwise, the Chelidonian Figges be the last: and ripen against Winter.

Moreouer, certain Figs there be which are both early, & also lateward: namely, such as beare twice a yeare: and be both blacke and white: for they are ripe first in haruest, and afterwards, in time of vintage. Late also it is before the Duracinæ be ripe, so called of the hard skin which they haue. Also some there be of the Chalcidian kind which beare thrice a yeare. At Tarentum there grow none but such as are exceeding sweet, and those they call Omas [or rather Oenadas, tasting of wine.]

Cato in his treatise of Figs writes thus, The vnfaourie Fig dotes, Mariscæ, would be sowne in an open, light, and chalkie ground. But the Affricane, Hirculane, and the Winter Saguntine Figges, as also the Telliane (which are blacke and long tailed) loue a fatter soile, or else well dunged.

After this, Figges haue changed into so many kinds, and altered their names very often: in such sort that by this point it is euident, how the world is altered, and to what varietie this life is subject. In some prouinces, as namely in Mœsia, there be winter Figs that hang all Winter long: but they come to be such, more by art and cunning, than naturally of themselves. For so soone as Autumne is passed, and Winter approches, they vse to couer with dung certaine little Fig-trees which they haue, and together with them the green yong Figs that they find on them in Winter: and when they haue continued so the sharpe time of dead Winter, so soone as the weather beginnes to be more warme and temperate, they discharge both fruit and tree of their dung: which being thus let out again (as it were) where they seemed buried, and now comming

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Atolight, they no sooner find the fresh aire, & another kind of nourishment differing from that, whereby they liued, but doe embrace and receive the comfort of the new Sun most greedily, as if they were new born and reuiued: in such sort, as that in Mœsia, notwithstanding it be a most cold region, ye shall haue the figs of these trees to ripen, when others begin to blossom, and by this means become early and hasty figs in another yeare.

Now forasmuch as we are fallen to mention the figs in Affricke, which were in so great request in the time of *Cato*, I am put in mind to speake somewhat of that notable opportunity and occasion which by the means of that fruit he took for to root out the Carthaginians, & rase their very city. For as he was a man who hated deadly that city, and was otherwise carefull to provide for the quiet and securitie of his posteritie, he gaue not ouer at every sitting of the Senat, to importune the Senators of Rome, and to cry out in their eares, That they would resolve and take order to destroy Carthage: and in very truth one day about the rest, he brought with him into the Senat house an early or hasty fig which came out of that country, and shewing it before all the lords of the Senat, I would demand of you (quoth he) how long agoe it is (as you think) since this fig was gathered from the tree? And when none of them could deny but that it was fresh, and new gotten: Lo (quoth he) my masters all, this I do you to wit, It is not yet full three daies past since this fig was gathered at Carthage: see how neere to the walls of our citie we haue a mortall enemy. Vpon which remonstrance of his, presently they concluded to begin the third and last Punick war, wherein Carthage was vtterly subuerted and ouerthrowne. Howbeit *Cato* suruiued nor the rasing and saccage of Carthage, for he died the yeare immediately following this resolution. But what shall we say of this man? whether was more admirable in this act, his prouident care and promptnesse of spirit; or the occasion presented by the sudden obiect of the fig? was the present resolution and forward expedition of the Senat, or the vehement earnestnesse of *Cato*, more effectuall to this enterprize? Certes, somewhat there is about all, & nothing in mine opinion more wonderful, that so great a signiory and state as Carthage, which had contended for the Empire of the world for the space of 120 yeres, and that with the great conquerours the Romanes, should thus be ruined and brought vtterly to nought, by occasion of one fig. A designe that neither the fields lost at Trebia and Thrasymenus, nor the disgrace receiued at the battell of Cannæ, wherein so many braue Romans lost their liues, and left their dead bodies on the ground to be interred, could effect: nay not the disdain that they took to see the Carthaginians incamped and fortified within 3 miles of Rome, ne yet the brauadoes of *Annibal* in person, riding before the gate Collina, euen to dare them, could euer bring to passe. See how *Cato* by the means of one poore fig, preuailed to bring and present the forces of Rome to the very walls of Carthage.

There is a fig tree called *Navia*, honoured with great reuerence, in the common Forum and publique place of iustice at Rome, euen where the solenne assemblies are held for election of Magistrats, neere to the Curia, vnder the old shops called *Veteres*: as if the gods had consecrated it for that purpose: neere (I say) it is to the Tribunal named *Puteal Libonis*, & there planted by *Actius Nauus* the Augur, where the sacred reliques of his miracle, to wit, the Rafter and the Whetstone, were solemnly interred: as if it came of the owne accord from the said Curia into the Comitium, and had not bin set by *Nauus*. This tree if it begin at any time to wither, there is another replanted by the priests, who that way are very carefull and ceremonious. But a greater respect is had of another in remembrance of the first fig tree named *Ruminalis* (as it were) the nurse of *Romulus* and *Remus*, the two yong princes fondlings, and founders also of the city of Rome: for that vnder it was found a she wolfe, giuing to those little babes the teat (in Latine called *Rumen*): and for a memoriall hereof there is a monument of brasse erected neere vnto it, representing that strange and wonderfull story. There grew also a third fig tree before the temple of *Saturne*, which in the yeare 260 after the foundation of the city of Rome, was taken away, at what time as a chappell was builded there by the Vestal nuns, and an expiatory sacrifice offered, for that it ouerthrew the image of *Sylvanus*. There is a tree of the same kind yet liuing, which came to grow of it self, no man knows how, in the midst of the Forum Romanum, and in that very place where was the deepe chinke and gaping of the ground, that menaced the ruine of the Roman empire; which fatall and portentuous gulfe the renowned knight *Curtius* filled vp with the best things that were to be found in the city, to wit, his Vertue and Piety incomparable, testified by a most braue & glorious death. In the very same place likewise there is

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an Olive and a Vine, which came thither by as meere a chance, but afterwards well looked and trimmed by the whole people; for to enjoy the pleasure and shade thereof. And there also stood an altar, which afterward was taken away by occasion of the solemne shew of sword-fencers, which *Iulius Caesar* late Emperor, exhibited to do the people pleasure, which were the last that plaied their prizes, and fought at the sharp in the said Forum. To conclude, wonderfull it is to see, how the fruit of this tree maketh fast to ripe: a man would say that Nature therein sheweth all her skill and force to ripen figs altogether at once.

CHAP. XIX.

¶ Of the wilde Fig trees: and of caprification.

There is a kind of wild Fig trees, which the Latines call *Caprificus*, that neuer brings any fruit to maturitie; but that which it selfe hath nor, it procureth to others, and causeth them to ripen. For such is the interchangeable course & passage of causes in nature, that as this thing putrifieth, that ingendreth; and the corruption of one is the generation of another. By this it comes to passe, that the wild fig tree breedeth certaine flies or gnats within the fruit thereof: which wanting nourishment, and nor hauing to feed vpon in those figs, because they become rotten and putrified as they hang vpon the tree, they flie vnto the other kinde of gentle and tame fig-trees, where they settle vpon the figs, and greedily nibble thereupon, vntill they haue made way and pierced into them; and by that means let in at first the breath of the warme Sun, and that comfortable and vegetatiue aire besides that helpeth to ripen them. Soon after they suck vp and spend the milky humor which they find there, and which keeps the figs still as it were in their infancie, and hindreth their speedy and timely maturitie. True it is, that the figs in time would ripen of themselves by the power and benefit of Nature only: howbeit skilfull and industrious husbandmen take order alwaies to set these wild fig trees neere to the place where other fig trees grow, but with due regard of the winde side, that when the foresaid gnats breake forth and are ready to fly out, a blast of wind might carry them to the other. And hereupon came the deuise and inuention to bring whole swarms & casts of them, as they hang one to another, from other places, that they might settle vpon the figs to consume the raw moisture within. Now if the soile be lean and hungry, and the fig trees growing therupon exposed to the North wind, there is no such need of this help: for the figs will dry sufficiently of themselves, by reason as well of the situation of the place, as the cliffs and rifts in them, which will effect that which the gnats or flies about named might performe. The like effect is to be seen also where much dust is, namely, if a fig tree grow neere vnto a high-way much frequented and travelled by passengers. For the nature of dust is to dry and soke vp the superfluous moisture of the milke within figs. And therefore when they are thus dried, whether it be by the means of dust, or of the said flies feeding, which is called *Caprification*, they fall not from the tree so easily, by reason they are discharged of that liquid substance which maketh them both tender, and also ponderous, weighty, and brittle withall.

All figs ordinarily are tender and soft in handling. Those which be ripe haue small graines within them: their succulent substance besides, when they begin to ripen, is white like milke: but when they are perfectly ripe it is of the colour of hony. They will hang vpon the tree vntill they be old, and when they are aged, they yeeld a certain liquor which distilleth from them in manner of a gum, and then in the end become dry.

The better sort of figs haue this honor and priuiledge, to be kept in boxes and cases for the purpose: and chiefly those which come from the Isle *Ebusus*, which of all others are the very best and largest: yea, and next to them those that grow in the *Marrucines* country. But where they are in more plenty they put them vp in great vessels called *Orcæ*, as namely in *Asia*: also in barrels & pipes, as at *Ruspina* a city in *Barbary*. And in very truth, the people of those countries make that vse of them when they be very dry, that they serue both for bread and meat. For *Cato* setting downe an order for dyet and victuals fit and sufficient for labourers, ordained, that they should be cut short of their other pittance, when figs are ripe, and make vp their full meals with it. And it is not long since the manner came vp to eat fresh new figs with salt and powdered meats, in stead of chiefe. And for to be eaten in this sort, the figs called *Coctana* (whereof we haue written before) and the dried figges *Caricæ* are commended: as also the *Cauncæ*, which

A which when *M. Crassus* should imbarque in that expedition against the Parthians (wherein he was slain) presaged ill fortune, and warned him not to go forward: namely, when at the very instant that he was ready to set foot a ship-board, there was a fellow heard to cry those figs for to be sold, pronouncing aloud, *Cauncæ, Cauncæ*: which word in short speaking was all one with *Cave ne eas* [i. Beware of this voiage, and go it not.] All these sorts of figges *L. Vitellius* brought out of *Syria*, into his ferm or manor that he had neere *Alba*, hauing *L. Gouvernor* or *Lientenant* generall in those parts, namely, in the later end of *Tiberius Caesar* the Emperor: and the same *Vitellius* was afterward Censor at Rome.

CHAP. XX.

¶ Of Medlars: three kinds of them.

Medlars and Seruices may well and truly be ranged in the ranke of Apples and Peares: Medlars be of three sorts; namely, *Anthedon*, *Serania*, and the third which they call *Gallicum*, [i. the French Medlar] which is of a bastard nature, yet it resembles the *Anthedon* rather than the other. As for the *Setanian* Medlar, the fruit is greater and whiter than the rest; also the kernels or stones within are of a more soft substance, and not altogether so woody and hard. The rest are smaller than these *Setania* or common Medlars, but they haue a better smell and more odoriferous, and withall will last longer. The tree it selfe that beareth Medlars is reckoned among the greatest sort: the leaues before they fall wax red: the roots be many in number, and run downe right deep into the ground: by which means, vnneth or verie hardly they be quite rooted vp. This tree was not known in Italy by *Cato's* dayes.

CHAP. XXI.

¶ Of Seruices, foure kinds.

OF Seruices there be foure sundry sorts, differing one from another: for some of them are round like apples, others pointed at the end as Peares; a third kinde are fashioned like eggs, as some long or tankard apples: and these are apt to be soon foure. For sweet sent and pleasant tast the round excell all others: the rest haue a relish of wine. The best kinde of them are they that haue soft & tender leaues about their steles whereby they hang. The fourth sort they call *Torminale*, allowed onely for the remedie that they afford to mitigate the torments and wringing of the colique. This tree is neuer without fruit, howbeit the smallest of all the rest, and differeth from the other, for it beareth leaues very like to the Plane. There are none of them that beare fruit before they be three yeares old. Lastly, *Cato* would haue Seruices to be preferred and condite in Cuit.

CHAP. XXII.

¶ Of the Wall-nut.

The next place to these for bignes, the Walnuts doe challenge, which they cannot claime for their credit and authoritie; and yet they are in some request among other licentious and wanton *Fescennine* ceremonies, at weddings: for lesse they be than Pine nuts, if a man consider the grossefne of the body outwardly; but in proportion therto they haue a much bigger kernel within. Moreover, Nature hath much graced and honoured these nuts with a peculiar gift she hath endued them with, namely, a double robe wherewith they are clad: the first is a tender and soft husk; the next, a hard and woody shel: which is the cause that at mariages they serue for religious ceremonies, resembling the manifold tunicles and membranes wherein the infant is lapped and enfolded within the womb: and this reason foundeth more probable, than that they should be scattered, because in their fall they rebound and make a ratling [to drowne (forsooth) all other noises from the bride-bed or chamber.] That these Nuts also were brought out of *Persia* first by commandement of the Kings, is euident by their Greeke names; for the best kind of them, they call *Persicon*, and *Basilicon*; as one would say, the Persian and Royall nut: and these indeed were the first names. Afterwards, the nut came to be named *Caryon*, (by all mens confession) for the heauinesse of head which it causeth, by reason of the

Q 9

strong

strong smell. Their outward husk serues to die wooll: and the little nuts when they come new forth are good to giue the haire of the head a reddish or yellow colour. The experiment thereof was first found by staining folks hands as they handled them. The elder that nuts be & longer kept, the more oleous and fatty they are. The only difference in the sundry kinds consisteth in the shell, for that in some it is tender and brittle, in others hard; in one sort it is thin, in another thick: lastly, some haue smooth and plain shells, others again be as full of holes and cranies.

Walnuts be the fruit alone that Nature hath inclosed with a couer parted in twaine, and so is ioyned and set together; for the shell is diuided and cleft iust in the middle, and each halfe resembleth a little boat. The kernell within is distinguished into foure parts, and between euery of them there runneth a membrane or skin of a woody substance. As for other nuts, their meat is solid and compact, as we may see in Filberds and Hazels, which also are a kind of nuts, and were called heretofore Abellinae, of their native place, from whence came good ones at first. They came out of Pontus into Narolia and Greece, and therefore they be called Pontick nuts. These Filberds likewise are covered with a soft bearded huske, and as well the shell as the kernell is round and solid, all of one entire piece. These nuts also are parched for to be eaten, and within their belly they haue in the mids a little chit or spirt as if it were a nauill.

As for Almonds, they are of the nature of nuts, and are reckoned in a third ranke. An vpper husk they haue like as Walnuts, but it is thin: like as also a second couerture of a shell. The kernell differeth somewhat, for broader it is and flatter, and their skin more hard, more sharpe, and hotter in taste than that of other nuts. Now whether the Almond tree were in Italy during the life of *Cato*, there is some doubt and question made; because he nameth the Greeke nuts, which some do hold for a kind of walnut. Mention maketh he besides of the Hazel nuts or filberds, as well the * *Galbae*, as the *Preneftine*, commended by him aboue all others, which hee saith are put vp in pots, and kept fresh and green within the earth. Now adaies the Thasian and Albeusian nuts be in great account; and two sorts besides of the Tarentine; whereof the one hath a tender and brittle shell, the other as hard: and those are the biggest of all other, and nothing round. He speaketh also of the soft shaled Filberds *Mollusca*, the kernels whereof doe swell and caufe their shells to breake in sunder.

But to return again to our Walnuts: some to honor them interpret their names *Iuglandes*, as a man would say, the nuts of *Iupiter*. It is not long since I heard a knight of Rome, a gentleman of high calling, and who had bin Consul, professe and say, that he had certain walnut trees that bare twice a yeare. As for Fifticks we haue spoken already of them. To conclude, these kind of nuts the aboue named *Pitellius* brought first into Italy at the same time, namely, a little before the death of *Tiberius* the Emperor: and withall, *Flaccus Pompeius* a knight of Rome, who serued in the wars together with him, caried them ouer into Spain.

CHAP. XXIII.

¶ Of Chestnuts eight kinds.

WE entitle Chestens also by the name of Nuts, although indeed they are more aptly to be called a kind of Mast. This fruit what euer it be is inclosed within a huske, and the same defended and armed all ouer with a rampier and palisade (as it were) of sharp prickles like the skin of an vchin; whereas the Acorn and other Mast is but half covered, and that defence in them is begun only. And certes, a wonderfull matter it is that we set so little store by this fruit, which Nature is so carefull to hide and defend. Vnder one of these husks ye shall find sometime three Chestnuts, and those hauing certain tough pills or shells very pliable. But the skin or filme within, and which is next to the body or substance of the fruit, vlesse it be pilled off and taken away, marreth the taste of it, like as it doth also in other nut-kernels. Chestnuts if they be roasted are better and more pleasant meat than otherwise. They vse also to grind them to meale, and thereof is made a kind of bread, which poore women for hunger will eat. The first Chestnuts were known to grow about Sardis, & from thence were brought, wherefore the Greeks call them Sardinian nuts: but afterwards they came to be named *Alie Banaia*, [*i. Jupiters* nuts] when as men began to graffe them; for thereby they became more excellent. And this day there be many sorts of them. The Tarentine be gentle and not hard of digestion, and in forme flat and plaine. That which they call *Balanitis*, is rounder, it will soone be pilled and

cleansed,

cleansed, and of it selfe will leape out of the skin. And of this kind, the *Salarian* is more neat, flat, and smooth: the Tarentine not so easie to be handled and dealt withall: the *Corellian* is more commended than the rest; as also the *Meterane*, which commeth of it by graffing: the manner whereof we will shew when we come to treat of graffes. These haue a red pilling, in which regard they are preferred before either the three cornered, or the blacke common ones, which be also called *Coctiua*, [*i. Chestnuts* to be boiled.] The best Chestnuts are they which grow about Tarentum, and Naples in Campaine. All the rest are good in manner for nothing but to feed swine, * so close sticketh the pill or inner skin in also, as if it were sodered to the kernell within, and so hard it is to separate the one from the other.

* *Scrupulosa corticis interioris circa nucleos quoque fermentatione.*

CHAP. XXIII.

¶ Of Carobes: of fleshie and pulpous fruits: of Mulberries: of liquid kernels or graines, and of berries.

THe fruit called Carobes or Caracts, may seeme to come neare vnto the foresaid Chestnuts, (so passing sweet they be) but that their cods also are good to be eaten. They be as long as a mans finger, and otherwhiles hooked like a faulcheon, and an inch in bredth. As for mast, it cannot be reckoned among fruit properly called Poma, and therefore we will speake of them apart, according to their nature.

Now are we to treat of the rest which are of a carnosus substance: and those are diuided into fruits that be soft and pulpous, and into berries. The carnosity in Grapes and Raisons, in Mulberries, and the fruit of the Arbut tree, differs one from the other. Againe, the fleshy substance in Grapes between the skin and the liquid juice, is one, and that in Sebesten is another. Berries haue a carnosity by themselves, as namely Oliues. Mulberries yeeld a juice or liquor within the pulpe thereof, resembling wine. They be ordinarily of three colours: at the beginning, white; soone after, red; and when they be ripe, blacke. The Mulberrie tree bloometh with the last, but the fruit ripeneth with the first. Mulberries when they be full ripe, staîne a mans hand with the juice thereof, and make them blacke: but contrariwise being vnripe, they scoure them cleane. There is not a tree againe, wherein the wit of man hath bin so little inuentiue, either to deuise names for them, or to graff them, or otherwise, saue only to make the fruit fair and great. There is a difference which we at Rome doe make, betweene the Mulberries of *Ostia* and *Tusculum*. There is a kind of Mulberries growing vpon the bramble, but their skin is much harder than the other. Like as the ground-strawberries differ in carnositie from the fruit of the Arbut tree, and yet it is held for a kind of Strawberry, even as the tree it selfe is reamed the Strawberry tree. And there is not a fruit of any other tree, that resembleth the fruit of an hearb growing by the ground, but it.

The Arbut tree it selfe spreadeth full of branches: the fruit is a whole yeare in ripening; by which means a man shall find alwaies vpon the tree, yong and old fruit together one vnder another; and the new euermore thrusts out the old. Whether it be the male or female that is barren, writers are not agreed. Surely the fruit is of base and no reckoning at all: no mariuell therefore if the Latines gaue it the name *Vnedo*, for that one of them is enough to be eaten at once. And yet the Greeks haue two names for it, to wit, *Comarum* & *Memecylon*: whereby it appeareth, that there be as many kinds among the Latines also, although it be reamed by another name, *Arbutus*. *K. Julia* saith, that these trees in Arabia grow to the heighth of fiftie cubites.

As touching Graines and liquid Kernels, there is great difference betweene them: for first and formost, among very grapes, there is no small diuersitie in the skin, either for tendernes or thickness: in the inner stones or pepins, which in some grapes are but single, or one alone; in others double, and those commonly yeeld not so much wine as the others do. Secondly, those of Iuie and Elder differ very much, yea and the graines within a Pomegranat are not like to others in their forme, for they alone be made cornered and angle-wise; and seuerall as they bee, they haue not a particular skin of their own, but they are altogether clad within on, which is white: and yet they stand all wholly of liquor and pulpous carnositie, especially those which haue within them but a small stone or woodie kernell.

Sensibly, there is as much varietie in berries: for oliues differ much from Bay berries: likewise those of a Lote tree are diuers from them which the Cornel tree beares. The Myrtle also differeth

differeth from the Lentisk in the verie berrie. As for the huluer or hollie berries, and the hawes of the white-thorn, they are without any juice or liquor: whereas Cherries be of a middle kind, betwene berries and graines. This fruit is white at the first, as lightly all berries be whatsoeuer: but afterwards some waxe greene, as Oliues and Baies; others turn red, as Mulberries, Cherries, and Cornoilles; but in the end they all become blacke, as Mulberries, Cherries, and Oliues.

CHAP. XXV.

¶ Of Cherries, eight kinds.

BEfore the time that *L. Lucullus* defeated *K. Mithridates*, there were no cherrie-trees in Italy: but after that victorie (which was about the 680 yeare from the foundation of the citie of Rome) he was the man that brought them first out of Pontus, and furnished Italie to well with them, that within fixe and twentie yeres, other lands had part thereof, even as far as Britain beyond the ocean. Howbeit (as we haue before said) they could neuer be brought to grow in *Aegypt*, for all the care and industrie employed about them. Of Cherries, the reddest fruit bee called *Apronia*; the blackest, *Actia*; the *Cæcilian* be round withall. The *Iulian* Cherries haue a pleasant tast, but they must be taken new from the tree and presently eaten; for so tender they be otherwise, that they will not abide the carriage. Of all other, the *Duracine* Cherries be the foueraign, which in *Campaine* are called *Pliniane*. But in *Picardie*, and those low countries of *Belgica*, they make most account of the *Portugall* Cherries: as they do also who inhabite vpon the riuer *Rhene*. They haue a hew with them composed of three colors, between red, black and green, and alwaies look as if they were in ripening still. It is not yet full 5 yeres since the Cherries which they call *Laurea*, were known: so called they be, because they were grafted on a Bay-tree stocke, and thereof thy take a kind of bitterness, but yet not vnpleasant to the tast. There be moreouer *Macedonian* Cherries, growing vpon a small tree feldome about three cubits high: and yet there be certain dwarfe Cherries not full so tall, called *Chamecerasti*, [*i. ground cherrry-shrubs.*] The Cherry-tree is one of the first that yeelds fruit to his master, in token of thankfulness & recognisance of his paines all the yeare long. It delights to grow in cold places and exposed to the North. The Cherrie wil drie in the sun, and may be kept in barrells like Oliues.

CHAP. XXVI.

¶ Of the Corneile and Lentiske tree.

THe same care is had in conditing the berries of the Corneil and the Lentiske, as in preserving Oliues: so curious are men to content their tooth, as if all things were made to serue the belly. Thus we see, how things of diuers relishes are mingled together, and one giues a tast vnto another, and causeth to be pleasant at the tongues end. Nay we entermingle all climats and coasts of heauen and earth to satisfie our appetite: for to one kind of meat wee must haue drugs & spices fetcht as far as from *India*: to another, out of *Aegypt*, *Candie*, and *Cyrene*: and in one word, for euery dish we haue a feuerall land to find vs sawce. To conclude, wee are growne to this passe, that we cease not to sophisticate our viands, euen with hurtfull things, so they tast well: yea and to make dishes of very * poisons, because we would deuoure and send all downe the throat. But more plainly hereof, in our professed discourse of the nature and vertue of Hearbs.

CHAP. XXVII.

¶ The diuersitie of tastes and saours.

IN the meane time, as touching those things which are common as well to all fruit, as juices and liquors: first and formost we find of tastes 13 feuerall kinds; to wit, sweet, pleasant, fattie, bitter, harsh and vnpleasant, hot and burning at the tongues end, sharpe and biting, tart or stringent, fowre, and salt.ouer and besides all these, there be three others of a most strange and wonderfull nature. The first is that, wherein a man may haue a smacke of many tastes together, as in wines: for in them a man shall find an harsh, sharpe, sweet, and pleasant relish all at once; and yet these all differ from the natie verdure of wine. A second sort there is besides, which carries a strange & different tast verily from the thing it self, and yet it hath besides the proper and peculiar

Aculiar tast of the owne substance, as the Myrtle: for it carrieth a feuerall tast by it selfe, proceeding from a certaine kind, mild, and gentle nature, which cannot truly be called either sweet, fattie, or pleasant, if we would speake precisely. Last of all, water hath no tast at all of any juice or liquor whatsoeuer, and yet therein is a flat tast by it selfe, which is called waterish, that nothing else besides hath: for if a man do tast in water a relish of any sap or liquor, it is reputed for a bad and naughtie water.

Furthermore, a great and principall matter of all these tastes, lyeth in the saueur and smell, which is connaturall vnto the tast, and hath a great affinitie with it: and yet in water, is neither one or other to be perceiued: or if any be felt either by tongue or nose, it is faultie, that is certaine. Finally, a wonderfull thing it is to consider, that the three principall Elements whereof the world is made, namely, Water, Aire, and Fire, should haue no tast, no saueur, nor participation of any sap and liquor at all.

CHAP. XXVIII.

¶ The iuice and sap of Fruits and Trees: their colours and odours: the nature of Apples, and such soft Fruits: and the singular commendation of all Fruits.

TO begin withall, The Pear, The Mulberry, & the Myrtle-berrie, haue a juice or sap within them, resembling wine, * no maruell then, of Grapes, if they haue the like. Oliues, Bay-berries, Walnuts and Almonds, haue a fattie liquor in them. The Grape, the Fig, and the Date, carie a sweet juice with them. Plums haue a waterish tast.

There is no small difference in the colour also that the iuice of fruits do beare: Mulberries, Cherries, and Cornoilles, haue a sanguine and bloudie liquor: so haue the blacke grapes; but that of the white grapes, is likewise white. The juice of Figs toward the head or neck of the fruit, is white like milke; but of another color in all the bodie besides. In Apples, it is in manner of a froth or foam: in Peaches, of no colour; and yet the *Duracina* of that kind, be full of liquor, but who was euer able to say, what colour it was of?

The odor and saueur likewise of fruits, is as strange and admirable: for the smell of Apples is sharpe and piercing; of Peaches, weake and waterish. As for sweet fruits, they haue none at all: D for verily we see, that sweet wines likewise haue little or no smell, whereas the small and thin are more odoriferous: and all things in like manner of a subtil substance, do affect the nostrills more, than the thicke and grosser doe: for whatsoeuer is sweet in sent, is not by and by pleasant and delicate in tast; for sent and smacke are not alwaies of like sort: which is the reason that *Pomecitrons* haue a most piercing and quick saueur, whereas in relish they are rough and harsh: and so it fares in some sort with Quinces. As for Figs, they haue not any odor. And thus much may suffice in generall, for the sundrie kinds and sorts of fruits which are to be eaten, it remaineth now to search more narrowly into their nature.

To begin then with those that are enclosed within cods or husks: ye shal haue some of these cods to be sweet, and the fruit or seed contained within, bitter, and contrariwise, many of those E graines or seeds are pleasant and toothsome enough; but eaten with the huskes, they be starke naught and loathsome.

As touching berries, there be that haue their stone or wooddie substance within, and the fleshy pulp without, as Oliues, and Cherries: and there be again, that within the said woody stone haue the carnositie of the berry as some fruits in *Aegypt*, whereof we haue already written. As for berries carnos without forth, & pulpos fruit called Apples, they be of one nature. Some haue their meat within, & their woodie substance without, as nuts: others, their carnosity without, and their stone within, as Peaches and Plums. So that in them we may say, That the faultie superfluitie is enuironed with the good fruit, whereas fruit otherwise is ordinarily defended by the said imperfection of the shell. Walnuts and Filberds are enclosed with a shell: Chestnuts be contained vnder a tough rind, that must be pulled off before they be eaten; whereas in Medlars, the carnositie and it be eaten together. Acornes, and all sorts of mast, be clad with a crust; Grapes with a skin, Pomegranats with a rind and a thin pannicle or skin besides. Mulberries do consist of a fleshy substance and a liquor. Cherries, of a skin and a liquid juice. Some fruits there be, the substance whereof will soon part from their woodie shell without, or stone within,

as nuts and Dates: others sticke close and fast thereto, as Oliues and Bay berries. And there be againe that participate the nature of both, as Peaches: for in those that be called Duracina, the carnos substance cleaueth hard to the stone, so as it cannot be plucked from it, whereas in the rest, it commeth easily away. Now ye shall meet with some fruits, that neither without in shell, nor within-forth in kernell, haue any of this woodinesse, as a kind of Dates [named Spadones.] And there be againe whose very kernell and wood is taken for the fruit it selfe, and so vied; as a kind of Almonds, which (as we said) doe grow in Egypt. Moreouer, yee shall haue a kind of fruits furnished with a double superfluity of excrement to couer them without-forth, as Chestnuts, Almonds, and Walnutts. Some fruits haue a substance of a threefold nature, to wit a bodie without; then a stone or wood vnder it; and within the same, a kernell or seed, as Peaches. Some fruits grow thick and clustred together vpon the tree, as Grapes, and likewise Scruifes, which claspe about the branches and boughes, bearing and weighing them downe as well as grapes. Others for it, hang here and there very thin, as Peaches. And there be againe that lye close, contained (as it were) within a wombe or matrice, as the kernells of the Pomegranates. Some hang by smal steles or tailes, as Peares: others in bunches, as Grapes and Dates. Ye shall haue some fruit grow by clusters, and yet hang by a long taile, as the Berries of Iuie and Elder: and others againe cleaue fast to the branch of the tree, as Bay berries: some both waies, as Oliues, for there bee of them that haue long steles, and others againe short tailed. Some fruits there be also, that are formed like cups or mazers, as Pomegranats, Medlars, the Egyptian bean or Lore, and that which groweth about the riuer Euphrates.

As for the singularities and commendable parts in fruits, they be of diuers sorts, Dates are most set by for their fleshie substance, and yet they of Thebes aboue in high Egypt, are esteemed onely for their outward coat or crust that they haue. Grapes, and the Dates called Caryotes, are in great account and estimation for their iuice and liquor: Peares and Apples be most accepted for their callous substance next vnto their skin or paring, but the honey-apples Melimela, are liked for their carnositie and fleshie pulpe within: Mulberries content the tast with their gristle or cartilage substance: and the best part of the nut, is the very graine of the kernell. In Egypt, some fruits are regarded onely for their vtmost skin, as drie Figs: when Figges bee green, the same is pilled off and cast aside like a shell, but be they once drie, the said skin is passing good. In all kind of Papyr-reeds, Ferula plants, and the white thistle Bedegnar, the verie maine stemme is the fruit to be eaten. The shoots also and tender sprigs of the Fig-tree, are reputed for good meat, and also medicinable. To come vnto the shrubs kind, the fruit of Capres is eaten together with the stalke. As for Carobe, what is it else but a meere woodie substance that folke do eat: (and yet the seed and graines within them, are not altogether to be despised for the propertie that they haue) although to speak precisely, it cannot properly be called either flesh, wood, or gristle; neither hath it found any other conuenient name to be termed by.

CHAP. XXIX.

Of the Myrtle, cleuen kinds thereof.

Nature hath shewed her wonderful power and bounty, especially in the iuice of the Myrtle, considering that of all fruits, it alone doth yeeld two sorts both of oile and wine: likewise the mixture or composition called Myrtidanum, as we haue said before. Also there was another vse in old time of Myrtle berries: for, before that Pepper was found and vsed as it is, they serued in stead thereof: from whence tooke name that exquisite and daintie dish of meat, which euen at this daie is called Myrtatum. And hereof came that excellent sauce so highly commended for the brawne of the wild Bore, when for the most part Myrtle berries are put thereto to dip the meat therein, for to giue a better tast to that kind of venison.

As for the very tree it selfe, the first that euer was seen within the compasse and precincts of Europe (which beginneth at the mountaine Ceraunia) was about Circeij, where stood the tombe sometimes of *Elpenor*; and still it retains the Greeke name: whereby we may well judge, that it is a stranger. Howbeit there grew a Myrtle tree in old time, when Rome was first founded, euen in that plot of ground where the citie now standeth. For thus goeth the historie: That vpon a time the Romanes and Sabines being raunged in battaile array, and at the point

A to fight a field, and to try the quarell (for the wrong which the Sabines pretended, was done to them, in regard that the Romans had rauished their daughters being yong maidens) were reconciled and made friends: and thereupon laid downe their armes and weapons, and were there purified with the sacred branches of Myrtle, in that very place wherein now the temple & image of *Venus Cloacina* standeth: which therupon tooke the name (for that *Cloere* in old Latin, signified to purge or cleanse.) Besides, that tree otherwise doth afford a kind of sweet perfume to be burned. Now was this tree chosen for that purpose then to make attonement and to ratifie the marriage betwene the Romans and the Sabine Virgins, because *Venus* is the president and mother of carnall copulation, and the parronesse withall of the Myrtle tree. I will not confidently auouch, but me thinks I may presume to say, that the Myrtle was of all other trees first planted

B in the publick places of Rome for some memorable preface and fore-tokening of future euent and things to come. For whereas the temple of *Quirinus* (i. of *K. Romulus*) is reputed for one of the most antique buildings now extant, there grew euen before it for a long time two old and sacred Myrtle trees: the one named *Patritia* (i. the Myrtle of the Nobility: and the other *Plebeia*; that is to say, the Myrtle of the Comminalty. The *Patritian* prospered and flourished many yeares together, whiles the *Plebeian* began to fade and wither. And to say a truth, so long as the Senate was able to maintaine and vphold their authority, the Myrtle of the Nobles continued fresh and greene, and spread her boughes at large; whereas that other of the Commons seemed as it had beene blasted, dried, and halfe dead: but after that the state of the Senat began to quaille and droupe (which was about the time of the war with the *Marfyans*) as their tree decayed and wasted, so the *Plebeians* Myrtle held vp the head againe: and so by little and little, as the Maiesty of the Senatours was taken downe and abated to nothing, so their Myrtle waxed poore and barren vntill it became dry and stark dead. Moreouer, there stood an old chappel and an altar consecrated to *Venus Myrtea*, whom now at this day they call *Murtia*.

Cato in his time wrote of three kinds of Myrtle: to wit, the white, the blacke, and the Conjugula (so called haply of wedlock or mariage): & peraduenture it may come of the race of those Myrtles belonging to *Venus Cloacina* aboue named. Howbeit, in these daies wee distinguish our Myrtles otherwise; for some we repute wild and sauage, others tame and gentle: and these both are likewise of two sorts, to wit, either broader or narrower leaued. To the wilde kind properly belongeth the prickie Myrtle *Oximyrsine*. As for the tame and gentle Myrtles, they be those that are planted in hort-yards and gardens, wherewith gardeners make arbours, knots, and diuers deuises. Whereof be sundry kindes. The *Tarentine* with small leaues; ours of Italy with broader; and the Myrtle * *Hexastica*, which is very full of leaues, and ordinarily each branch hath six rankes thereof. But these are altogether out of request: both the other are full of boughes and branches. As touching the aboue named *Conjugula*, I suppose it be the same that our common Myrtle here in Italy. But the most odoriferous Myrtle of all others, is that which groweth in Egypt.

Now concerning the wine of Myrtles, *Cato* hath shewed vs the manner how to make it: namely, to take the black Myrtle berries, to dry them in the shade vntill they haue lost all their waterish humidity, & so to put them in Must or new wine, & let them lie there infused, or in sleep. E For certainly, if the berries be not dried before, they would yeeld an oile from them. Howbeit, afterward there was a deuise found out to make a white wine of the white Myrtle in this manner. Take of Myrtles wel beaten or stamped, the quantity of two * Sextares, steep the same in three hemires or pintes of wine, and then straine and presse forth the liquor.

Moreouer, the very leaues of the Myrtle tree, being dried and reduced into a kinde of meale, are singular good for to cure the vlcers in mens bodies: for certaine it is, that this powder doth gently eat away and consume the superfluous humours that cause putrifaction. And besides, it serueth well to coole and repress immoderate sweats.ouer and besides, the Oile also of Myrtles (a strange and wonderfull thing to tell) hath a certaine relish and taste of wine: and withall, the fat liquor thereof is indued with a speciall and principall vertue to correct and clarify Wines; if the bagges and strainers where-through the wine runneth, bee first sooked and F drenched therewith: for the said oleous substance retaineth and keepeh with it all the lees and dregges, and suffereth nothing but the pure and cleare liquor to passe through, and more than that, it carrieth with it the commendable odour and principall vertue of the said oile. Furthermore, it is said, That if a wayfaring man that hath a great journey for to goe on foot, carrie

* not F. Notica, Turab.

* i. wine quart.

Virgeli annuli
But Turæbus
teacheth Virge
faculi. i. flames
of laurelines
made of their
Arre boughs.
And Experiens
Terri. i. nothead
ded with yron.

in his hand a stick or rod of the Myrtle tree, he shall neuer be weary, nor thinke his way long and tedious. Also *rings made of Myrtle twigs, without any edged iron tooles, keep downe and cure the swelling bunch that riseth in the groine. What should I say more? The myrtle intermedleth in war affaires: for *Posthumus Tubertus*, being Confull of Rome (who was the first that entred in a petty triumph, ouant into the city, because he had easily conquered the Sabines, and drawne in manner no bloud of them) rode triumphant in this manner, to wit, crowned with a chaplet of Myrtle, dedicated to *Venus Victorese*; and from that time forward the Sabines (euen his very enemies) let much store by that tree, and held it in great reuerence. And euer after, they that went but ouant into the city after a victory, ware this kind of garland only, except *M. Crassus*, who after he had vanquished the fugitiue slaues, and defeated *Spartanus*, marched in a coronet of Lawrell. *Masurius* writeth, how Generals when they entred triumphant into Rome, riding in their stately chariots (which was the greatest honor of all others) ware vpon their heads, chaplets of Myrtle. *L. Piso* reporteth, That *Papyrius Maso* (who first triumphed in mouht Albanus ouer the Corsians) vsed euer after to come vnto the games Circenses, and to behold them, crowned with a garland of myrtle. This *Papyrius* was grandfather by the mothers side, to the second *Scipio Africanus*. Finally, *M. Valerius*, according to a vow that he made in his triumphs, vsed to weare coronets as well of Lawrell as Myrtle.

CHAP. XXX.

¶ Of the Lawrell or Bay tree, thirteene kinds thereof.

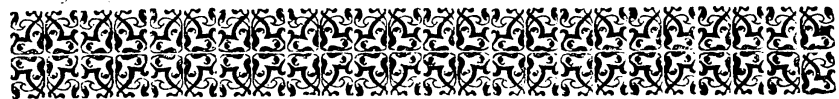
Lawrell is appropriate vnto triumphs, and besides groweth most pleasantly before the gates of the Emperors court, and bishops pallace, giuing attendance there as a dutifull portresse or huißer, most decently. This tree alone both adorneth their stately houses, & also keepes watch and ward duly at the dores. *Cato* setteth down two kinds of Lawrell, to wit, the Delphick, and the Cyprian. Hereunto *Pompeius Lenaus* hath ioined a third, which he called Mustacea; because in old time they vsed to lay the leaues thereof vnder certain cakes or March-panes (which in those daies they called Mustacea) as they were in baking; this third kind hath leaues of all others largest, flaggy, hanging, and whitish withall. As for the Delphick, it carrieth leaues of one entire colour, greener than the rest; the baies or berries thereof likewise are biggest, and of a reddish green colour. With this Lawrell were they wont to be crowned at Delphos, who won the prize at any tourney or solemne game; as also the victorious captains who triumphed in Rome. The Cyprian Lawrell hath a short leafe, black, crisped, or curled, and about the sides or edges thereof it turneth vp hollow like a gutter or crest-tile. Howbeit, afterwards there were ranged in the rank of Lawrells other trees, to wit, the *Tinus*, which some take to be the wild Lawrell, others say it is a kind of tree by it self indeed, it differeth from other Lawrells in the colour of the fruit; for it beareth blew berries. Then came the roiall Lawrell in place, which began to be called Augusta or Imperial. This is a very tall and big tree, with leaues also as large in proportion, and the Baies or berries that it beareth are nothing sharp biting and vnpleasant in tast. But some there be that thinke this roiall Bay, is not a Lawrell, but a feuerall tree apart, as hauing longer & broader leaues than the rest of the ordinary sort. And these writers speaking of other kinds, call our common Bay tree, Baccalia, and namely that which is so fruitfull and beareth such a sort of berries: as for the fruitlesse and barren of that sort they name Triumphal, which is, as they say, vsed in triumphs. Whereat I maruell very much, vnlesse this ordinance and custome began of *Augustus Caesar*, by occasion of that Lawrell which came to him as sent from heauen (as I wil shew anon more at large;) and of all others it is for height lowest, in leafe short and frizled, very geason and hard to be found. Now there is another kind of Lawrell named *Taxa*, very fit for greene arbors, and to be wrought into knots. Out of the middest of the leafe there growes forth another little one, in manner of a skirt, tongue, or lappet of the leafe. Also without any such excreffence there is that, which they name *Spadonia*, as one would say, the gueldest Bay, that cares not how shadowie the place be where it grows: for be it neuer so remote out of the Sun, or ouershadowed how soeuer, yet it ceases not to grow & ouerspread the ground where it standeth. Moreover, in this rank is to be reckoned the wild shrub called Lowrier or *Chamaedaphne*. There is besides the Lawrell *Alexandrina*, which some call *Idra*, [i. Mountaine Lawrell] others *Hypoglossion*, [i. Horse tongue] some *Daphnitis*, others *Carpophyllon* or *Hypelate*. This plant putteth forth branches

A branches immediatly from the root, of a span or nine inches long: very proper and hand som to draw workes, or to clad arbors withall in a garden, also to make garlands and chaplets. The leaues are more sharp and pointed, softer also and whiter than those of the Myrtle, yea, & haue within them a bigger grain or seed, of colour red. Great plenty thereof groweth vpon the mountaine *Ida*, likewise about *Heraclea* in *Pontus*; and in oneword, neuer but in hilly and mountain countries.

As for the herb *Daphnoeides* or *Laureola*, it hath many names: for some terme it *Pelasgum*, others *Eupetalon*, and there are again who would haue it to be *Stephanos Alexandri* (i. *Alexanders* chaplet.) This plant also is full of branches, carrying a thicker and softer leafe than the common Lawrell; and if a man tast thereof, it will set both the mouth & also the throat on a fire: the berries that it beareth be blackish, inclining to a kind of red. It hath bin noted and obserued in ancient writers, that no kind of Lawrell in old time was to be found in the Island *Corfica*; and yet in these daies it is there planted, and thriueth well enough. The Lawrell betokeneth peace: insomuch, as if a branch thereof be held out among armed enemies, it is a signe of quietnes and cessation from armes. Moreover, the Romans were wont to send their missiue letters adorned with Lawrell, when they would giue aduertisement of some special good newes or iouful victory: they vsed besides to garnish therewith their lances, pikes, and spears. The knitches also and bunches of rods, born before grand captains and generals of the army, were beautified & set out with Bay branches. Herewith they stick and bedecke the bosome of that most great and gracious *Iupiter*, so often as there cometh glad tidings of some late & fresh victory. And all this honor is don to the Lawrell, not because it is alwaies green, nor for that it pretendeth and sheweth peace (for in both these respects the oliue is to be preferred before it) but in this regard, that the fairest and goodliest of them grow vpon the mountaine *Pernassus*; and therefore also is it so acceptable to *Apollo*, for which cause (as may appeare by *L. Brutus*) the Roman kings in old time were accustomed to send great presents and oblations thither to the temple of *Apollo*; or peraduenture it was in memoriall of that ground that bare Lawrell trees, and which according to the Oracle of *Apollo*, the said *L. Brutus* kissed, when he intended the publicke freedom of the city, and minded to deliuer it from the yoke and seruitude of the kings: or haply, because it alone either set with the hand before the dores, or brought into the house, is not blasted and smitten with lightning. And these reasons verily inducement to beleuee, that in times past they chose the Bay tree for their triumphs, before any other: rather than as *Masurius* would haue it, because the Lawrell serued for a solemne perfume, to expiate and assoile the carnage and execution don vpon the enemies. And so far were men in old time from common vsing either Lawrell or oliue, and polluting the same in any prophane vse, that they could not be permitted to burne thereof vpon their altars when they sacrificed or offered Incense, although it were to doe honour to the gods, and to appease their wrath and indignation. Euident it is, that the Bay tree leaues, by their crackling that they make in the fire, do put it from them, and seem to detest and abhor it. It curerh moreover the diseases of the guts [the matrice and the bladder] also the lassitude and weariness of the sinews. It is reported, that *Tiberius Caesar* the Emperor vsed euer to weare a chaplet thereof when it thundered, for feare of being stricken with lightning.

E Moreover, certaine strange and memorable euents as touching the Bay tree, haue happened about *Augustus Caesar*. For *Liuita Drusilla* (who afterwards by marriage with the said *Augustus*, became Emperesse, and was honored with the title of *Augusta*) at what time as she was affianced and espoused to *Caesar*, chanced as the fat still, to haue an exceeding white hen to light into her lap (which an *Aegle* flying aloft, let fall from on high) without any harme at all to the said pullet. Now when this lady or princeesse aduised & considered wel the hen, without being astonished and amazed at so strange & miraculous a sight, she perceiued that the hen held in her bill a lawrell branch full of Bay berries. The *Wisards* and *Soothsaiers* were consulted withall about this wonderful occurrent, and gaue aduise in the end to preferue the bird and the brood thereof: likewise to set in the ground the foresaid branch, and duly to tend and look vnto it. Both the one and the other was done and executed accordingly, about a certain house in the country belonging to the *Caesars*, seated vpon the riuer *Tyberis*, nere the causey or port way *Flaminia*, about nine miles from Rome: which house therupon was called, *Ad Gallinas*, as a man would say, The signe of the Hens. Well, the foresaid branch mightily prospered, and proued afterwards to be a groue of Laurels, which all came from the first stock. In proceffe of time, *Augustus Caesar* when he

he entred in **T**riumph into Rome, caried in his hand a branch of that Bay tree, yea, and wore a chaplet vpon his head of the same: and so did all the Emperors and *Cæsars* his successors after him. Hereof also came the custome to set againe and replant those branches of Lawrel that emperors held in their hands when they triumphed; & therof continue whole woods & groues distinguished each one by their feuerall names, and perhaps therefore were they named **T**riumphall. This is the only tree known in the Latine tongue, whereof a man beareth the name. Again, there is not another tree besides that hath the leafe to cary in the Latine tongue a denomination and name by it selfe apart, as well as the tree: for whereas the plant is named *Laurus*, the leafe we call *Laurea*. Moreouer, there is a place likewise within the city of Rome on mount **A**ventine, retaining stil the name *Loretum*, which first was imposed vpon it by reason of a lawrell groue which grew there. The Bay tree also is vsed in solemne purifications before the gods: and to conclude, this would be resolued and agreed vpon by the way, That if a branch thereof be set, it will prosper and become a tree; although *Democritus* and *Theophrastus* make some doubt thereof. Thus much of Lawrels and other domesticall and natieue trees: it remaineth now to write of those that be wild and sauage, and of their natures.



THE SIXTEENTH BOOKE OF THE HISTORIE OF NATVRE,

WRITTEN BY C. PLINIUS

SECVNDVS.

The Proeme.



Hitherto haue we treated of those Trees that beare Apples and such like fruits: which likewise with their mild iuice and sweet liquors made our meats first delighsome, and taught vs to mingle together with the necessarie food for sustentation of our lines, that which maketh it delicate and pleasant to content our taste: as well those trees that naturally were so in the beginning, as those which through the industry and skill of man, what by grafting and what by wedding them (as it were) to others, became toothsome, and delectable to our tongue: whereby also we haue gratified in some sort wild beasts, and done pleasure to the foules of the aire. It followeth now by order, that we should discourse likewise of trees that beare Mast: those trees (I say) which ministred the first food vnto our forefathers, and were the nources that fed and cherished mankind in that rude wild age and poore infancie of the world: but that I am forced to break the course of mine history, and preuented with a deep study and admiration arising from the truth and ground of experience, to consider, What maner of life it might be, to liue without any trees or shrubs at all growing out of the earth.

CHAP. I.

¶ Of Nations that haue no Trees nor Plants among them. Of wonderfull trees in the Northerly regions.



Ve haue shewed heretofore, that in the East parts verily toward the maine Ocean, there be many countries in that estate, to wit, altogether destitute of trees. In the North also I my selfe haue seene the people called * *Cauchi*, as well the greater as the lesse (for so they be distinguished) where there is no shew or mention at all of any tree whatsoeuer. For a mightie great compasse, their Country lieth so vnder the Ocean, and

*1. The Low countries of Zealand, &c.

A and subiect to the tide, that twice in a day & night by turns, the sea ouer floweth a mighty deale of ground when it is floud, and leaues all dry again at the ebbe & return of the water: inso much, as a man can hardly tell what to make of the outward face of the earth in those parts; so doubtfull it is between sea and land. The poore silly people that inhabit those parts, either keep together on such high hills as Nature hath afforded here and there in the plain: or els raise mounts with their own labor and handy work (like to *Tribunals* cast vp and reared with turf, in a camp) about the height of the sea, at any spring tide when the floud is highest; and thereupon they set their cabbins and cottages. Thus dwelling as they do, they seeme (when it is high water, & that all the plain is ouerspread with the sea round about) as if they were in little barks floating in the midst of the sea: againe, at a low water when the sea is gone, looke vpon them, you would take them for such as had suffered shipwracke, hauing their vessels cast away, and left lying aro-side amid the sands: for ye shall see the poore wretches fishing about their cottages, and following after the fishes as they go away with the water: they haue not a four-footed beast among them; neither enioy they any benefit of milk, as their neighbour nations do: nay, they are destitute of all means to chase wild beasts, and hunt for venison; in as much as there is neither tree nor bush to giue them harbor, nor any neare vnto them by a great way. Sea-weeds or *Reike*, rushes and reeds growing vpon the washes and meers, serue them to twist for cords to make their fishing nets with. These poore souls and silly creatures are faine to gather a slimy kinde of fatty mud or oase, with their very hands, which they drie against the wind rather than the Sun: and wish that earth, for want of other fuel, they make fire to seeth their meat (such as it is) and heat the inward parts of their body, ready to be starke and stiffe againe with the chilling North winde. No other drink haue they but rain water, which they saue in certain ditches after a shower, and those they dig at the very entry of their cottages. And yet see! this people (so wretched and miserable a case as they be in) if they were subdued at this day by the people of Rome, would say (and none sooner than they) that they liued in slauerie. But true it is, that Fortune spareth many men, to let them liue still in paine and misery. Thus much as touching want of woods and trees.

On the other side, as wonderfull it is to see the mighty Forrests at hand thereby, which ouerspread all the rest of Germany: and are so big, that they yeeld both cooling and shade to the whole countrey: yea, the very tallest woods of all the rest are a little way vp higher in the countrey, and not farre from the *Cauchi* aboue said: and especially those that grow about the two great loughes or lakes in that tract. Vpon the banks wherof, as also vpon the sea-coasts, there are to be seene thick rows of big Okes, that loue their seat passing wel, and thrue vpon it in growth exceeding much: which trees happening to be either vndermined by the waues and billowes of the sea vnder them, eating within their roots, or chased with tempestuous winds beating from aboue, carry away with them into the sea (in manner of Islands) a great part of the Continent, which their roots doe claspe and embrace: wherewith being counterpoised and ballasted, they stand vpright, floting and making saile (as it were) amid the waues, by the means of their mighty armes which serue in stead of tackling. And many a time verily, such Okes haue frighted our fleets and armadoes at sea, and especially in the night season, when as they seemed to come directly against their proes standing at anker, as if of purpose they were driuen vpon them by the waues of the sea: inso much, as the sailers & passengers within, hauing no other means to escape them, were put to their shifts, and forced for to addresse themselves, and range a nauall battell in order, and all against trees, as their very enemies.

CHAP. II.

¶ Of the huge and great Forrest *Hercynia*

IN the same North climat is the mighty Forrest *Hercynia*. A huge and large wood this is, stored with tall and big Okes, that neuer to this day were topt or lopt. It is supposed they haue beene euer since the creation of the world, and (in regard of their eternall immortality) summing all miracles besides whatsoeuer. And to let passe all other reports which happily would be thought incredible, this is knowne for certain, That the roots of the trees there, run and spread so far within the ground, that they encounter and meet one another: in which resistance they swell and rise vpward, yea, and raise vp mounts of earth with them to a good height in

in many places: or, where as the earth follows not, a man shal see the bare roots embowed arch-wise, and mounting aloft as high as the very boughes: which roots are so interlaced, or els rub one against the other, striuing (as it were) not to giue place, that they make a shew of great portails or gates standing open so wide, that a whole troupe or squadron of horsemen may ride vp-right vnder them in ordinance of battell.

CHAP. III.

¶ Of trees bearing Maſt.

MAſt trees they were all, for the most part, which the Romanes euer so highly honoured and held in best account.

CHAP. IV.

¶ Of the Ciuicke garland: and who were honoured with chaplets of Tree-leaues.

From Maſt trees (and the Oke especially) came the Ciuicke coronets. And in very truth, these were the most honorable badges and ornaments that could possibly be giuen vnto souldiers and men of war, in regard of their vertue and man-hood: yea, and now for a good while, our Emperors haue had this chaplet granted vnto them, in token and testimony of clemency: euer since that by our prophane and vnkind ciuill wars the world is grown to this passe, that it is reputed a singular demerit and gracious act, not to kill a citizen of Rome, but to let him liue. To this kind of garland, none other be comparable: for the Murall and Vallare coronets (bestowed vpon them that either scaled the walls, or entred the breach first into an enemy city, or els mounted ouer the rampier of a camp) albeit they were of gold, and of greater price by far, yet they gaue place to these. Yea, the very Nauall coronets, fashioned like the three forked pikes of ship beake-heads (wherewith they were honored, who had performed some braue seruice at sea) came behind these Ciuicke garlands, due to them who haue rescued citizens and saued them out of the enemies hands: and yet in these our daies there haue bin knowne two in that kind most renowned about the rest, whereof the one was bestowed vpon. *M. Varro* by *Pompey* the Great, for defeating the pyrats, and for scouring and clearing the seas of them: the other likewise giuen to *M. Agrippa*, by *Augustus Caesar*, for vanquishing the Sicilians, who also were no better than rousers.

Now forasmuch as we are light vpon the mention of Nauall or Rostrate coronets, this would be noted, That in old time the said braſen beake-heads of ships woon from the enemies, and set vpon the front of the Tribunal or publick pulpit in Rome, serued for an ornament to beautifie the Forum or common place of the city; so as the very body of the people of Rome seemed to be crowned and honored thereby. But after that the Tribunes in making seditious orations began to stamp and fare like mad men there, to trample (I say) vnder foot, and to pollute that sacred place and those goodly enſignes; after that they fel once euery man to make his priuat and particular profit of the common good, without regard to aduance the weale publick; after that each one sought to strengthen and arm himself by the benefit of authority, and that to the weakening of the main state, inſomuch as they who were reputed by their place sacrosanct and inviolable, polluted and prophaned all then the said ornaments of beake-heads, which beautified the place vnder their feet, serued to adorne the heads of Roman citizens. So as, to returne again now to the aboue named *Agrippa*, *Augustus Caesar* gaue vnto him a Nauall coronet for subduing the Sicilian Pyrats: and himselfe received of mankind a Ciuicke chaplet, for sparing the bloud, and sauing the liues of so many citizens.

In ancient time they vsed to crowne none but the gods. And hereupon it is, that the Poet *Homer* speaketh of no garlands and chaplets but due to the celeſtiall & heavenly wights, or at leastwise in the name of a whole army, for victory atchieued in some notable battell: for to one man alone he alloweth not any, no not in regard of the better hand in combat or single fight. And to say a truth, the first that euer set a Garland vpon his owne head, was prince *Bacchus*, and the same was made of Iuie: but afterwards, those that sacrificed to the honour of gods, not only ware chaplets themselves, but also adorned therewith the heads of the very beasts which were appointed to be killed for sacrifice. In the end, the custome was taken vp to honour them with gar-

A garlands, who wan prizes at those sacred and solemne games, *Olympia*, *Isthmia*, *Pythia*, and *Nemœa*. Howbeit the manner was then, and so continueth to this day, To giue chaplets to the said victors, not in their own name, but in the behalfe of their natie country, which by open proclamation they pronounce to be crowned and honored thereby. And hereof it came also, that such coronets and chaplets were granted to them that should triumph, yea and soone after to those also who had won the prise in any publick games, vpon condition to dedicate them to the temple of the gods.

To discourse what Roman citizen receiued this honor first of a chaplet or coronet, were a long peece of worke, and nothing pertinent to our purpose and matter in hand; considering that they were acquainted with none at all, but in regard of seruice performed in the wars. Yet thus much I may aue for certain, That no nation vnder heauen, nay put them all together, can shew so many sorts of chaplets and coronets, as this one state and people of Rome. *K. Romulus* crowned *Hostus Hostilius* with a garland of bare greene leaues, for that in the forcing and ruining of *Fidenæ*, he brake first into the city and made way for the rest. This man was grandfire to *Tullus Hostilius* king of Rome. Semblably in the war against the Samnites, wherein *Cornelius Cossus* the Conſull was L. Generall, the whole army crowned *P. Decius* the father with a chaplet of green leaues, who then was a martiall Tribune or Colonell ouer a regiment of souldiers, for that hee had saued and deliuered the said army.

But now to come againe to our Ciuicke garland, it was made at first of the *Ilex* or Holme tree leaues: afterwards men tooke a better liking to make it of the *Æsculus*, a tree consecrated to *Iupiter*. They staied not there, but changed soone after with the common oke; neither made they any precise choise, but tooke the leaues of that which came next hand, whereſoeuer they found it growing; provided alwaies that it bare acorns: for all the honor of these garlands consisted principally in the maſt. Moreouer, there belong to these Ciuicke garlands streight laws and ordinances, in which regard these chaplets be proud and stately: and we may be bold to compare them with that Paragon-coronet of the Greeks, which passeth al others, giuen solemnly and published in the presence of *Iupiter*, and made of the wilde Oliue dedicated vnto him: comparable (I say) to any crowne or chaplet whatſoeuer; euen to that, for which a city in token of ioy, would not stick to lay open a breach in their very wall to receiue it when it should enter in. The lawes ordained in this behalfe run in this forme: *Imprimis*, He that is to enioy the honour of a Ciuicke chaplet, ought, first to haue rescued a citizen, and wishall to kill the enemy in whose danger hee was. Item, It is required, That the enemies the same day held the verie ground and were Masters hereof, wherein the rescue was made and the seruice performed. Item, That the partie himselfe so saued, doe confesse the thing, for otherwise all the witnesses in the World answere not in this case. Item, the man thus deliuered, must bee a free Citizen of Rome in anie hand: for ſet case that hee were a King which was thus rescued, if hee were a stranger, and came onely amongst the auxiliaries to aide the Romanes, it would not boot, nor gaine any man this honour for to saue his life. Item, Say that the Generall himselfe were rescued and deliuered out of danger, the partie for his good seruice should haue no more honour due vnto him, than if hee had preserved but a simple common souldier, so hee were a Roman Citizen: for the makers of these ordinances aimed chiefly at the life of a Citizen whoſoeuer hee was, without regard of any other circumstance. Item, Hee that was once crowned with this garland, was endued also with

these priuiledges: That hee might weare it alwaies after, whenſoeuer it please him: That so often as hee came in place of publick playes or games, men should accusſomably rise up vnto him, yea, and the verie Senators themselves, doe him honour in that sort: That hee should haue his place allowed him to sit next vnto those of Senators degree: That both himselfe, and also his father and grandfire by the fathers side, should euer after bee exempt from all ciuile charges, and inioy full immunitie. Thus much concerning the lawes and priuiledges attending vpon the Ciuicke garland. *Siccius Dentatus* (as wee haue specified before) receiued foureteene of these chaplets for his good seruice: [*Manlius*] *Capitolinus* six, and hee verily had one of them for rescuing *Seruilus* beeing Generall of the Armie. As for *Scipio Africanus*, hee refused this honour when it was offered and presented vnto him, for sauing the life of his owne father at the iourney and battaile of *Trebia*. O the excellent orders and customes of those times, worthie of immortalitie and euerlasting memorie! O the wisdom of men in those daies, who assigned no other reward for so braue exploits and singular workes, but honour onely? And whereas all other militarie coronets they enriched and adorned with gold, they would not set the life of a citizen at any price. A plaine and euidēt

Rr

profession

* As the manner was to receiue the *Hittionica*.

profession of our ancestors and predeceffors, That it is an vnlawfull and shameful thing to seeme for to saue a mans life, in hope of any gaine and profit thereby.

CHAP. V.

¶ Of Mast, thirtene kinds.

MAny nations there be euen at this day, and such as inioy peace and know not what warre meaneth, whose wealth and riches lyeth principally in Mast: yea and elswhere in time of dearth and for want of other graine, folke vse to dry their mast, grind it into meale, temper it with water, and thereof make dough for bread. Moreover, euen at this day throughout Spaine, the manner is to serue vp acornes and mast to the table for a second seruice: and sweet-
 it is being roasted vnder the cinders and ashes, than otherwise. Ouer and besides, provided it is by an expresse act and law of the twelue tables in Rome, that a man may gather the mast that falleth from his owne trees into another mans ground.

Diuers and sundry sorts there be of Mast, and their difference consisteth in the forme and fashion of the fruit, in the site and scituation of the place, in the sex, and in the taste: for the mast of the Beech tree is of one figure and making, the Acorne (which is the mast of the Oke) another, and the mast of the Holme or Ilex, differeth from them both: yea & in euery one of these kinds, they do vary one from another. Also, some are of trees growing wild; others more milde and gentle, louing places well tilled and ordered by husbandry. Some like the hilly countries, others the champaine and the plains. Semblably there is mast comming from the male trees: there is againe that groweth on the female. In like maner, the rellish & tast maketh a difference and diuersity in mast. The sweetest of all, is the Beech mast: for *Cornelius Alexander* reporteth, That the inhabitants of Chios, when they were streightly beleaguered, indured the siege a long time by the benefit & substance only of that mast. We are notable distinctly to specifie name by name, the sundry sorts of mast and the trees which beare the same, considering that in euery cuntry they alter their names: for we see the Robur and the Oke to grow commonly euerie where, but the Esculus is not so rise in all countries. A fourth sort there is of the same kind, that is not known ordinarily in most places of Italy. We will therefore distinguish them according to their nature and properties: yea and when need shall require, by their Greeke names also.

CHAP. VI.

¶ Of the Beech mast, and other Masts: of Charcole, and the feeding of Hogs.

THe Beech mast is like to the kernell of a Chestnut, inclosed within a three cornered skin. The leafe of the tree is thin and very light, resembling that of the Poplar: it turneth yellow passing soone. In the middle whereof, for the most part, and in the vpper side, it bringeth forth a little green berrie, pointed sharpe at the toppe. The mast of Beech, Rats and Mice are much delighted in: mark therefore when there is store of that mast, ye shal haue as great increase of that vermin. It will feed also Reremice or Dormice fat: and the Oufels or Blackbirds take a great liking thereto, and wil flie vnto it. Lightly, all trees are most fruitful one yere than another, and beare most euery second yere; but aboue all, Beeches keepe this course. As touching Mast (which properly is so called) it groweth vpon the Robur, the common Oke, the Esculus, Cerrus, Ilex, and Cork tree. All kinds of mast are contained more or lesse, within a rough cup, which lieth close to the vtmost skin thereof, & claspeth it about. The leaues of all these mast trees, except the mast-Holme Ilex, be heauy, fleshie, large, waued or indented along the sides, neither be they yellow when they fall, as the Beech leaues are; longer also or shorter, according to the diuers trees whereupon they grow.

Of the Ilex or mast-Holme tree, there be two sorts. Those in Italy differ not much in leafe from the Oliue. Some Greeks call them Smilaces, but in other prouinces Aquifoliae. The mast of Ilex, both the one and the other, is shorter and slenderer than of the rest. *Homere* calleth it Acylon, by which name he distinguisheth it from other mast. The male Holmes (men say) beare no fruit. The best mast and the biggest, is the Acorn growing vpon the common Oke: next to it is that of the Esculus; as for that of the Robur, it is but small. The Cerrus carieth a mast vnpleasant to the eie, and rough to be handled, for clad it is with a cup beset with sharpe prickles like
 to

A to the Chestnut shell. Among the ver: Acornes, some haue a sweeter tast than others: the female Oke beareth those that be more soft and tender; the male, tough, thick, and massie: and the best simply are those that come of the broad leaved Oke, for so it is called by reason of the large leaues. Moreover, there is another difference in mast and acornes, for some be bigger than others; againe, there are that haue thin and fine skins inclosing the kernell; and ye shal find others for them as thick skinned; likewise many of them are couered with a rough and rustie tunicle; and as many againe do shew immediatly their bare white skin and naked fleshy substance. Furthermore, that mast is accounted good, which at both ends (taking it long-waies) groweth hard in manner of a stone; howbeit that which hath an hard shell without, and a soft body within, is better than that which is hardened in the carnous substance of the body; and lightly neither of both these qualities happeneth to any but the male kind. Ouer and besides, some you shall find fashioned long like an egge, others as round as a ball, and a third sort sharp pointed. The outward colour also yeeldeth variety: for some be blacker than other, but the whiter commonly be the better set by. Some are bitter toward the ends, and sweet in the mids. The length also & the shortnesse of the stele or taile whereto they hang, maketh a difference. The very tree it self causeth diuersity of the fruit: for that Oke which beareth the biggest mast, is named Hemeris. A shorter tree this is than the rest, with a round head, and putting forth many hollow airm-pits (as it were) of boughes and branches. The wood or timber of the ordinary and common Oke is tougher and harder than that of others, and lesse subiect to putrifaction: full of arms & boughes it is, as the other, but it groweth taller and is thicker in the body. The highest of all, is the Agilops, which longeth to grow in wild and desart places. Next to it for talnesse, is the broad leaved Oke, but the timber thereof is not so good and profitable for building, howeuer it be employed for to make charcole: yet being once squared to that purpose, & cleft, it is subiect to the worm, and will soon rot: and for this cause, being in quarters, they vse not to make cole of it clouen, but of the solid and round boughs or branches thereof. And yet this kind of charcole serueth only the Bloom-smithies and furnaces; the hammer-mills also of brasse and copper-smithies, whom it standeth in great good stead and sauet them much fewell; for it burneth and consumeth no longer than the bellows goe: let them leaue blowing once, presently the cole dieth; and so it lasteth long: for at euery new blast it is renewed againe and refreshed: otherwise it sparkleth very much and yeeldeth many cinders. But the charcole made of yong trees is the better.

D Now the maner of making them is this: when the wood is cut into many clefts & splents, fresh and green, they are heaped vp on high, and hollow, in manner of a furnace or chimney, and then well luted with clay in the top, and all about: which done, the pile of truncheons aforesaid, is set on fire within; and as the outward coat or crust of clay beginneth to wax hard, the workemen or colliers pierce it with poles and peaches, and make diuers holes therein for vent, and to let out the smokie vapor that doth sweate and breath from the wood. The worst of all other for timber or cole, is the oke named Haliphleos; a thicke barke it hath, and as big a body, but for the most part hollow and light like a sponge or mushroom: and there is not another besides it of all these kind of trees, that rotteth as it stands alieue. Besides, so vnfortunate it is, that the lightning smiteth it, as low as it groweth; for none of them ariseth to any great height: which is the cause that it is not lawfull to vse the wood thereof about the burning of any sacrifice. Seldome beareth it any Acorns, and those few that it hath, be exceeding bitter, so as no other beast will touch them but swine againe; nor they neither, but for pure hunger, when they can meet with no other food. Moreover, in this regard also reiected it is, and not employed in any religious vse, for that without blowing at the wood and cole thereof continually, it will not burne cleare and consume the sacrifice, but goeth out and lieth dead.

But to returne vnto our mast againe: that of the Beech tree feedeth swine quickly, maketh their flesh and lard faire and pleasant to the eie, tender to be soone sodden or roasted, light and easie of digestion, and good for the stomacke. The mast of the Holme causeth hogs to gather a more fast and compact flesh, their bodies to be neat, slender, lanke, and ponderous. Acornes doe engender a fleshy substance, more square and spreading, and the same also most heauy and hardest of digestion, and yet they are of all other kinds of mast, most sweet and pleasant. Next to them in goodness (by the testimony of *Nigidius*) is that of the tree Cerrus, neither is there bred of any other a courser flesh, howbeit hard it is, fast, and tough. As for the mast of Ilex, hogs are endangered by eating thereof, vnlesse it be giuen them warily by little and little. Hee sayeth
 moreover,

The sixteenth Booke of

moreouer, that of all other it falleth last. Moreouer, the mast of Esculus, Robur, and the Corke, G
causeth the flesh to be spongeous and hollow. To conclude, what trees soeuer beare mast, carry
also certaine nuts called Galls: and lightly they are full of mast but each other yeare. But the
oke Hemeris beareth the best galls, and fittest for the curriers to dresse their leather. The broad
leafed Oke hath a kinde of Galls like vnto it, but lighter in substance, and not so good by far:
it carrieth also blacke galls (for 2 sorts there be) and this is better for the dier to colour wooll.

CHAP. VII.

¶ Of the Gall-nuts: and how many other things Mast-trees doe
beare besides Mast.

THe nuts called Galls, doe euer breake out all at once in a night, and namely about the be-
ginning of Iune, when the Sun is ready to goe out of the signe Gemini. The whiter fort
thereof commeth to the growth in one day: and if in the first spring and breaking forth
thereof it be hot weather, it drieth and withereth out of hand, and commeth not to the full big-
nesse and perfection, namely to haue a kernell as much as a bean. The blacke of this kind conti-
nueth longer fresh and green, and groweth still, to the bignesse otherwhiles of an apple. The
best galls be those of Comagena: the worst is that of the oke called Robur, which are knowne
by the holes they haue, that may be seen through. The common oke Quercus, ouer and besides
the fruit (which is the mast) beareth many other things; for it carrieth both sorts of gal, the black
and the white: certaine berries also like Mulberries, but that they be dry and hard, resembling
for the most part a buls head, containing within them a fruit much like the kernels of the oliue. I
Moreouer, there grow vpon it certaine little bals not vnlike to nuts, hauing soft flox within good
to make candle-wick or matches for lamps; for burn they wil without any oile, like as the black
Gals. It beareth also other little pills or balls good for nothing, couered ouer with haire, & yet
in the spring time they yeeld a certain juice or liquor like hony. Furthermore, there breed in
the hollow arm-pits (as it were) of the boughes, other small pills fetled or sticking close to the
wood, and not hanging by any steles, which toward the nauill or bottome thereof are whitish;
otherwise they be speckled all ouer with black spots, saue that in the mids between they are of
a scarlet red colour: open them, and hollow they are within, but very bitter. Sometimes also this
oke engendreth certaine hard callosities, like Pumish stones, yea and other round balls made of
the leaues folded one within another: on the backside also of the leafe where it is reddish, yee K
shal find sticking certaine waterish pearls, white and transparent or cleare within, so long as they
be soft and tender, wherein there breed little flies or gnats: howbeit in the end they ripen and
wax harder, in manner of Galls.

CHAP. VIII.

¶ Of the Catkin called Cachrys: the graine of Scarlet: of Aga-
ricke, and Corke.

THe Oke called Robur, bringeth forth likewise a certaine pendant chat or catkin, named in
Greece Cachrys: for so they terme the little pill, which is of a burning and causticke Na-
ture, and whereof there is vse in Physick for potentiall cauteries. The like groweth vpon L
Firres, Larch trees, Pitch trees, Lindens of Tilletts, Nut-trees, and Planes, namely after that the
leaues be fallne; and abideth vpon the tree in winter time. These chats haue a kernel within like
to those of the Pine-nuts. It beginneth to grow in winter, & by the spring time al of it openeth
and spreadeth to the prooff; but when the leaues begin to bud and put forth, it falleth off. Thus
you see how fruitfull these okes be, and how many things besides mast, they do bring forth: and
yet they cease not nor giue ouer thus, for many times a man, shall see certaine excrecences
growing forth about their roots, such as roostfools & mushrooms; the last denifes that our glut-
tons haue inuented to whet their appetite and stomacke, and to maintaine gourmandize. The
common Oke breedeth the best of this kind: as for those that grow about the Oke Robur, the M
Cypresse, and Pine-tree, they are hurtfull to be eaten, and venomous. Moreouer, Hesiodus saith,
that the Okes Robora do beare Mifello, and yeeld hony. True it is indeed, that the hony-dewes
called Manna, falling from heauen (whereof we haue spoken before) light not vpon any other
leaves

A leaues more than of those okes. Moreouer, this is knowne for certain, that the ashes of this Oke
when it is burnt, hath a quality or taste of nitre or salt-peter.

Howbeit for all the riches and fruit that the Oke affourdeth, the Scarlet graine alone which
commeth of the Ilex, challengeth yea and ouermatcheth it. This graine is no other than a very
excrement or superfluity arising about the stem of the small shrub called Ilex Aquifolia, scra-
ped and pared off from it, like such refuse as they Cusculum or Quisquilium: but of such price
it is, that the poore people of Spaine gather it, & make a good part of their reuenue thereby,
euen as much as will pay halfe their tribute. As touching the commendable vse thereof in dy-
ing, we haue sufficiently spoken in the discourse of the purple tincture. This scarlet grain is in-
gendred also in Galatia, Africa, Pisidia, and Cicilia. But the worst of all other is that which
commeth out of Sardinia.

B As for Agaricke, it groweth in France principally vpon trees that beare mast, in manner of a
white mushroom: of a sweet sauer, very effectually in Physicke, and vsed in many Antidotes and
soueraigne confections. It groweth vpon the head and top of trees: it shineth in the night, and
by the light that it giueth in the darke, men know where and how to gather it.

Of all Mast-trees, the Oke called by the Greeks Ægylops, beare certaine drie excrecences,
swelling out like Touch-wood, couered all ouer with a hoary & hairy mosse, and these not only
beare out from the bark of the fruit, but also hang downe from the boughes a cubit in length:
and odoriferous they are, as we haue shewed in our treatise of Ointments.

C Now concerning Corke, the woody substance of the tree is very small, the mast as bad, hol-
low, spongeous, and good for nothing. The barke only serueth for many purposes, which will
grow again when the tree is barked, & that of such a thicknes, that it will beare 10 foot square.
Much vse there is of it in ships, & namely for boys to anere cables, also for flotes to trainels or
dragnets that fishers do occupy: moreouer in bungs & stoppels of barrels, bottles, and such like
vessels. Finally, our gentlewomen and dainty dames haue the soles of their pantofles & winter-
shoes vnderlaid therewith. In regard of which barke, the Greeks call it by a pretty name, and
not improperly, The bark tree, or the tree all barke. Howbeit somewhat haue it to be the fe-
male Ilex or Mast. Holm, and so they name it: and where there groweth no Ilex, in stead thereof
they take Corke, especially in Carpentry, and cart-wrights worke, as about Elis and Lacedæ-
mon. Neither groweth it in all parts of Italy, ne yet in any one quarter of France.

D

CHAP. IX.

¶ What trees they be that carry barke good for any vse.

THe peisants of the countrey and the rusticall people employ much, the barke also of Bee-
ches, Lindens or Tilletts, Firs, and Pitch trees; for thereof they make sundry vessels, as
paniers, baskets, and certain broad and wide hampers for to carry their corn and grapes in
time of haruest and vintage, yea and otherwhiles they couer their cottages therewith. Moreo-
uer, spies vse to write in barks (when they be fresh and greene) intelligences to their capitaines,
grauing and drawing their letters so, as that the sap and iuice thereof couereth them. To con-
clude, the bark of the Beech tree is vsed in certain religious ceremonies of sacrifice: but when
the tree is spoiled of the bark, it soone fadeth and dieth.

E

CHAP. X.

¶ Of Shindles: of the Pine tree, the wilde Pine, the Fir, Pitch tree, Larch tree,
Torch tree, and the Tew.

THe boards or shindles of the wild Oke called Robur, be of all others simply the best: and
next to them, those which are made of other mast-trees, and especially of the Beech. The
shindles are most easily rent or clouen out of all those trees which yeeld Roïn, but setting
aside the Pine-wood only, none of them are lasting. Cornelius Nepos writeth, that the house in
Rome were no otherwise couered ouer head but with shindles, vntil the war with K. Pyrrhus, to
wit, for the space of 470 yeres after the foundation of the city: and of a truth, the chiefe quarters
of Rome were diuided & distingly named by certain woods and groues neere adjoining. And
euen at this day there remaineth the quarter of Iupiter Fagutalis, where sometime stood a tuft or

Rr 3

groue

grove of Beeches: also the gate Querquetulana, bearing the name of an Oke row: likewise the hill Viminalis, from whence they used to fetch windings and bands of Officers: and many other groves, whereof some were set double, and were two of a name. We read in the Chronicles, that *Q. Hortensius*, Dictator for the time being, (when as the commons arose, and in that mutinie or insurrection forsooke the city and withdrew themselves to the fort Ianiculum) made a law & published it within a certain grove hard by, called Esculetum, where there grew a number of trees named Esculi: and the said statute ran in this forme, That whatsoever ordinance should be enacted by the said Commonaltie, it should bind all Citizens of Rome whomsoever to observe and keepe.

In those daies the Pine and Fir, and generally all trees that yeeld pitch, were held for strangers and aliens, because none of them were knowne to grow neere unto the city of Rome: whereof now we will speak, the rather because the beginning & whole maner of conceiting and preserving wines might be thereby thoroughly knowne. First and foremost, some of the trees aforesaid in Asia or in the East parts do bring forth pitch. In Europe there be six sorts of trees, seeming all of one race, which yeeld the same. Of which, the Pine and the Pinafter cary leaues thin and slender in manner of haire, long also and sharp pointed at the end. The Pine beareth least rosin of all others, howbeit otherwise some it hath in the very fruit thereof, which we call Pine nuts or apples (whereof we haue already written) yet so little it is, that hardly a man would reckon the Pine among those kinde of trees that yeeld rosin. The Pinafter is nothing els but the wild Pine: it growes wonderful tall, putting forth arms from the mids of the trunk or body upward; whereas the other Pine brancheth only in the head. This of the twain is more plentiful in rosin, whereof we will speake more anon. These wild Pines grow also vpon plains. There be trees vpon the coast of Italy, which men call Tibuli, and many think they be the same, although they carry another name: slender they are and shorter, altogether without knots, and little Rosin they haue in them or none: but they serue well for shipwrights, to build frigats & brigandines.

The Pitch tree loueth the mountains and cold grounds, a deadly and mournful tree it is, for they used in old time to sticke vpon a branch thereof at the doores of those houses where a dead corps was, to giue knowledge thereof abroad: and commonly it grew green in churchyards and such places, where the maner was to burn the bodies of the dead in funeral fires: but now adays it is planted in courtyards and gardens neer our houses, because it may be easily kept with cutting and shredding, it brancheth so well. This tree puts forth great abundance of rosin, with white grains or kernels comming between, so like vnto frankincense, that if it be mixt therewith, vneth or hardly a man may discern the one from the other by the eye. And hereupon it cometh, that Druggists and Apothecaries do sophisticate frankincense, and deceiue folk with it. All the sort of these trees are leaued with short thick and hard prickly bristles in manner of the Cypres. The Pitch tree beginneth to shoot forth branches euen from the very root almost, and those be but small, bearing out like armes, and sticking one against another in the sides. Semblably do the Fir trees, which are so much sought for to serue shipping: and yet this tree delighteth in the highest mountains, as if it fled from the sea of purpose, and could not away with it: and surely the form and maner of growing is all one with the pitch tree. The wood thereof is principal good timber for beams, and fitteth our turn for many other necessities of this life. Rosin if it be found in the Fir is thought a fault in the wood, whereas the only commoditie of the pitch tree is her rosin; and yet sometime there frieth and sweateth out a little thereof in the extreme heate of the sun. The timber of them both is not alike, for that of the Fir is most faire and beautifull; the pitch tree wood serueth only for clouen lath or rent shindles, for coopers to make tubs and barrels, and for some few other thin boords and painels.

As for the Larch tree, which is the fift kind of those that beare rosin, like it is to the rest, and loueth to grow in the same places: but the timber is better by ods, for it rots not, but will last and endure a long time: the tree will hardly be killed: besides, it is red of colour, & carries an hotter and stronger smel than the other. There issueth forth of the tree as it growes, good store of liquid rosin, in colour like hony, somewhat more clammy, which will neuer grow to be hard.

A sixt sort there is of these trees, and it is properly called Teda [i. the Torch tree:] the same yeelds more plenty of moisture and liquor than the rest: lower it is of growth than the Pitch tree, but more liquid and thin: very commendable also to maintain fire at sacrifices, & to burn in torches for to giue light. These trees, I mean the male only, bring forth that strong and stin-

king

A king rosin, which the Greeks call Syce. Now if it happen that the Larch tree proue Teda, [i. to be Torch-wood] it is a signe that it doth putrifie and is in the way of dying.

The wood of all these kinds before named, if it be set a fire, maketh an exceeding grosse and thick smoke, and presently turneth into a cole, spitting and sparkling a far off; except that only of the Larch tree, which neither burneth in light flame, nor maketh cole, ne yet consumeth in the fire otherwise than a very stone.

All these trees whereof we speake continue greene all the yeare long: and very like they are in leafe, that men otherwise of cunning and good experience, haue enough to do to discern one from the other by it, so neere of kin they be, and their race so much intermingled. But the pitch tree is not so tall as the Larch: for the Larch is thicker in body, of a thinner and lighter barke, more shag leaued, and the said leaues fatter, growing thicker, more pliable, and easier to wind and bend: whereas the leaues of the pitch tree hang thinner, they be of a drier substance, more slender and subiect to cold: and in one word, the whole tree is more rough and hideous to see to, and withall, full of rosin: the wood also resembleth the Firre, rather than the Larch.

The Larch tree, if it be burnt to the very stumpe of the root, will not spring againe and put forth new shoots: whereas the pitch tree liueth stil for all the fire, and wil grow afresh: the experience whereof was seen in the Island Lesbos, at what time as the Forrest Pyrrhæum was set on fire, and clean burnt to the ground.

Moreover, euery one of these kinds differ in the very sex: for the male of each kind is shorter and harder: the female taller, hauing fatter leaues, and the same soft and plain, & nothing stiff and rugged. The wood of the male is tough, and when it is wrought keepeth not a dire & grain, but windeth and turneth, so as the carpenter must goe euery way about it with axe and plaine: contrariwise that of the female is more firm and gentle. And commonly the axe or the hatchet wil tell the difference of male and female in any tree: for what wood soeuer it be, it will soone find and feeble the male: for hardly is it able to enter, but either turnes edge, or rebounds againe: and whether a man hew or cleaue withall, it maketh more crassing and a greater noise where it fetleth and taketh hold; it sticketh also faster, and with more ado is plucked forth. Moreover, the very wood of any male tree is of a more brown and burnt colour, yea, and the root of a blacker hew.

About the Forrest Ida within the territory of Troas, there is another distinction of trees in the same kind: for some grow vpon the mountaines, others toward the coast on the sea side. In Macedony, Arcadia, and about Elis, these trees oftsoons change their names, so that the Greek writers are not agreed how to distinguish their several sorts, and range them in their due kind. I therefore haue exprest them according to the iudgment of Roman and Latine Authors.

Of all the trees aboue named, the Fir surpasseth for bignesse, and the female is the taller. The timber also is more firm and soft, more profitable also, and easier to be wrought: the tree it self rounder, and so it brancheth archwise: the boughes as they resemble wings stretched out and displaied, so they stand so thick with leaues, that they will beare off a good shower, in so much as no rain is able to pierce through. In sum, the female Firre is far more louely and beautifull euery way than the male.

All the sort of these foresaid trees, saue onely the Larch, beare certain knobs like Catkins or Chats, composed (as it were) of many scales wrought one ouer another, and those hang downe dangling at the branches. These knobs or clogs in the male Firre haue in the vpper end a kernel within: but those of the female haue no such thing. Moreover, the pitch tree as it hath such catkins lesse and slenderer; so all within, from one end to the other, the kernels be passing little and black withall, like to lice or fleas, which is the reason that the Greekes call it Phthirophoros. The said catkins of the male pitch trees are more flat, and nothing so round as those of the females, lesse gummie also, and not so moist of the rosin.

To come now to the Yugh, because we would ouerpasse none: it is to see to like the rest, but that it is not so green; more slender also and smaller, vnpleasant and fearefull to looke vpon, as a cursed tree, without any liquid substance at all: and of these kind of trees, it alone beares berries. The fruit of the male is hurtful: for the berries in Spain especially haue in them a deadly poison. And found it hath bin by experience, that in France the wine bottles made thereof for wavfaring men and traouellers, haue poisoned and killed those that drunke out of them. *Sesimus* saith, That the Greekes call it Smilax: and that in Arcadia it is so venomous, that who soeuer take

take

take either repose or repast vnder it, are sure to die presently. And hereupon it commeth, that those poisons wherewith arrow heads be inuened, after some were called in times past Taxica, which wee now name Toxica. But to conclude, it is seen by good prooffe, that if a brassen wedge or spike be driuen into the very body of the tree, it loseth all the venomous nature, and becommeth harmlesse.

CHAP. XI.

¶ How to make all kinds of Pitch. The maner how Cedrium is made. Also, of thicke Pitch, how it is made; and in what sort Rosin is boiled.

THe liquid Pitch or Tar throughout all Europe is boiled out of the Torch tree: and this kind of pitch serueth to calke ships withall, and for many other vses. Now the manner of drawing Tarre out of this tree, is, to cut the wood thereof into pieces, and when they are piled vp hollow into an heape, to make a great fire within, as it were vnder a furnace, being claid without forth: thus with the heate of the fire it doth fry and seeth again. The first liquor that sweateth and issueth forth runneth cleare as water, in a channell or pipe made for the purpose, and this the Syrians call Cedrium: which is of such force and efficacy, that in Egypt they vse to embalme the dead bodies of men and women departed, and keep them from putrefaction. At the next running it is thicker, and this second liquor is very pitch. Howbeit this is cast again into certaine coppers or cauldrons of brasse, and together with vineger sodden a second time, vntill it come to a thicke * consistence: and when it is thus thickened, it taketh the name of Brutian pitch, good only for tuns, barrells, and other such vessels. Much like it is to the former pitch, but that it is more glutinous and clammy, redder also of colour, and more fatty. And thus much concerning the pitch made of the Torch tree.

As for that which comes of the pitch tree, the rosin thereof is drawne with red hot stones in certain vessels made of strong and thick oken planks: or in default thereof, the wood is clouen into pieces, and piled together after the order of a charcole hearth, & so the pitch boiles forth. The vse hereof when it is beaten into a kind of meale or poulder, is to be put into wine, and it is of a blacker colour than the rest. The same pitch-rosin, if it be boiled more lightly with water, and be let to run through a strainer, comes to a reddish colour, and is gleeue: and thereupon it is called stilled Pitch. And for this purpose lightly, is set by the more grosse and faultie substance of the rosin, together with the bark of the tree. But there is another composition and manner of making of pitch, that serueth for heady wine, called Crapula. For the floure of the Rosin is taken green and fresh, as it distillerh from the tree, together with a good quantitie of small, thin, and short spils or chips of the tree plucked away with the same: the same are minced or shred so small, as they may passe through a sieue or a riddle: which don, all is put into scalding water, and there boileth vntill it be incorporate with the water. The fat substance that is strained and pressed from hence, is the excellent pitch Rosin, hard to come by, and not to be found in Italy, vnlesse it be in few places vnder the Alps, and very good it is in physick. Now to make it passing white, there must be taken one gallon of the rosin, & sodden in two gallons of rain water. But some think it the better way to seeth it a whole day together at a soft fire, without any matter at all, in a pan or vessell of Latron. Others there be likewise that boile Turpentine in a hot frying pan, and are of opinion, that this is the best of all others. And the next to it in goodness is the Lentiske rosin, called Mastich.

CHAP. XII.

¶ Of the Pitch Zopissa, which is scraped from ships: and of Sapium. Also what trees are in request for their timber.

IT would not be forgotten, that the Greeks haue a certaine Pitch, scraped together with wax from the ships that haue lien at sea, which they Zopissa (so curious are men to make experiments and try conclusions in euery thing:) and this is thought to be much more effectually for all matters that pitch and rosin are good for, by reason of the fast temperature that it hath gotten by the salt water.

For

A For to draw rosin out of the * Pitch-tree, it must be opened on the Sun side, nor by giuing a slit or gash in the bark, but by cutting out a peece thereof, so that the tree may gape and lie bare two foot at the most: and from the earth, this wound to be at least a cubite. Neither doe they spare the entire bodie and wound of the tree, as they do in the rest: for there is no danger thereof, considering that the very chips of the wood being cut out, are full of liquor, and do serue to make pitch. But the nearer that the said ouerture or hole is made to the earth, the better is the rosin that issues forth: for if it be higher it is better. When this is don, all the humor afterwards runneth to the vicer or incision aforesaid, from euery part of the tree. The like it doth in the Torch pine. When it hath left running to the first hole, there is a second likewise made on another side, and so still is the tree opened euery way: vntill at length tree and all is hewn downe, and the very pith and marrow thereof serueth for Torch wood to burne. Semblably, in Syria they vse to plucke the barke from the Terebinth: yea, and they pill the boughes and roots too for Terpentine, howsoeuer in other trees the rosin issuing out of those parts, is not counted good; in Macedonie the manner is to burne the male Larch, but the roots onely of the female for to draw out pitch. Theopompus wrate, that there is found in the territorie of the Apolloniars, a kind of mineriall pitch, called Pissaspaltum, nothing inferiour in goodness to the Macedonian.

The best pitch in all countries, is that which is gathered from trees, standing vpon the North wind, and in places exposed to the Sunne-shine. As for that which commeth from shadowie places, it is more vnpleasant to the cie, and carieth besides a strong and stinking sauer. If it bee a cold and hard winter, the pitch then made is the worse, there is also lesse store of it, & nothing is so well coloured. Some are of opinion, That the pitch issueth in more abundance out of trees in the mountaines, also that it is better colored, sweeter in tast, more pleasant also in smell, namely, while it is raw pitch-rosin, and as it runneth from the tree: but if it be boiled, it yeelds lesse plentie of pitch than that which commeth of trees in the plain, and runneth all into a thin liquor in manner of whey, yea, and the very trees themselues are smaller. But both the one and the other, as wel the mountain pines and pitch-trees, as those of the plaines, yeeld not so much pitch in a faire and drie season, as when the weather is rainy and full of clouds. Moreover, some there be of these trees that yeeld forth fruit (which is their rosin) the very same yere that immediately followeth their incision; others, two yeres after; yea, and some againe in the third yere. As for the incision or open wound that is made, it filleth vp with rosin: for neither doth it founder or vnite in manner of a skar, ne yet closeth the barke againe: for in this tree, being once diuided it will neuer come together and meet.

Among these trees, some haue reckoned one kind by it selfe named Sapium, because it is replanted and groweth of some of the sions or imps of the said trees, in maner as hath been shewed before in our treatise of nut-kernells. The neather parts of which tree they call Teda [i. Torch-wood:] whereas indeed this tree is no other than the Pitch-tree, brought to a more mild and gentle nature by transplanting. As for that which the Latines call Sapinus, it is nothing else but the wood or timber of these kinde of trees, being hewed or cut downe, as well * hereafter declare in place conuenient.

* Chap 39. of his booke.

CHAP. XIII.

¶ Of the Ash, foure kinds thereof.

THere be many trees besides that Nature hath brought forth, only for their wood and timber: and among them the Ash, which of all others, growes most plentifully in euery place. A tall tree this is & grows round, bearing leaues set in maner of feathers or wings; much ennobled by the praise and commendation that the Poet Homer giueth it, as also for the speare or lance of Achilles, made thereof. And in very truth, the wood serueth right well for many vses. As for the timber of the ash, growing vpon the Forrest Ida in Troas, it is so like the citron wood, that when the barke is off, a man may hardly discern the one from the other, insomuch, as the merchants and chapmen are deceiued therewith.

F The Greekes haue made two kinds of the Ash: the one runneth vp tall and euen without a knot: the other is lower, more tough and hard, and withall, of a more browne and dusky color: and the leaues resemble the Lawrell. In Macedony they haue an Ash, which they call Bumelia, which of all other is the tallest and biggest, the wood thereof is most pliable and bending. Others

thers haue put a difference betweene Ashes, according to the places: for that of the plaine and champion cuntry, hath a more curled or frised graine than the other of the mountaines, but contrariwise, the wood of this is more compact and harder than the other. The leaues of this tree, according to the Greeks, are hurtfull, venomous and deadly to Horses, Mules, and such laboring garrons; but otherwise to beasts that chew the cud, they be harmlesse. Howbeit, in Italy if horses, &c. do brouse of the leaues, they take no harme thereby. Moreouer, they be excellent good, and nothing so soueraigne can be found against the poison of serpents, if the iuice thereof be pressed forth and giuen to drinke; or to cure old vlcers, if they be applied and laid thereto in manner of a Cataplasme: nay, so forcible is their vertue, that a serpent dareth not come neare vnto the shadow of that tree, either morning or euening, notwithstanding at those times it reacheth farthest; you may be sure then they will not approach the tree it selfe, by a great way. And this am I able to deliuer by the experience which I haue seene, that if a man doe make a round circle with the leaues thereof, and enuiron therewith a serpent and fire together within, the serpent will chuse rather to go into the fire, than to flie from it to the leaues of the Ash. A wonderfull goodnesse of dame Nature, that the Ash bloometh and flourisheth alwaies before that serpents come abroad; and neuer sheddeth leaues, but continueth greene, vntill they be retired into their holes; and hidden within the ground.

CHAP. XIII.

¶ Of the Line or Linden tree, two sorts thereof.

Great difference there is euery way between the male & female Linden tree: for, the wood of the male is hard and knottie, of a redder colour also, and more odoriferous than the female. The barke moreouer is thicker, and when it is plucked from the tree, it is stiffe, and will not bend. It beareth neither seed nor floure, as the female doth: which also is rounder and bigger in bodie, and the wood is whiter, more faire and beautifull by farre than is the male. A strange thing it is to consider, that there is no liuing creature in the world will touch the fruit of the Linden tree, and yet the iuice both of leaf and barke is sweet ynough. Between the bark and the wood of this tree there be thin pellicles or skins lying in many folds together, whereof are made bands & cords called Brazen ropes. The finest of these pellicanes or membrans serued in old time for to make labels and ribbands belonging to chaplets, and it was reputed a great honor to weare such. The timber of the Linden or Tillet tree will neuer be worm-eaten.* The tree it selfe is nothing tall, but of a meane height, howbeit the wood is very commodious.

CHAP. XV.

¶ Ten kinds of the Maple tree.

The Maple in bignesse is much about the Linden tree: the wood of it is very fine and beautifull, in which regard, it may be raunged in the second place, and next to the very Citron tree. Of Maples there be many kinds: to wit, the white, and that is exceeding faire and bright indeed, growing about Piemont in Italie, beyond the riuer Po, & also beyond the Alps, and this is called the French Maple. A second kind there is, which hath a curled graine running too and fro with diuers spots; the more excellent worke whereof, resembling the eies in the Peacockes taile, thereupon took also the name. And for this rare and singular wood, the countries of Istria and Rhætia be chiefe. As for that which hath a thicke and great graine, it is called Crassiuenum of the Latines, and is counted to be of a baser kind. The Greekes distinguish Maples by the diuerse places where they grow. For that of the champion or plaine cuntry (which they name Glion) is white, and nothing crisped: contrariwise, the wood of the mountaine Maple is harder and more curled, and namely, the male of that sort, and therefore it is in great request for most exquisite and sumptuous workes. A third sort they name Zygia, which hath a reddish wood, and the same easie to cleaue: with a barke of a swert colour, and rough in handling. Others would haue it to be no Maple, but rather a tree by it selfe, and in Latine they call it Carpinus.

CHAP.

CHAP. XVI.

¶ Of the Besses, Wennes, and Nodosities, called Bruscum and Molluscum: of the wild Fisicke or Bladder nut-tree called Staphylodendron: also three kinds of the Box tree.

The bunch or knurre in the Maple, called Bruscum, is passing faire, but yet that wich is named Molluscum, excelleth it. Both the one and the other swell like a wen out of the Maple. As for the Bruscum, it is curled and twined after a more crawling and winding manner; whereas the Molluscum is spread with a more direct and strait course of the grain. And certes, if there might be planks hereof found broad enough to make tables, doubtlesse they would be esteemed and preferred before those of the Citron wood. But now it serueth only for writing tables, for painels also and thin bords in waincote work, to set out beds heads and footings, and such are seldome seen. As for Bruscum, there be tables made of it inclining to a blackish color. Moreouer, there be found in Alder trees such nodosities; but nor so good as those, by how much the wood of the Alder it selfe is inferior to the Maple, for beauty and costlines. The male Maples do put forth leaues and flourish before the female. Yea, and those that grow vpon dry grounds are ordinarily better esteemed than those of moist and waterish places, in like sort as the ashes.

Beyond the Alps there is a kind of bladder Nut-tree; whereof the wood is very like to the white white Maple, and the name of it is Staphylodendron. It beareth certain cods, and within the same, kernels in tast like the Filberd or Hazell-nut.

Now for the Box tree, the wood thereof is in as great request as the very best: seldom hath it any grain crisped damask-wise, and neuer but about the root; the which is dudgein and full of work. For otherwise the grain runneth streight and euen without any wauing: the wood is sad enough and weighty: for the hardnesse thereof and pale yellow colour much set by and right commendable. As for the tree it selfe, gardeners vse to make arbors, borders, and curious works thereof. Three sorts there be of the Box tree: the first is called the French Box, it groweth taper-wise, sharp pointed in the top, and runneth vp to more than ordinarie height. The second is altogether wild, and they name it Oleastrum, good for no vse at all, and besides carieth a strong and stinking sauer with it. The third is our Italian box, and so called. Of a sauage kind I take this to be also: howbeit by setting and replanting brought to a gentle nature. This spreadeth and brancheth more broad, and herewith a man shall see the borders and partitions of quarters in a garden, growing thick and green all the yeare long, and kept orderly with cutting and clipping. Great store of box trees are to be seen vpon the Pyrenæan hills, the Cytorian mountains, and the whole Berecynthian tract. The thickest and biggest Box trees be in Corsica, and they beare a louely and amiable floure, which is the cause that the hony of that Island is so bitter: there is not a beast that will eat the fruit or grain thereof. The Boxes of Olympus in Macedonie are more slender than the rest, and but low of growth. This tree loueth cold grounds, yet lying vpon the Sun. The wood is as hard to burn as iron: it will neither flame nor burn cleare it selfe, nor serue to make charcole of.

CHAP. XVII.

¶ Of the Elme foure kinds.

Between these wild trees abovesaid, and those that bear fruit, the Elm is reckoned of a middle nature, in regard of the wood and timber that it affords, as also of the friendship & acquaintance that it hath with vines. The Greekes acknowledge two sorts thereof, namely, one of the mountains, which is the taller and the bigger; and the other of the plaines & champion, which is rather more like a shrub, the branches that it shooteth forth are so smal and slender. In Italy men hold the Elmes about Atinum to be the tallest, and of those they prefer them which grow in dry grounds, and haue no water comming to them, before those by riuers sides. A second sort of them, which are not all out so great, they call the French Elmes. The third kinde be the Italian Elmes, thicker growne with leaues than the rest, and those proceeding in greater number from one stem. In the fourth place be ranged the wilde Elmes. The Atinian Elmes

* Any herin is deceived. For the Line Tree with vs is comparable to the highest Oakes in tallnesse.

Elmes aboue said beare no Samara (for so they cal the seed or grain of the Elme.) All the kind of them are planted offets taken from the roots, whereas others come of seeds.

CHAP. XVIII.

¶ *The nature of trees as touching the place where they grow.*

Having thus discoursed in particular of the most famous and noble trees that are, I think it not amisse to say somewhat of their natures in generall. And first to beginne with the mountain high countries: the Cedar, the Larch, and the Torch-tree loue to grow among the hills; like as all the rest that ingender rosin: semblably, the Holly, the Box tree, the Mast-Holme, the Iuniper, the Terebinth, the Poplar, the wilde Ash, the Beech, and the Carpin. Vpon the great hill Apennine there is a shrub named Cotinus, with a red or purple wood, most excellent for in-laid works in Marquetry. As for Firs, the wild hard oaks (Robora) Chestnut trees, Lindens, Mast-holmes, and Cornell trees, they can away with hills and vallies indifferently. The Maple, the Ash, the Seruis tree, the Linden, and the cherry tree, delight in the mountains neere to waters. Lightly a man shall not see vpon any hills, Plum trees, Pomegranat trees, wild Oliues, Walnut trees, Mulberry trees, and Elders. And yet the Cornel tree, the Hase, the common Oke, the wild Ash, the Maple, the ordinary Ash, the Beech, and the Carpin, are many times found to come downe into the plaines: like as the Elme, the Apple tree, the Peare tree, the Bay tree, the Myrtle, the Bloud shrubs, the Holme, and the Broome (which naturally is so good for to dry clothes) do as often climbe vp the mountains. The Seruis tree gladly groweth in cold places, so doth the Birch, and more willingly of the twaine. This is a tree which is meere French, and came first out of France: it sheweth wonderfull white, and hath as fine and small branches or twigs, which are so terrible to the offenders, as wherewith the Magistrates rods are made for to execute justice. And yet the wood of this tree is passing good for hoopes, so pliable it is and easie to bend: the twigs thereof serue also for to make paniers and baskets. In France they vse to boile the wood, and thereof draw a glutinous and clammy slime in manner of Bitumen. In the same quarters there loueth to grow for company the white thorn, which in old time they were wont to burne for torches at weddings, and it was thought to be the most fortunate and lucky light that could be deuised, because (as *Massurius* reporteth) the Romane shepherds and heardmen who rauished the Sabine maidens, were furnished euery one with a branch thereof to make them torches. But now adaies the Carpine and Hazel are commonly used for such nuptial lights. The Cypress, walnut, Chestnut trees, and the Laburnum, cannot in any wise abide waters. This last named is a tree proper to the Alps, not commonly known: the wood thereof is hard and white: it beares a blossom of a cubit long, but Bees will not settle vpon it. The plant likewise called Iouis Barba, so handsom to be cut in arbors and garden works, which groweth so thicke and round withall, full of leaues, and those of a siluer colour, hates waterie places. Contrariwise, Willows, Alders, Poplars, and Osiers, & the Priver which is so good for to make dice, will not grow well and prosper but in moist grounds. Also the Vacinia or Whortles, set and sowed in Italy for the Fowlers to catch birds withall; but in France for the purple colour, wherewith they vse to die clothes for their seruants and slaues.

To conclude, this is a generall rule, What trees soeuer will grow indifferently as well vpon hills as plaines, arise to be taller, bigger, and carry a fairer head to see to in the low champion grounds: but timber is better, and caries a more beautifull grain vpon the mountaines, except only Apple trees and Pyrries.

CHAP. XIX.

¶ *A diuision of Trees according to their generall kinds.*

Moreouer, some trees lose their leaues, others continue alwaies green. And yet there is another difference of trees before this, and whereupon this dependeth. For trees there be which are altogether wild and sauage: there be again which are more gentle and ciuill: and these names me thinks are very apt to distinguish them. Those trees therefore which are so kind and familiar vnto vs, as to serue our turns either with their fruit which they bear, or shade which they yeeld, or any other vertue or property that they haue, may be very aptly and fitly be called ciuill and domesticall.

CHAP.

CHAP. XX.

¶ *Of Trees that neuer shed their leaues: also of Rhododendron.*

AMong these trees and plants which are of the gentle kind, the Olive, the Lawrel, the Date tree, Myrtle, Cypress, Pines, Ivy, and the Oleander, lose not their leaues. As for the Oleander, although it be called the Sabine herb, yet it commeth from the Greeks, as may appeare by the name Rhododendron. Some haue called it Nerion; others Rhododaphne: it continueth alwaies green leaved, beareth floures like roses, and brancheth very thicke. Hurtfull it is and no better than poison, to Horses, Asses, Mules, Goats, and Sheepe; and yet vnto man it serueth for a countrepoyson, and cureth the venom of serpents.

CHAP. XXI.

¶ *What trees shed not their leaues at all: which they be that lose them but in part: and in what countries all trees are euier greene.*

OF the wild sort, the Fir, the Larch, the wilde Pine, the Iuniper, the Cedar, the Terebinth, the Box tree, the Mast-holme, the Holly, the Cork tree, the Yew, and the Tamariske, be green all the yeare long. Of a middle nature between these two kinds aboue named, are the Adrachne in Greece, and the Arbut or Strawberry tree in all countries: for these lose the leaues of their waterboughs, but are euier green in the head. Among the shrubs kind also there is a certain bramble and Cane or Reed, which is neuer without leaues. In the territorie of Thurium in Calabria, where sometime stood the city Sybaris, within the prospect from the said Citie, there was an Oke aboue the rest to be seen, alwaies green and full of leaues, and neuer began to bud new before Midsummer: where by the way I maruel not a little, that the Greek writers deliuered thus much of that tree in writing, and our countrymen afterwards haue not written a word thereof. But true it is, that great power there is in the clymat, in so much as about Memphis in Egypt, and Elephantine in the territorie of Thebais, there is not a tree, not so much as the very Vine, that sheddeth leaues.

CHAP. XXII.

¶ *The nature of such leaues as fall from trees: and what leaues they be that change colour.*

ALL trees without the range of those before rehearsed (for to reckon them vp by name particularly were a long and tedious piece of work) do lose their leaues in winter. And verily this hath bin found and obserued by experience, that no leaues doe fade and wither, but such as be thinne, broad, and soft. As for such as fall not from the tree, they be commonly thick skinned, hard, and narrow: and therefore it is a false principle and position held by some, That no trees shed their leaues which haue in them a fatty sap or oleous humiditie: for who could euier perceiue any such thing in the Mast-holme? a drier tree there is not, and yet it holdeth alwaies green. *Timaeus* (the great Astrologer and Mathematician) is of opinion, that the Sun being in the signe Scorpio, he causeth leaues to fall, by a certain venomous and poysoned infection of the aire, proceeding from the influence of that maligne constellation. But if that were true, we may wel and iustly maruell, why the same cause should not be effectually likewise in all other trees. Moreover, we see that most trees do let fall their leaues in Autumne: & some are longer ere they shed, continuing green vntill winter be come. Neither is the timely or slow fall of the leafe long of the early or late budding: for wee see some that burgen and shoot out their spring with the first, and yet with the last shed their leaues and become naked: as namely the Almond trees, Ashes, and Elders. And contrariwise the Mulberry tree putteth forth leaues with the latest, and is one of them that soonest sheddeth them again. But the cause hereof lies much in the nature of the soile: for the trees that grow vpon a leane, dry, and hungry ground, do sooner cast leafe than others: also old trees become bare before younger; and many of them also lose their leaues before their fruit be fully ripe: for in the Fig tree, that commeth and beareth late, in the winter Pyrry, and Pomegranate, a man shall see in the later end of the yere fruit

Sf

only

only, and no leaues vpon the tree. Now as touching those trees that continue euer greene, you must not think that they keep still the same leaues, for as new come, the old wither & fall away: which hapneth commonly in mid-Iune about the Summer Sunne-stead. For the most part, the leaues in euery kind of tree do hold one and the same colour, and continue vniform, save those of the Poplar, Ivy, and Croton, which wee said was called also Cici [*id est*, Ricinus, or Palma Christi.]

CHAP. XXIII.

¶ Three sorts of Poplar: and what leaues they be that change their shape and figure.

* Taken by
some to be
our Aspe.

OF Poplars there be found three sundry kinds, to wit, the white, the blacke, and that which is named * Lybica, or the Poplar of Guynee: this hath least leaues, and those of all other blackest: but now commendable they are for the fungous meazles (as it were) that come forth thereof. As for the white Poplar leafe, the leaues when they be yong, are as round as if they were drawn with a paire of compasses, like vnto those of Citron before named: but as they grow elder, they run out into certain angles or corners. Contrariwise, the Ivy leaues at the first be cornered, and afterwards become round. All Poplar leaues are full of downe: as for the white Poplar (which is fuller of leaues than the rest) the said downe flieth away in the aire like to mossie chats or Thistle-downe. The leaues of Pomegranats and Almond trees stand much vpon the red colour. But very strange it is and wonderfull which hapneth to the Elme, Tillet, or Linden, the Oliue tree, Aspe, and Sallow or Willow: for their leaues after Midsummer turn about vpside downe, in such sort, as there is not a more certaine argument that the Sun is entred Cancer, and returneth from the South point or Summer Tropicke, than to see those leaues so turned.

CHAP. XXIII.

¶ What leaues they be that vse to turne euery yeare. Of Palme or Date tree leaues, how they are to be ordered and used. Also certain wonderful obseruations about leaues.

Here is a certain general and vniuersal diuersitie & difference obserued in the very leaf: for commonly the vpper side which is from the ground, is of greene grasse colour, more smooth also & polished. The outside or nether part of the leaf hath in it certain strings, sinues or veins, brawns and ioyns, bearing out like as in the back part of a mans hand: but the inside cuts or lines in manner of the palme of ones hand. The leaues of the oliue are on the vpper part whiter and lesse smooth; and likewise of the Ivy. But the leaues of all trees for most part, euery day do turn and open to the Sunne, as desirous to haue the inner side warmed therewith. The outward or nether side toward the ground of all leaues, hath a certaine hoary downe more or lesse here in Italy, but in other countries so much there is of it, that it serueth the turn for wooll and cotton. In the East parts of the world they make good cordage and strong ropes of date tree leaues (as we haue said before) and the same are better, & serue longer within than without. With vs these Date leaues are pulled from the tree in the Spring, whiles they are whole and entire; for the better be they which are not clouen or diuided. Being thus plucked, they are laid a drying within house foure daies together. After that, they be spread abroad and displaied open to the Sun, and left without dores to take all weathers both day and night, and to be bleached, vntill they be dry and white: which done, they be sluied and slit for cord-work. But to come again to other leaues, the broadest are vpon the Fig-tree, the Vine, and the Plane; the narrowest vpon the Myrtle, Pomegranat, and oliue: as for those of the Pine and cedar, they be hairy: the Holly leaues and all the kindes of Holme be set with sharpe prickles. As for the Iuniper, in stead of leafe it hath a very pointed thorne. The Cypresse and Tamariske carrie fleshie leaues: those of the Alder be most thick of all other. The Reed and the Willow haue long leaues: the Date tree hath them double. The leaues of the Peare tree are round, but those of the Apple tree are pointed; of the Iuie cornered: of the Plane tree diuided into certaine incisions; of the Pitch tree and the Fir cut in, after the maner of comb-teeth; of the wild

hard

A hard Oke, waued and indented round about the edges; of the brier and bramble, sharpe like thornes all the sk in ouer. Of some, they be stinging and biting, as of Nettles: of others ready to pricke like pins or needles, as of the Pine, the Pitch tree, the Larch, the Firre, the Cedar, and all the sorts of Holly. The leaues of the Oliue tree, and the Mast-Holme, hang by a short stele, the Vine leaues by a long. The Poplar or Aspen leaues doe shake and tremble, and they alone keep a whistling and rustling noise onewith another. Moreouer, in the very fruit it selfe, and namely in a certain kind of Apples, ye shall haue small leaues breake out of the very sides in the mids; in some single, in others double and two together. Furthermore, there be trees that haue their leaues coming forth about their boughs and branches, others at the very end and shoot of the twig; as for the wild Oke Robur, it putteth leaues forth of the trunk and maine stock.ouer and besides, the leaues grow thicker or thinner in some than in others; but alwies the broad and large leaues, are more thinne than others. In the Myrtle tree, the leaues grow in order by ranks; those of the Box tree turn hollow; but in the Apple trees they are set in no order at all. In Pyrries & Apple trees both, ye shall see ordinarily many leaues put forth at one bud, hanging at one and the same taile. The Elme, and the Tree-trifolie, are full of small and little branches. *Casto* addeth moreouer and saith, That such as fall from the Poplar or the Oke, may bee giuen as fodder to beasts, but he wils that they be not ouer drie: and he saith expressly, that for kine and oxen, Fig-leaues, mast Holm leaues, and Luie, are good fodder: yea and such kind of beasts may well broule and feed of Reed leaues and Bay leaues. Finally, the Seruise tree looseth her leaues at a once, others shed them by little and little one after another. And thus much for the leaues of trees.

CHAP. XXV.

¶ The order and course obserued in Nature as touching plants and trees, in their conception, flourishing, budding, knotting, and fructifying. Also in what order they put forth their blossomes.

THE manner and order of Nature yeare by yeare, holdeth in this wise: first, trees and plants do conceiue by the meanes of the Westerne wind Fauonius, which commonly beginneth to blow about sixe daies before the Ides of Februarie: for this wind is in stead of an husband to all things that grow out of the earth, and of it they desire naturally to be conceiued, like as the Marcs in Spaine, of which we haue written heretofore. This wind is that spirit of generation which breathes life into all the world; which the Latines call thereupon Fauonius, & *fauendo*, [*i.e.* cherishing and nourishing euery thing] as some haue thought. It blowes directly from the Equinoctiall Sun-setting, and euermore beginneth the Spring. This time, our rustical peasants call the Seasoning, when as Nature seemeth to goe proud or assaut, and is in the rut and furious rage of loue, desirous to conceiue by this wind, which indeed doth viuifie and quicken all plants and feeds sowne in the ground. Now of all them conceiue not at once, but in sundry daies: for some are presently sped in a moment, like as living creatures: others are not so hastic to conceiue, but long it is first ere they retaine, and as long againe before their vitall seed putteth forth; and this is therupon called their budding time. Now are they said to bring forth and be deliuered, when in the Spring they bloome, and that blossome breaketh forth of certain matrices or ventricles. After this, they become nourees all the while they cherish and bring vp the fruit: and this time also the Latines call Germinatio, [*i.e.* the breeding season.] When trees are full of blossomes, it is a signe that the Spring is at the height, and the yeare become new againe. The blossom is the very ioy of trees, and therein standeth their chief felicity: then they shew themselves fresh and new, as if they were not the same; then be they in their gay coats; then it seemeth they striue aie onewith another in varietie of colours, which of them should excell and exceed in beautifull hew. But this is not generall, for many of them are denied this pleasure, and enjoy not this delight; for all trees blossome not: some are of an heauie and sad countenance, neither cheare they at the coming of this new season and glad some Spring; for the mast-Holme, the Pitch tree, the Larch, and the Pine doe not bloome at all, they are not arrayed in their robes, they haue not their lueries of diuers colors to fore-signifie (as messengers and vaucourriers) the arriual of the new yeare, or to welcome and solemnize the birth of new fruits. The Figge trees likewise both tame and wild, make no shew of floures: for they are not

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too

too soon bloomed (if they bloom at all) but they bring forth their fruit. And a wonderful thing it is to see what abortive fruit these Figge-trees haue, and how it neuer commeth to ripeness. Neither doe the Iunipers bloome at all. And yet some writers there be who make two kinds thereof: and they say, that the one flowreth, and bears no fruit, as for the other which doth not blossom, it brings forth fruit vpon fruit, and berrie vpon berrie, which hang two yeres vpon the tree before they come to maturitie. But this is false, for in very truth all Iunipers without exception, haue euermore a sad looke, and at no time shew merie. And this is the case and condition verily of many a man, whose fortune is neuer in the floure nor maketh any outward shew to the world. Howbeit there is not a tree but it buddeth, euen those that neuer blossom: And herein the diuersitie of the soile is of great power: for in one and the same kind, such as grow in marsh grounds, do shoot and spring first; next to them, those of the plaines; and last of all they of the woods and Forrests. And generally the wilde Pyrries growing in woods doe bud later than any other. At the first coming of the western wind Faunius, the Corneil tree buddeth; next to it, the Bay; and somewhat before mid-march or the spring Equinoctiall, the Tillet or Linden, and the Maple, the Poplar, Elme, Willow, Alder, and Filberds or Hazell nut trees, bud with the first. The Palme also maketh hast and is loth to come behind. All the rest at the point and prime of the spring, namely the Holly, the Terebinth, the Paliurus, the Cheston, and the Walnut-trees, or Mast-trees. Apple trees are late ere they bud, but the Corke tree longest of any other. Trees there be that put forth bud vpon bud, by reason that either the soile is exceeding battill and fat, or else the weather faire and pleasant: and this happeneth more to be seene in the blades of corne. But trees if they happen to be ouer rancke in new shoots and buds, they waxe wearie and grow out of heart.

Moreouer, some trees there be that naturally do sprout at other seasons besides the spring, according to the influence of certaine starres, whereof the reason shall be rendred more conueniently, in the third booke next ensuing after this. Meane time this would be obserued, That the winter spring of trees is about the rising of the Ægle-star: the Summer budding at the rising of the Dog-star: and a third, when the star Arcturus is vp. And for the two later, some would haue them verily to be common to all trees, but most evidently seen, in Fig-trees, Vines, Pomegranate trees: and they yeeld a cause, For that in Thessalie and Macedonie the Fig tree about these times putteth forth most plentifully: and in Ægypt this reason is to be seene most apparently. As for all other trees, certaine it is, that when they begin once to bud, they hold on and shoot forward continually without intermission. The wild Oke, the Fir, and the Larch tree, haue their seuerall shoots in one yere, and spring at three sundrie times, giuing ouer between whiles; and therefore they put forth the sprouts between the skales of their barks: a thing vsually happening to all trees in their budding & breeding time: for after they be once conceiued, their rind or bark bursteth withall. Now their first budding is in the prime & beginning of the spring, and continueth much about 15 daies. They bud a second time in the moneth of May when the sun passeth thorough the signe Gemini: by which time it is evidently to be seen, how the bud heads that came first, are driuen and thrust vp higher by those that follow after; & that appeares more plainly by the encrease of the knots & joynts. As for the third budding, it is very short, namely at * midsummer, and lasteth not aboue a seuen-night: and euen then also may a man perceiue manifestly by the knots and joynts of the shoots how much they are put forth and grown. The Vine alone shooteth twice, to wit, when the first beginneth to burgen & put forth a grape; and a second time, when the formeth and digesteth or concocteth the same. As for those trees that blossom not, they haue no more to doe but only to bring forth their fruit, and so proceed to ripen it. Now there are some trees, which no sooner bud, but they shew also a blossom; and yet as hasty as they be that way, they take their leisure afterwards, and long it is ere their fruit come to be ripe: and such are the Vines. Others again be as backward and slow both to bud and blossom; but they make speed to ripen their fruit, as the Mulberry tree, which of ciuile and domesticall trees, is the last that buds, and neuer before all the cold weather is past; and therefore she is called the wisest tree of all others: but after that she begins once to put forth buds, she dispatches her busines out of hand, inasmuch as in one night she hath done; and that with such a force, that in the breaking forth a man may evidently heare a noise. Of those trees that conceiue in winter, about the rising of the Ægle-star, (as we haue before said) the Almond tree is the first that blossometh in the moneth of Ianuarie, and by March the Almond is ripe. The next that blossometh

A blossometh after it, be the Peach Plum-trees of Armenia, then the Iuboe trees called Tuberes, and the Abricots. As touching the former, they be meere strangers, but these Abricots are forced by Art and industrie of man. As for wild and sauage trees, by course of nature the Elder floures first, and hath of all other most plentie of pith or marrow within, whereas the male Corneil hath none at all. But of domesticall and ciuile trees, the Apple tree beginneth to blossom; and soone after the Pyrry, Cherrie tree, and Plum tree, inasmuch as they seeme all to floure together. Next to them, is the Lawrell; anon after it, the Cypress; and then the Pomegranat, and the Fig tree: Vines and Oliue trees do but then burgen and bud, when those other be in their floure: for in truth they conceiue late, namely, at the rising of the Vergilia or Brood-hen; for this is the proper star to the influence whereof these trees be subject: and it is Iune first and the summer Sun-stead, before the vine bloomes; and so it is with the Oliue tree, but that it cometh somewhat later. All trees be seuen daies at the least in their blossoming; and some be longer ere they giue ouer, but none passe a fortnight: and done they haue euer by the eight day before the Ides of Iuly, which are forerunners of the Etesian winds. Finally, some trees there are which doe not knit nor shew their fruit immediatly vpon their blooming.

CHAP. XXVI.

Of the Corneil tree. Also, what is the proper time wherein euery tree beareth: which trees be they that beare not, and which be reputed vnluckie. Also of those trees which soonest lose their fruit. Last of all, what trees shew fruit before lease.

C AS for the Corneil tree, it is about midsummer or the summer Sun-stead, before it putteth forth any fruit, which at first is white, afterwards red as blood. But the female of this kind beareth after Autumne, sowre berries, and such as no beast will abide to tast. The wood thereof also is spongy, hollow, and good for nothing, whereas that of the male is counted among the hardest that be: so great difference there is in trees of one and the same kind. Moreover, the Terebinth, Maple, and Ash, yeeld their fruit or seed in harvest time: Walnuts, Apples, and Peares (vnlesse they be some winter fruits, or of the hasty kind) ordinarily are readie to be gathered in the Autumne. All mast trees be later ere they render their fruit, to wit, about the going downe of the Vergilia or beginning of the winter, saue only the Æsculus, which passeth not the Autumne. As for certain Apple trees and Peare trees both, as also the Corke tree, their fruit is not to be gathered before winter begin. The Firre putteth forth a blossom of a yellow color like Saffron, about mid-Iune or the summer sun-stead; but the Brood-hen star is downe before the fruit be ripe. The Pine, and Pitch tree, do bud before the Firre some fifteen daies, or thereabout; and it is winter first, and the foresaid Vergilia or Brood-hen is likewise set, before their fruit is ripe. Citron trees, Iunipers, and mast-Holmes, are counted trees that beare all the yere long, and the old fruits of the former yere tarieth on the tree vntill new come, and they hang both together. But aboue all other trees, the Pine is a wonder in nature; for a man shall euer find vpon it some of the fruit readie to be ripe; and some againe that will remaine vnto the next yere, and the third yere before it will be readie: and there is not another tree that is more forward and greedie (as it were) to put forth it selfe, and giue greater hope of increase, than it doth: for look in what month soeuer the Pine-nuts are gathered from the tree, in the very same others are in good forwardnesse of ripening; and in such sort the ordereth the matter, that euery month a man shall haue ripe fruit on her. Those Pine-apples or nuts which cleaue and open vpon the tree, bee called Zamia; and well may they be so named, for vnlesse they be plucked, they hurt and corrupt the rest. The only trees that bear no fruit at all, that is to say, not so much as seed, are these; the Tamariske, good for nothing but to make Beesoms of; the Poplar, Alder, Atinian Elme, and the Alaternus, which hath leaues resembling the Holme, and partly the Oliue. As for such trees which neither at any time are set or planted, nor yet beare fruit, they be holden for vnfortunate, accursed, and condemned, in such sort, as there is no vse of them in any sacrifice or religious seruices. Crenutius writeth, That the (Almond) tree whereon Iadic Phyllis hanged her selfe, had neuer (after) greene leaues on it. Such trees as yeeld gum, after they haue put forth their bud, do cleaue and open: howbeit the gum that issueth out, neuer commeth to any thicknesse, vntill the fruit thereof be gathered. Young trees commonly beare not so long as they

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they shoot and grow. The Date tree, the fig tree, the Almond tree, the Apple tree, and the Pyrie, do soonest of all other let their fruit fall before it be fully ripe. Semblably, the Pomegranat tree, which is so tender besides, that with euery thicke and heauie dew, white frost, and foggie time, the wil be bitten & shed the blossom: which is the cause that folk vse to bend the boughs thereof downward to the ground, that both dew and rime may sooner fall off which lights vpon them, and otherwise would ouer-load and hurt them. The Pyrie and the Almond tree cannot abide close and clouidie weather, especially if the wind be Southerly, although no raine do fall: for in such daies, if they chance to blossom, they not only shed their flowre, but lose their fruit new knit. But the Sallow or Withie tree, is of all others most ticklish, and soonest forgoes the seed or chats that it beareth before it commeth to any ripenes: for which cause, called it is of *Homer* * Loose-fruit, or Spill-fruit. Howbeit the age ensuing (naught as it was) hath interpreted that Epithet of his, in another sense, according to the wicked experience they had of it, whereby it was found, that the seed therof causeth barraine in women, and hindreth conception. But in this regard, Nature hath well done also to prevent this mischiefe and inconvenience, in that she hath not been very carefull to preferue the seed: and yet for the maintenance of the whole kind, she hath endued it with this gift, To grow very quickly, if a man do pricke into the ground but a cutting or twig thereof. And yet (by report) there is one Willow in Candie, and namely about the very descent of *Iupiters* caue, which is wont ordinarily to carie the graine or seed thereof vntill it be full ripe, and then is it of a rough and writhen shape, of a wooden and hard substance, and withall, of the bignesse of a cich pease.

Moreover, some trees there be that proue barraine and fruitlesse by the occasion of the imperfection of the soile and territorie where they grow: and namely in the Isle Paros, there is a whole wood or coppise that vsually is lopt and cut, but it neuer beareth any fruit. The Peach trees in the Island Rhodos blossom only, and otherwise are fruitlesse. Ouer and besides, this difference of trees (that some be fruitfull and others barraine) ariseth of the sexe also, for commonly the males beare not: howsoeuer some affirme cleane contrary, and say, They are the male only that be fruitfull, and the female barren. Furthermore, it falleth out many times that trees be fruitlesse, either because they grow too thick one by another, or else are ouercharged and too ranke with boughs and branches: but of such as do beare, some bring forth their fruit both at the sides, and also at the very tips and ends of their branches; as the Peare tree, Pomegranate tree, Figge tree, and Myrtle. As for others, they are of the nature of corne and pulse; for the one grows in the eare or spike alone, the other by the sides, & not otherwise. The Date tree onely (as hath been said before) containeth fruit within certain pellicles, and the same hangeth down in clusters after the manner of grapes. Other trees beare their fruit vnder the leafe for their safeguard and defence, except the Fig tree, which hath her Figs about the leafe, because it is so large and overshadowie. Moreover, the leafe of the fig tree commeth forth after the Figge. One notable thing is reported of a kind of figge-trees in Cilicia, Cyprus, and Hellas, to wit, that they haue this propertie singular by themselves, To bring forth their perfect Figs vnder leafe, and their Greene abortiue Figs that come to no prooffe, after the leafe. The Fig tree beareth moreover certain hastie Figs, which the Athenians call *Prodromos*, i. want-courriers or forerunners, because they be long ripe before others. The Laconian Figge trees bring the fairest and greatest Figs.

CHAP. XXVII.

¶ Of trees that beare twice and thrice in one year. Also what trees soonest wax old: and of their ages.

IN the same countries aboue-named, there be Figge trees also that beare Figges twice in one year. And in the Island Cea, the wild Figge trees beare thrice in the same year: for the second increase is put forth on the first, and the third vpon the second: and by this third fruit, the Figges of the tame Figge tree receiue their maturitie by way of caprification: and those wild Greene Figges of theirs come forth about the leafe. Moreover, there be some Pyries and Apple trees that bring forth fruit twice a year: as also there be others of the hastie kind, which do beare both Peares and Apples betimes in the year. There is a kinde of Crab tree also or Wilding, that in like manner beareth twice a year; and the later fruit is ripe presently after

A after the midst of September, especially in places lying well vpon the Sun. As touching Vines, there be of them also, that after a fort beare three times in the year, which thereupon men call *Insanas*. [The mad or foolish vines:] for whiles some of the grapes be ripe, others begin to swell and wax big, and a third fort againe are but then in the flower. *M. Varro* writeth, That in Smyrna by the sea side there was a vine that bare fruit twice a year, as also an Apple tree in the territorie of *Consentia*. But this is an ordinary thing throughout all the country about Tacapa in Africa, and neuer is it seen otherwise there, so fertile is the soile; but thereof will wee write more at large hereafter in another place. As for the Cypress trees, they faile not but come with fruit thrice in one year: and their berries be gathered in Ianuarie, May, and September, and all of a diuers bignesse, one from the other. Ouer and besides, the very trees themselves are not laden with fruit after one and the same manner: for the Arbut or Strawberry tree is more plentiful in the head, and toward the top: the Oke, the Wal-nut-tree, Fig-tree (and namely that which beareth the vnusurie great figs *Mariscæ*) are more fruitfull beneath. Generally, all trees the elder they are, the sooner they beare and make more hast to ripen their fruit; the rather also if they grow in a ground leane, and exposed to the Sun. Contrariwise, trees that be wild are later in bearing than other: and some of them neuer yeeld fruit fully ripe. Moreover, such trees vnder which the ground is tilled & laid hollow, haue their fruit sooner ripe, & are more fruitfull withall, than those that are neglected and not looked vnto. Besides all this, there is a difference in trees as touching bearing their fruit, according to the age: for the Almond tree & the Pyrie are, most fertile when they be old, as also mast trees, and a certain kind of fig-trees. Al others, the yonger they are, the more fruitfull they be, howbeit, later it is ere their fruit be ripe: a thing most plainly to be obserued in Vines. For the better wine commeth from the elder Vines: but more plenty from the yonger. As for the Apple-tree, it becommeth of all other soonest old, and in that age the fruit is nothing so good as in youth: for both lesser be the Apples, and also more worm-eaten, in so much as the very wormes will breed in them vpon the tree. The Fig is the fruit alone of all trees, that needeth some help of * *Phyficke* to ripen. And this may be noted for a strange and miraculous thing in them, That the later figs bee in more price than the hasty and early ripe, and that there should be more reckoning made of preposterous and artificiall things beside the course of kind, than of the naturall. Also this is a generall rule, Whatsoeuer tree is exceeding fruitfull, and beareth most, the same continueth least while, and soon waxeth old. Yea and some of them are to be seen to die out right, and that very quickly, because they inioyed so fauorable a season, to cause them so to spend themselves with bearing; as wee may marke most easily in Vines.

CHAP. XXVIII.

¶ Of the Mulberrie tree.

CONtrariwise, the Mulberry tree lasteth long, and is very late ere it seemeth old. For why? it is not giuen greatly to beare fruit, neither is ouerladen with Mulberries. To conclude, look what trees haue a curled graine in the wood, as the Maple, Date-tree, and Poplar, they continue a long time before they decay. And in one word, such as haue their roots digged or delued often and laid bare about, are not long liued, but soone age and decay.

CHAP. XXIX.

¶ Of wilde trees.

AS for wilde trees, they indure longest of all others. And generally, as carefull tending and looking to trees, maketh them more fertile: so there is nothing sooner bringeth age vpon them, than fruitfulness and much bearing. Hereupon it is likewise, that such trees both bud and also blossom sooner than others, yea, and ordinarily their fruit is ripe before the rest: in regard whereof, they are more subiect to the iniury of the time & the weather, which causeth also diuers and fundry infirmities. Moreover, as we haue said already in the chapter of mast trees, there be many that bring forth fruits of different sorts: among which may be reckoned the Lawrell, with her variable floures and berries growing so thicke, and principally the barren of that kind which beareth nothing els, and therefore is esteemed of some the male. The Hazels also

so and Filbara trees, besides, their nuts do carry certain chats with a callous substance of skales G
joined one within another, but good for nothing.

CHAP. XXX.

¶ Of the Box-tree: the Greeke Beane or the Lotus.

Among these is to be ranged the Box-tree, which bringeth forth the most varietie of all others. For it putteth forth a seed of her owne, also, a graine which they call Carthegon: besides, on the North side Misselto, and on the South Hyphear: whereof wee will write a none more at large: so that otherwhiles a man shall find foure diuers things vpon the Box all together.

Moreover of trees, some be simple or single, to wit, such as from the root haue one trunk or body, and no more, and yet many boughes and branches; as the Oliue, Fig-tree, and the Vine: others be of a shrubs kind, and put forth many shoots from the root besides the main trunk, as the Rhamne, thorn Paliurus, and the Myrtle. In like maner the Hazell nut-tree. Howbeit, the better is the tree and more plenteous in fruit, when it is well branched from the body, and hath not those suckers from the root: ye shall find some again haue no principall stock at all, as wee may see in a kind of Box, and a certain Lotus beyond sea. Others be forked in twain, yea in fiew, immediately from the root: and ye shall meet with those that put vp many trunks out of the earth, but branch not into boughes, as namely, the Elders; as also with others that forke not, nor are diuided at all, howbeit, they be full of arms & boughs, as the Pitch-trees. Moreover, some there be which haue their boughes disposed in good order, as the Pitch-tree, Firre, or Deale: others again be as disorderly, as the Oke, Apple-tree, and Pyrrie. As for the Fir verily, where it is diuided into boughs, they grow directly vp right vnto heauen, and spread not in breadth about the sides. But a strange and wondrous thing it is of this tree, that if it be headed, or the tops only of those arms cut off, the whole dieth thereupon: but if they be lopped off close to the body, it continueth still aliue. Nay, in case it be cut vnder the place where the branches put forth, the stock or stump that is left, will take no harme by it, but remaine and liue: crop the head onely thereof, and the whole tree dieth. To proceed, some trees spread into arms immediately from the root, as the Elme: others branch only toward the top, as the Pine, and the Greek Beane, which at Rome for the pleasant tast of the fruit, resembling cherries very much, although it be of a wild nature, they call Lotus. This tree is much planted about faire houses, in the court yards, especially because the boughs spread so large; for albeit the stock or body it selfe be but very short and small, yet it brancheth so, as that it yeldeth much shade: yea, and often times the boughes reach to the neighbor housen. But there is not a tree againe that maintaineth this shade a lesse while; for when Winter is once come, the leaues shed, and then it admitteth the warm Sun for it. Moreover, there is not another tree that beareth a fairer barke, nor more pleasant to the eie, nor that carieth either longer boughes, and more in number than it, or stronger: a man that seeth them, would say they were so many trees by themselves. As touching the vse and commodities of this tree, the barke serueth to colour skins and leather: the root to die wooll. And as for the fruit or Apples that it beareth, they are a speciall kind by themselves: for all the world they resemble the snouts or muzzles of wild beasts, and many of the smaller sort seeme to hang to one that is bigger than the rest.

As concerning boughs of trees, some are termed blind, because they put not forth certaine eies or chits where they should bud: which happeneth somtime by a naturall defect, when they are not of validity to thrust out a bud; otherwhiles it is occasioned by some wrong and iniurie done, namely, when they be cut off, and in the place of the cut, there groweth as it were a callous skar that dulleth the vertue of the tree. Furthermore, looke what is the nature that forked trees haue in their boughes, the same hath the Vine in her eies and burgeons; the same also haue canes and reeds in their joints and knots.ouer and besides, all trees toward their root, and the nearest to the ground, are thicker than else where. Some run vp altogether in height, and therein shew thir growth, as the Firre or Deale tree, the Larch, Date-tree, Cypress, Elme, and generally all that rise vp in an entire stocke, and are not diuided. Of those also that branch and put out many boughes, there is a kind of Cherry-tree that is found to beare armes like beames forty cubites long, and two foot in thicknesse square throughout the whole length.

CHAP.

CHAP. XXXI.

¶ Of the Boughes, Barke, and Roots of trees.

There are trees, that immediately from the root thrust out boughes and branches, as do the Apple-trees. Some be couered with a thin rind, as the Lawrell and the tree: others with a thicke barke, as the Oke. In some a man shall find the barke euen and smooth, as in the Apple-tree, and fig-tree: the same in others is rough and rugged, as is to be seene in Oke, and Dare-trees. And ordinarily, all old trees haue more riueld barks and furrowed, than the young. In many trees the bark naturally doth breake and cleaue of the own accord, and namely in the Vine. From some it shaleth and falleth off, as from the Apple tree and the Arbut. The cork and the Poplar haue a fleshie and pulposus barke: the rind of the Vine and the Reed, is made in manner of a membrane or thin skin. In Cherry trees it is as slender as paper, and runneth into rolls: but Vines, Lindens, and Firs, are clad with tunicles and coats of many folds. In some again the rind is but single, as in the Fig-tree, and the Cane or Reed. And thus much of Barke.

There is as great difference in the root. For the fig-tree, the Oke, and the Plane, haue great store of roots and large spurns: contrariwise, in the Apple tree they are short and small: the firre and Larch haue one tap root and no more: for vpon that one main master-root they rest and are founded; howbeit, many small strings and petie spurns shoot out of the sides. In the Bay-tree the roots be more grosse and vnequally embossed, and likewise in the oliue, which also spreadeth out into many branches. But those of the oke be of a carnos substance: and verily, all the kind of okes do root deep into the ground. Certes, if we giue credit to Virgil, that sort of them which are called Efculi, go down as deep into the earth with their roots, as they arise & mount aboue with their heads. The roots of the Apple-tree, Oliue, and Cypress, lie very ebbe, and creep hard vnder the sould of the ground. Moreover, there be roots that run direct and streight, as those of the Bay and Oliue: there be againe that wind and turne as they go, as those of the fig-tree. Some are all ouergrowne and full of hairy strings, as the firre-root, and many others of wild trees that grow in Forrests: from which the mountains vse to pluck those fine fibers & small threds, wherewith they twist goodly faire paniers, couers for flaggons and bottels, and work many other vessels & prety deuises. Some writers [as namely Theophrastus] hold opinion and haue put down in their books, that no roots goe lower into the earth, than that the Sunnes heat may pierce vnto them and giue them a kind warmth; the which is more or lesse, say they, according to the nature of the soile, as it is either lighter or lean, or massier, richer, and faster compact. But I take this to be a meere vnruth. This is certain, that we find in antient writers, that a yong Fir, when it was to be transplanted and set again, had a root that went eight cubits within the earth; and yet it was not digged vp all whole, but broken in the taking vp, and left somewhat behind. The roots of Citron trees are biggest of all other, and spread most. Next to them are those of the Planes, Okes, and other Mast-trees. Some trees there be, the roots wherof like better & liue longer, the more ebbe that they lie within the vpper face of the ground, and namely, Lawrels; and therefore they spring fresh againe, and put forth better, when the old stock is withered and cut away. Others hold, that trees which haue short stumped roots, do sooner decay, & liue lesse while. But deceived they are, and may be reproued by the instance of fig-trees, which liue least while, and yet their roots are longest of any other. I suppose this also to be as false, which some haue held and deliuered in writing, That the roots do diminish and decay, as the trees do waxe old; for the contrary hath bin seen by an aged oke, which by the violent force of a tempest was ouerthrowne, the root wherof tooke vp a good acre of ground in compass.

Moreover, a common thing it is and ordinary, to replant and recouer many trees that haue bin blown down and laid along; for they will reioine, knit againe, and reuiue, by meanes of the earth, euen as a wound doth unite by the solder of a callous cicatrice. And this is a most vsuall and familiar practice obserued in the Planes, which by reason of their great heads so thicke of boughes, gather windes most, and are soonest subiect to their rage: if any one of them by that means be fallen, they lop their boughes, and discharge them of their weightie load, and then set them vp right again in their owne place, as it were in a socket, and they will take root and prosper. And in good faith, this hath bin done heretofore already in Walnut trees, Oliues, and many other, to the like purpose.

CHAP.

CHAP. XXXII.

¶ Of certaine prodigious trees, and presages obserued by them. By what meanes trees grow of their owne accord. That all plants grow not euery where: and what trees they be that are appropriate to certaine regions, and are not elsewhere to be found.

WE read in Chronicles and records, that many trees haue fallen without wind and tempest, or any other apparent cause, but only by way of prodigie and presage of some future euent: and the same haue risen againe of themselves without mans helpe. This happened during the wars against the Cymbrians, to the great astonishment of the people of Rome, who thereupon gathered a fore-tokening of great consequence: for at Nuceria in the groue of *Iuno*, there was an old Elme fell, and after the head was lopped off, because it light vpon the very altar of *Iuno*, it arose of it own accord; and that which more is, immediately vpon it put forth blossoms and flourished. And this was obserued, That from that very instant, the majesty of the people of Rome began to take heart, reuiue, and rise again, which had bin decayed and infeebled by so many and so great losses that the Romans had receiued. The like chanced (by report) neer the city Philippi, vnto a Willow tree which was fallen downe, and the head of it cut off cleane: semibly, to an Aspen tree at Stagyræ, neere vnto the colledge or publik place of Exercise there. And all these were fortunate presages of good luck. But the greatest wonder of all other was this, of a Plane tree in the Isle Antandros, which was not only fallen, but also hewed and squared on all sides by the Carpenter; and yet it rose againe by it selfe, and recouered the former greenesse and liued, notwithstanding it bare 15 cubits in length, & foure elnes in thicknesse and compasse.

All trees that we are beholden vnto the goodnesse of Nature for, we haue by 3 meanes: for either they grow of their owne accord, or come of seed, or else by some shoot springing from the root. As for such as we inioy by the art and industry of men, there be a great number more of deuises to that effect: whereof we will speake apart in a seuerall booke for that purpose. For the present our treatise is of trees that grow in Natures garden onely, wherein she hath shewed her selfe many waies after a wonderfull manner, right memorable.

First and foremost, as we haue shewed and declared before, euery thing will not grow in euery place indifferently: neither if they be transplanted, will they liue. This happeneth sometimes vpon a disdain, otherwhiles vpon a peeuish forwardnesse and contumacie, but oftner by occasion of imbecility and feeblenesse of the very things that are remoued and translated; nay, one while the climate is against it, & enuious; otherwhiles the soile is contrary therunto. The balm tree can abide no other place but Iury. The Assyrian Pome-citron tree will not beare elsewhere than in Syria. As for the Date-tree, it scornes to grow vnder all climates; or if it be brought to that passe by transplanting, it refuseth to beare fruit. But say, that it fortune by some meanes, that she giueth some shew and apparance of fruit, she is not so kind as to nourish and reare vp to perfection, that which she brought forth, forced against her will. The Cinnamon shrub hath no power and strength to indure either the aire or earth of Syria, notwithstanding it be a neere neighbor to the naturall region of her natiuity. The daintie plants of Amomum or Spike-hard, may not away with Arabia, howbeit they be brought out of India thither by sea: for king *Seleucus* made triall therof: so strange they are to liue in any other country but their own. Certainly, this is a most wonderful thing to be noted, That many times the trees for their part may be intreated to remoue into a forrain country, and there to liue; yea, and otherwhiles the ground and soile may be perswaded and brought to accord so wel with plants (be they neuer such strangers) that it will feed and nourish them; but vnpossible it is to bring the temperature of the aire and the climat to condescend thereto and be fauourable vnto them. The Pepper-trees liue in Italy; the shrub of Casia or the Canell likewise in the Northerly regions; the Frankincense tree also hath been knowne to liue in Lydia: but where were the hot gleames of the Sunne to be found in those regions, either to dry vp the waterish humor of the one, or to concoct and thicken the gumme and Rosine of the other? Moreover, there is another maruell in Nature, well-neare as great as that, namely, that she should so change and alter in those same places, and yet exercise her vertues and operations otherwhiles againe, as if there were no change nor alteration

A ration in her. She hath assigned the Cedar tree vnto hot countries: and yet wee set it to grow in the mountaines of Lycia and Phrygia both. She hath so appointed and ordained, that cold places should be hurtfull and contrary to Bay-trees, howbeit, there is not a tree prospereth better, nor groweth in more plenty vpon the cold hill Olympus, than it. About the streights of the Cimmerian Bosphorus, and namely, in the city Panticapæum, both *K. Mithridates*, and also the inhabitants of those quarters, vsed all meanes possible to haue the Lawrel and the Myrtle there to grow, only to serue their turns when they should sacrifice to the gods: it would neuer be, did they what they could: and yet euen then, there were good store of trees there growing of a warm temperature; there were Pomegranates and Fig-trees plenty; and now adaies there be Apple-trees and Pyrries in those parts, of the best and daintiest sort. Contrariwise, ye shall not find in all that tract any trees of a cold nature, as Pines, Pitch-trees, and Firres. But what need I to goe as farre as to Pontus for to auerre and make good my word? Goe no farther than Rome, hardly and with much adoe will any Chestnut or Cherrie trees grow neere vnto it, no more than Peach-trees about the territory of Thufculum. And worke enough there is to make hazels and filbards to like there: turne but to Tarracina thereby, ye shall meet with whole woods full of Nut-trees.

CHAP. XXXIII.

¶ Of the Cypresse tree. That oftentimes some new plants do grow out of the ground, which were neuer knowne to be there beforetime.

THe Cypresse hath bin counted a neere stranger in Italy, & most vnwilling there to grow, as we may see in the works of *Cato*, who hath spent more words, and made oftner mention of the Cypresse alone, than of all other trees whatsoeuer. Much ado there is with it before it come vp; and as hard it is to grow, and when all is done, the fruit is good for nothing. The berries that it beareth, be wrinckled, and nothing louely to the eie; the leaues wherewith it is clad, bitter in tast; a strong and violent smell it hath with it, not so much as the very shade thereof is delectable and pleasant; and the wood but small & not solide, but of an hollow substance: insomuch, as a man may range it among the kinds of shrubs. Consecrated is this tree to *Phaon*; & therefore men vse to set a bough thereof as a signe, before those houses wherein a dead corpse lieth vnder boud. As touching the female Cypresse, it is long ere she beareth. The Cypresse tree for all this, in the end growing vp to a pyramidall forme sharp pointed, is not rejected but much set by, if it were for nothing els but to stand between euery row and ranke of Pine-trees; howbeit, now adaies it is ordered with cutting and clipping for to grow thick in borders about garden quarters along the allies, also to climbe vpon walls in manner of feeling; and being thus kept down, it is by this means alwaies small and tender. Moreover, thereof are drawne many vi-nets and borders about story-works in colours: for so fine is the leafe, so short and green withal, that it may be brought in a traile to winde about pictures either of hounds and hunters, or of ships and sailers, or any counterfeits and images whatsoeuer most daintily.

Two sorts there are of the Cypresse tree. First that which runneth vp into a pyramidall point, winding vpward as a round spire, which also is called the female. A sfor the male, it sendeth out branches, and spreadeth broad: it is lopped also, and serueth in frames to beare vp vines. Both the one and the other is suffered to grow for perches, railes, and planks, to be made of their boughes when they are cut. Once in thirteene yeares there is made a fall, and not one of those but are sold for a Roman denier apiece. A wood thereof planted in this manner, is of all others most gainfull, and yeldeth greatest profit: insomuch, as in old time they were wont commonly to say, That one fall of such Cypresse poles would yeld a man a portion sufficient to giue with his daughter in mariage.

The Island Candie is the naturall countrey of the Cypresse tree, howsoeuer *Cato* hath called it a Tarentine tree: haply, because it came thither first. In the Isle *Ænaria*, the Cypresse trees spring againe after they be cut downe to the roots. But in Candie, looke what ground soeuer a man dorth breake vp and plough, vnlesse he sow or set it with some other thing, Cypresses will come vp, and presently shew about ground. In many places also of that Isle, they spring and grow of themselves, euen in ground otherwise vntilled; and principally in the mountaines of *Ida*, and those which they cal the white Hills: vpon the very crests and tops wherof, which are alwaies

alwaies couered with snow, they are to be seen in greatesst plenty. A wonderfull thing, considering that in all other places they loue warmth, and without it, will not grow: and besides, when they haue met with a familiar ground vnto them, yet they care not much for it, but disdain so kind a noyce: whereby a man may see, that not onely the nature of the soile, and the ordinarie power of the climat serueth much for these plants, but also certain sudden and temporarie impressions of the aire do wonderfully worke in this case: for some showers there be, that oftentimes do bring seeds with them and ingender plants. The same rains do fall sometime after one certain manner, otherwhiles also in such strange sort, as men are able to giue no reason thereof. A thing that befell the country about Cyrene in Barbary, at what time as the herbe *Laserpitium* (which beareth the gum Benioine) grew there first: as hereafter we will write more at large in our treatise of herbes. Moreouer, about the 430 yere after the foundation of Rome city, there sprung vp a very forest or wood nere vnto the same city, by reason of a certaine thick and glutinous shoure like to Pitch, that then fell.

CHAP. XXXIII.

¶ Of *Iuie*.

It is said, that now the *Iuie* tree groweth also in Asia: and yet *Theophrastus* in his time deliuered the contrary, and a firmest, that neither it was to be found there, nor yet throughout all India, but only vpon the mount *Merus*. Ouer and besides, it is reported, that *Harpalus* did what he could to store the country of Media therewith, but all in vaine. And as for *Alexander* the Great, when he returned from out of India with victory, for the rarenesse thereof he would haue all his soldiers go in a sumptuous shew, wearing chaplets thereof vpon their heads; resembling herein prince *Bacchus*, in solemnities and high feasts of which god, the people of Thracia euen at this day are furnished from this tree, and do with *Iuie* set out and garnish the heads of their launces, pikes, and iauelins, their mourrons also and targuets.

An enemy is *Iuie* doubtlesse to trees, and generally to all plants and sets whatsoeuer it cleaue and breaketh sepulchres built of stone, it vndermineth city walls; good onely to harbour serpents, and most comfortable for their cold complexions: so that I cannot chuse but marvel much that it should be honored at all, and accounted of any worth. But to enter into a more particular consideration and discourse of *Iuie*, two principall kinds are found thereof, like as of all other trees, to wit, the male and the female. The male is described to be a more massiue and greater body, to be clad with a harder and fatter leafe, and to shew a flower inclining to purple: and yet the flower of them both, the male as well as the female, doth resemble that of the wild Rose or Eglantine, saue that it hath no smell at all. These generall kinds containe each of them three particular sorts: for there is the black and the white *Iuie*, and a third besides named *Helix*: and yet we must admit other subdiuisions of these also: for of the white, there is one sort that beareth white fruit only, and another that hath white leaues withall: moreouer, of such as carry only white fruit, one kind hath big berries growing thick together, and bunching round in manner of grapes, which clusters be called of the Greeks and Latines *Corymbi*. A second sort there is of the white *Iuie* named *Selenitium*, which beareth smaller berries, and those not so close set and thick couched together. Semblably, it is to be said of the black: for there is an *Iuy* that beareth also a black grain or seed: another with a fruit of a Saffron colour; and hereof are the garlands made which Poets wear: some call it *Nysia*, others *Bacchica*: the leaues of it are not altogether so blacke, but it beareth the greatest bunches and biggest berries of all the black kind. And verily of this *Iuie* there be some Greeke writers that make two sorts, according to the diuers colors of the berries: for the one they call *Erythranus* [i. the red;] & the other *Chryfocarpus*, as one would say, the golden berry. *Iuie*. Now as touching the rampant or climbing *Iuie*, *Helix*, there be many and sundry sorts thereof, differing in their leafe especially: for first & foremost the leaues of this *Iuie* are small, cornered, and better fashioned than the rest, which indeed are but of a plain and simple making. There is a difference likewise in the length between euery knot and ioint, but especially in this, that it is barren and beareth no fruit at all. And yet some there be, who attribute that to the age, and not to a feuerall kind of *Iuie* by it selfe; saying, that the same which at first was *Helix*, and clasped trees, in tract of time changed the leafe and became a very *Iuie* tree: but foully they are deceiued, and disprooued plainly they may be by this,

That

- A That of the said clasping *Iuie Helix*, there be many kinds, and three principall above the rest. The first, of grasse Greene colour, which groweth most common: the second, with a white leate: and the third, called also the Thracian *Iuie*, which hath leaues of diuers colours. The foresaid Greene *Iuie* is fuller of leaues, and those finer and set in better order than in others; whereas the contrary is to be seen in the white kind: also in the third sort with variety of colours, some haue smaller and thinner leaues, couched likewise in good order, and thicker growing; whereas in the middle kind, no such thing may be obserued. Ouer and besides, the leaues of *Iuie* are bigger or lesse, spotted also and marked; in which regard one differeth from another. Among the white *Iuies*, some be whiter than other. The green *Iuie* groweth most of all others in length: the white killeth trees, for by sucking and foking al the sap and moisture out of them, it feedeth and thrusteth so well it selfe, that it becommeth in the end as big as a tree. A man may know an *Iuie* being come to his perfection by these signes: the leaues are very big and large withall; the tree putteth forth yong shoots straight, whereas in others they be crooked and bend inward: the berries also stand in their clusters directly vpright. Moreouer, whereas the branches of all other *Iuies* be made like vnto roots, this hath boughes strong and sturdy above the rest; and next vnto it, the black kind: howbeit this property hath the white *Iuie* by it selfe, that amid the leaues it putteth forth armes that clasp and embrace the tree round on euery side: which it doth vpon walls likewise, although it cannot so well compasse them. And hereupon it is, that although it be cut asunder in many places, yet it continueth and liueth still: and looke how many such arms it hath so many heads likewise of roots are to be seen, whereby it maintaineth it selfe safe and sound; and is besides of that force, as to suck and choke the trees that it claspeth. Furthermore, there is great diuersity in the fruit, as well of the white as the black *Iuie*. As for the rest, the berries of them are so exceeding bitter, as no bird wil touch them. And yet there is one kind more of *Iuy*, which is very stiffe and standeth alone of it selfe without any prop to beare it vp: and this of all others only, is therupon called *Cissos* or *Iuie*; indeed, Contrariwise, *Chamaecissos*, [i. ground *Iuie*] is neuer knowne but to creep along the ground.

CHAP. XXXV.

¶ Of the Bind-weed or *Iuie* called *Smilax*.

- D Like vnto *Iuie*, is that plant which they call *Smilax*, or rough Bind-weed. It came first out of Cilicia, howbeit more commonly it is to be seen in Greece: it putteth forth stalks set thicke with ioints or knots, and those thrust out many thorny branches. The leafe resembleth *Iuie*, and the same is small, and nothing cornered: from a little stele that it hath, it sendeth forth certain pretty tendrils to clasp and wind about: the floure is white, and smelleth like to a Lilly; it beareth clusters comming nearer to those grapes of the wild vine *Labrusca*, than to the berries of *Iuie*; red of color, whereof the bigger contain within them 3 kernels or pepins apiece, the smaller but one, and those be hard and black withall. This *Smilax* is not vsed in any sacrifices or diuine seruice of the gods, nor serueth for garlands and chaplets: for that it is held to be dolefull and ominous, or of an vnlucky presage, by occasion of a certain yong lady or Damsell, of that name, who for the loue of the yong gallant and knight *Croesus*, was turned into this shrub or plant, retaining still her name: which the ignorant people not knowing, but taking it for a kind of *Iuie*, stick not to make coronets thereof; profaning by that means many times their high feasts and sacred solemnities: and yet who woteth not with what chaplets Poets are crowned, and what garlands prince *Bacchus* or *Silenus* vsed to weare? Of this *Smilax* are made certain manuell writing tables. And this property moreouer hath the wood thereof, That if a man hold it close to his eare, he shall heare it to giue a pretty sound.

But to return againe to the *Iuie* indeed, it hath (by report) a strange and wonderful vertue to trie wines, whether they be delaid with water or no: for make a cup of *Iuie* wood, and put wine thereinto, all the wine will foke and run through, but the water (if any be mingled therewith) will tarry behind.

CHAP. XXXVI.

¶ Of Reeds, Canes, and other water shrubs.

IN this discourse touching plants that loue cold places, it wil not be amisse to treat of those that grow in waters. Among which, the Reeds and Canes may be raunged in the first place:

Tt

for

* For Arrowes
and Darts.
* For writing
pens,
* For Flutes
and Pipes.

for necessarie they be in time both of * war and * peace : they haue their vse besides, and are accepted among the * delightfom pleasures of this world. Moreouer, in the Northern regions, the people vse therewith to couer and thatch their houses: and this kind of rooffe will last many ages, if it be laid with a thick coat, euen vpon high and stately houses. In other parts also of the world, they are wont with it to make their arch-roufes, and hanging floores of most sleight worke. As for Canes particularly, and those of Egypt by name, which haue a certaine resemblance of the Papyr-reed in Nilus, they serue for writing Paper. Howbeit those of Gnidos, and which grow in Asia along the lake or meere of Anaja, be held for the best. As for ours heere in Italy, they are of a more spongeous substance and gristly matter, apt to sucke and drinke vp any liquour. The same within-forth is full of holes and concauities, but conuerted aloft into a fine woody rind, and in time becommeth drie, fast, and hard. Apt it is to cleaue, and the cliffs euer more carry with them a very sharpe edge; and besides, it is full of ioints. Now this woody substance being thus distinctly parted by knots, runneth alwaies euen and smooth, growing smaller and smaller vntill it proue sharpe pointed in the top: with a head consisting of a good thicke downe or plume, which serueth also to right good purposes: for either in stead of feathers they vse to stuffe beds therewith in common Innes; or when it is growne hard and hath a slimie callositie about it, they in Picardie and those Nether-lands do stampe it, and therewith calfet or calke the ioints of their ships, betweene the ribs and planks: and herein it hath no fellow, for it taketh faster hold than any glue, and for filling vp any rifts and chinks, no solder so strong, no pitch so sure and trustie. Of Reeds, the Easterlings make their shafts; and archers they be that fight their battels and determine all quarrels. These shafts they arme with sharpe barbed arrow heads in manner of fish-hooks, which wound with a mischief, because they cannot be drawne out of the body againe: and to make these arrowes flie the faster and kill more presently, they fet feathers vnto them. Now say that a shaft be broken as it is fet fast in the body, that end without the flesh will serue againe to be shor: & so inured are the people in those parts to these kind of weapons, so practised withall in discharging of them so nimbly, that a man seeing how thick the shafts flie in the aire, would say they were a cloud of arrowes that shadowed the very Sun. And therefore when they goe to battell, they wish euer for faire weather and Sunne-shine daies. Windes and raine, as most aduerse vnto their warres, they cannot abide: then are they quiet and rest in peace, full fore against their wils, because their weapons at such a time wil not serue their turne. Certes if a man would fall to an exact reckoning and estimate of Aethyopians, Egyptians, Arabians, Indians, Scythians, and Baetrians, of so many nations also of the Sarmatians, and other East-countries, together with all the kingdomes of the Parthians, hee should finde, that the one moiety or halfe of the world hath been vanquished and conquered by the meanes of arrowes and darts, made of Reedes. The Candiot aboute all others, were so readie and perfect in this kinde of feat, that the ouerweening of their owne skill, and the confidence which they had in this manner of seruice, made them too bold, and was in the end their owne ouerthrow. But herein also, as in all other things: else whatfoeuer, Italie hath carried the name, and woen the prize: for there is not a better Reed growing for to make shafts, than that which is found about the Rhene, a little riuier running vnder Bononia: very full of marrow or pith; stiffe also it is and weightie withall; it cutteth the aire, it flyeth away most swiftly: and last of all, it will hold the owne and stand in the weather so counterpoised, that no winde hath any power on it. And those Reeds in Picardie and the Low-countries, are nothing comparable: ne yet of Candie, how highly soeuer they be commended for warre-seruice. And yet the Reeds that grow in India be preferred before them, and beare the name, which indeede some thinke to be of another nature, considering they bee so firme and bigge withall, that beeing well headed with yron, they serue in stead of Speares and Iauelins. In very truth, the Indian Canes for the most part, grow to the bignesse of Trees, such as we see commonly in Temples, standing there for a shew. The Indians doe affirme, that there is a difference amongst them also, in regard of sexe: and namely, That the substance and matter of the male, is more fast and massie: but that of the female, larger and of greater capacitie within. Moreouer, (if wee may beleue their words) the verie Cane betweene euery ioint, is sufficient to make a boat. These great Canes do grow principally along the riuier Acesine. All Reeds in generall, doe shoot and spring in great number from one root and principall stocke: and the more they be cut, the better they come againe. The root liueth long, and without great iniurie offered vnto it, will not die: it also is di-

uided

A vided into many knottie ioints. Those onely of India, haue short leaues. But in all of them, the leafe springeth out of the ioint, which embracing the Cane, doth clad it round about with certaine thin membranes or tunicles, as far as to the middle space between the ioints; and then for the most part they giue ouer to claspe the Cane, and hang downward to the ground. As well Reeds as Canes, spread their leaues like wings round one after another, on either side vpon the very ioints, and that in alternatiue course alwaies very orderly; so as if the one sheath come forth of the right side, the other at the next ioint or knot about it, putteth out on the left, and thus it doth throughout by turnes. From these nodosities, otherwhiles a man shall perceiue as there were certaine little branches to breake forth, and those bee no other but small and slender Reeds.

B Moreouer there be many kindes of Reedes and Canes: for some of them stand thicker with ioints, and those are more fast and solid than others, & small distance there is between the same: there be again that haue not so many of them, and greater space there is from the one to the other, and such Canes for the most part are of a thinner substance. Yee shall haue a Cane all full of holes within, called therupon Syringias; and such are very good to make whistles or small flutes, because they haue within them neither gristly nor fleshy substance. The Orchomenian Cane is hollow throughout from one end to the other, and this they call Auleticus, or the pipe Cane, for as the former was fit for flutes, so is this better for great pipes. Now you shall meet with Canes also that stand more of the wood, & haue but a narrow hole and concauity within; and this is full of a spongeous pith or marow within-forth. Some be shorter, some longer than other, and where you haue one that is thin and slender, you shall spie a fellow to it more grosse and thicker. That which brancheth most, & putteth forth greatest store of shoots, is called Donax, and is neuer known to grow but in marishes and watery places (for herein also lieth a difference) and preferred it is far before the Reed that commeth vp in dry ground. The archers reed is a severall kind by it selfe (as we haue shewed before;) but of this sort, those in Candy haue the greatest spaces betweene euery ioint; and if they be made hot, they are very pliable, and will bend and follow which way soeuer a man would haue them.

Moreouer, Reeds are distinguished one from another by the leafe, not for the number, but the strength and colour. The leaues of those about Lacedaemon, * are stiffe and strong, growing thicker of the one side than of the other. And such as these are thought generally to grow a-
D long standing pooles and dead waters, far vnlike to those about running riuers: and besides, to be clad with long pellicles, which claspe and climbe about the Cane higher about the ioint, than the rest doe. Furthermore, there is another kind of Reeds that groweth crooked and winding trauers, and not vpright vnto any height, but creeping low toward the ground, and spreading it selfe in manner of a thrub. Beasts take exceeding great delight to feed thereof, and namely, when it is young and tender, for the sweet and pleasant taste that it hath. Some call this Reed, Elegia.

E Ouer and besides, there breedeth in Italy also among the fens, a certain salt some, named * A-
darca, sticking to the rind or vtmost barke of Reedes and Canes, onely vnder the verie tuft and head: passing good it is for the tooth-ach, by reason of the hot and caustick quality that it hath like to Senuie or Mustard-seed. As touching the Reed-plots about the Orchomenian lake, I must needs write more exactly, considering in what admiration they were in times past: for in the first place, they called that Cane which was the thicker and more strong, Characias; but the thinner and more slender, Plotia. And this verily was wont to be found swimming in the Islands that floted in the said lake; whereas the other grew alwaies firme vpon the bankes and edges thereof, how farre soeuer it spread and flowed abroad. A third sort also there is of Canes, which they called Auleticon, for that it serueth to make flutes and pipes of: but this commonly grew but euery ninth yeare: for the said lake also kept that time just, and increased not about that terme; but if at any time it chanced to passe that time and to continue full two yeres together more than ordinary, it was holden for a prodigious and fearfull signe. The which
F was noted at Chironia, in that vnfortunate battell wherein the Athenians were ouerthrowne and defeated: and many times else is obserued to happen about Lebadia, namely when the Riuier Cephissus ariseth so high, that he swellth ouer his bankes, and is discharged into the said lake. Now during that ninth yeare (whiles the inundation of the lake continueth) these Canes prouue so bigge and strong withall, that they serue for hawking poles, and fowlers peaches:

T t 2

and

* Paria, or Per-
ficolor, minima,
Therph. i. of
diuers colours.

* Calamachne.

and then the Greeks call them Zeugitæ. Contrariwise, if the water hold not so long, but do fall and return back within the yere, then the Reeds be small and slender, named Bombyciæ. Howbeit the femals of this kind, haue a broader and whiter leafe, little or no down at all vpon them, and then they are known by a pretty name and called Spadones, as one would say guelded. Of these Reeds were made the instruments for the excellent close musick within-house: wherein, I cannot passe with silence, what a wonderfull deale of paines and care they tooke to fit them for their tune, and make them to accord: insomuch, as we are not to be blamed but born withall, if now adaies we chuse rather to haue our pipes and hautboies of siluer. And in truth, to the time of *Antigenes* (that excellent minstrell and plaier vpon the pipe) all the while that there was no vse but of the plain musick and single instrument; the right time of cutting down & gathering these Reeds for this purpose, was about September, when the signe *Arcturus* is in force: then were they to haue a seasoning and preparation for certaine yeares, before they would serue the turne; yea and then also much ado there was with them, and long practise and exercise they asked, before they could be brought into frame and good tune: so as a man might wel say, that the very pipes were to be taught their sound and note, by meanes of certaine tongues or quills that struck and pressed one vpon another; and all to giue contentment and shew pleasure vnto the people assembled at Theatres, according as those times required. But after that musicke came once to be compound, and that men sung and plaied in parts with more varietie and delight, they began to gather these Reeds before mid-Iune, and in three yeares space they had their perfection and grew to their prooffe; then were those tongues or holes made more wide and open, for to quauer and change the note the better: and of such are the flutes and pipes made, which be vsed at this day. But in those times men were persuaded, that there was a great difference in the parts of any Reeds for to serue these or those instruments: in such sort, as that ioint which was next vnto the root, they held to be meeter for the Base pipe that was fitted for the left hand, and contrariwise for the Treble of the right hand, those knots that were toward the head & top of the Reed. Howbeit of all others, by many degrees were those preferred which grew in the riuer *Cephissus*. Now adaies, the hautboies that the *Tuscans* play vpon at their sacrifices, be of Box-wood; but the pipes vsed in plaies for pleasure only, are made of the *Lotos*, of *Asses* shank-bones, and of siluer. The best *Faulconers* Reeds wherewith they vse to chase foules, came from *Panhormus*: but the Canes for angle-rods that fishers occupie, are brought out of *Africk* from *Abaris*. The Italian Reeds & Canes be fittest for to make perches to lay ouer frames, & props for to beare vp vines. Finally, as touching the setting of Reedes, *Cato* would haue them to be planted in moist grounds, after they haue bin first delued & laid hollow with a spade; provided alwaies that the oellets stand 3 foot asunder, and that there be wilde *Sparages* among, whereof come the tender crops for fallads; for those like well and sort together with the Canes.

CHAP. XXXVII.

¶ Of the Willow or Sallow, eight kinds thereof: and what trees besides the Willow are good for bindings. Also of Briers and Brambles.

Moreouer (after the opinion of the said *Cato*) it is good to plant Withies also about riuer sides, and neere to Reeds: for surely there is not more profit arising from any other tree of the waters, than from it; howsoeuer the *Poplars* are well liked and loued of the vines, and do nourish the good wines of *Cæcubum*: howsoeuer the *Alders* serue in stead of rampiers and strong fences against the inundation and ouerflowing of riuers, withstanding their forcible eruptions; howsoeuer they stand in the waters as mures and wals to fortifie the banks, or rather as sentinels to watch and ward in the borders of country farms; and being cut down to the root, do multiply the rather, and put forth many shoots and imps as heires to succeed. And to begin withall, of *Sallowes* there be many kinds: for some there be, that in the head beare perches of a great length to prop and make trails for vines to run vpon: and the rind or skin as it were pilled from the wood, is as good as a belt or thong to binde or gird any thing withall. Others againe there are, and namely the red Willows, which carry twigs and rods that are pliable and gentle to wind as a man would haue them; fit also for buildings. Ye shal haue of these *Osiers*, some that are very fine & passing slender, wherof are wrought pretie baskets, and many other dainty deuises; others also that are more tough and strong, good to make paniers, hampers, and a thousand other

- A** other necessary implements for country houses, and to fit the husbandmen. Being pilled, they are the fairer and whiter, more smooth also and gentle in hand, whereby they are excellent good for the more delicate sort of such wicker ware, and better far than stubborn leathers; but principally for leaning chairs, wherein a man or woman may gently take a nap, sitting at ease and repose most sweetly. A willow, the more that it is cut or lopt, the better spring will it shoot at root, and beare the fairer head. Let that which you cut or shred, be so little & short withall, that it resemble a mans fist, rather than a bough, the thicker will it come again: a tree no doubt that would not be set in the lowest rank, but be wel regarded, how soeuer we make but baste reckoning thereof: for surely there is not a tree for reuennue and profit, more safe and certain; for cost, lesse chargeable; and for injury of weather, in better security. Certes, *Cato*, among the commodities that commend a good ferm or manor, esteemeth it in the third place, and preferreth the increase and benefit thereby, before the gain that groweth from oliue rows, corn fields, & good meadows. Yet hereof we must not infer, that we are not furnished with many other things which wil serue for bands to bind withall; for we haue certain sorts of *Spart* or *Spanish broom*, we haue *Poplars*, *Elmes*, the *Sanguine-thrubs*, *Birch*, clouen Reeds, leaues of *Cane*; as for example in *Liguria*: the cuttings also of the very *Vine*, and *Briars*, so their sharp prickles be cut away, to tie withall; yea and the *Hayell wands* also, so they be writen and twined: wherein a man may see a wonderful property, That a wood should be stronger for to bind withall, when it is crushed and bruised, than whiles it was entire and sound. All these (I say) are good for bands, and yet the willow hath a gift therein beyond all the rest. The Greek willow is red, and commonly is sluken for to make withs. The *Amerian Osier* is the whiter, but more brittle, and soon wil crack, & therefore it is put to that vse of binding sound and whole as it groweth, and not clouen through. In *Asia*, they make account of three sorts of willows: the black, which they imploy to wind and bind withall, so tough and pliant it is; the white, wherewith husbandmen make their wicker paniers and baskets, with other such vessels for their vse; as for the third, it is the shortest of all other, and they call it *Helix* or *Helice*. With vs also here in *Italy*, there be as many kinds, & those distinguished by their seuerall names; the first, which is of a deep purple colour, they call the free osier or willow; and that is so good for bands: the second, which is more thin and slender, is named *Vitellina*, [or *Vitellinam* rather, for the yellow colour of the yolke of egges,] for the bright hew that it hath: the third that is smallest of all three, is the French willow.
- D** To come now to the brittle Rushes that grow in marsh grounds, which serue to thatch houses and to make mats; and the pith whereof when the rind is pilled, maketh wicke for watch-candles, and funerall lights to burne by a dead corps whiles it lieth aboue ground, they cannot iustly be reckoned in the ranke either of shrubbes, or Brier-bushes, and Brambles, ne yet of tall plants growing vp with stems and stalks, no more than among Hearbes and Weeds creeping along the ground; but are to be counted a seuerall kind by it selfe. True it is, that in some places there are to be found rushes more stiffe, hard, and strong, than in others. For not onely mariners and watermen in the riuer *Po* do make sailes thereof, but fishermen also of *Africk* in the maine sea; howbeit they hang their sailes betwene the masts, from mast to mast, after a preposterous manner contrary to all other. The *Mores* also do couer their cottages with *Bulrushes*; and surely if a man looke neerly to the nature of them, they may seeme to serue for that vse which the *Papyr-reeds* in the netherland of *Ægypt* are put vnto, about the descent and fall of the riuer *Nilus*.
- E** As touching Brambles, they may go among the shrubs of the water: so may the *Elders* also, which consist of a spongy kind of matter, & yet cannot wel be counted among those plants which bee termed *Fencels-gyant*: for surely the *Elder* standeth more vpon the wood than they do. The shepherds are verily persuaded, that the *Elder* tree growing in a by-place farre out of the way, and from whence a man cannot heare a cock crow out of any town, maketh more shrill pipes and louder trumpes than any other. The Brambles beare certaine berries like the *Mulberries*, euen as the sweet Brier of another kind, which they call *Cynosbatos* or the *Eglantine*, carrieth the resemblance of a *Rose*. A third sort there is of brambles, which the Greeks call *Idea*, of the mountaine *Ida*. This is the *Raspis*: smaller it is and more slender than the rest, with lesse prickles vpon it, and nothing so sharpe and hooked. The floure of this *Raspis* being tempered with hony, is good to be laied to bleared and bloud-shotten eies; as also to the wild-fire, or disease called *Saint Antonies fire*. Being taken inwardly, and namely drunk with water, it is very com-

comfortable to a weake stomacke. The Elder beareth certain blacke and small berries, full of a grosse and viscous humor, vsed especially to die the haire of the head black. If they be boiled in water they are good and wholsome to be eaten as other pot-herbs.

C H A P. XXXVIII.

¶ *Of the iuice or humor in trees. The nature of their wood and timber. The time and manner of felling and cutting downe trees.*

Trees haue a certaine moisture in their barks, which we must vnderstand to be their very bloud, yet is it not the same nor alike in all: for that of the Fig trees is as white as milke, and as good as rendles to giue the forme to cheese. Cherry trees yeeld a glutinous and clammy humor, but Elmes a thin liquor in manner of spittle. In Apple trees the same is fattie and viscous; in Vines and Pyrries waterish. And generally, those trees continue and liue longest, that haue such a glewy moisture in them. In summe, there are to be considered in the substance and body of trees, like as of all other liuing creatures, their skin, their bloud, flesh, sinues, veins, bones, and marrow. For in lieu of their hide is the barke. And I assure you, a strange and maruellous thing it is to be obserued here in the Mulberry, that when Physitians seek to draw the foresaid liquour out of it, at seuen or eight a clocke in a morning, if they scarifie or lightly cut the bark with a stone, it issueth forth, and they haue their desire: but if they crush or cut it deeper in, they meet with no more moisture than if it were stark dry. In most trees next to the skin lieth the fat: this is nought else but that white sap which of the colour is called in Latin Albumum. As it is soft in substance, so is it the worst part of the wood; and euen in the strong oke, as hard as otherwise it is, ye shal haue it soon to putrifie and rot, yea and quickly be worm-eaten. And therefore if a man would haue found and good timber, this white must be alwaies cut away in the squaring. After it followeth the flesh of the tree; and so the bone, which is the very heart and best of the wood.

All trees whereof the wood is ouer dry, beare fruit but each other yeare, or at leastwise more in one yeare than another, as namely the Oliue tree: a thing obserued more in them than in those that haue a pulposus and fleshy substance, as the Cherry tree. Neither are all trees indifferently furnished with store of the said fat or flesh, no more than the most fierce and furious beasts. As for the Box, Cornel, and Oliue trees, they haue neither the one nor the other, ne yet any marrow at all, and but very little bloud. Semblably, the Seruis tree hath no heart, the Alder no carnositie, (and yet both of them are stored wel enough with marrow, which is their pith) no more than canes or reeds for the most part. In the fleshy substance or wood of some trees there are to be found graine and veine both. And easie it is to distinguish the one from the other: for commonly the veins be larger and whiter; contrariwise the grain, which the Latines call Pulpa, runneth streit and direct in length, and is to be found ordinarily in trees that wil easly cleaue. And hereupon it commeth, that if a man lay his eare close to one end of a beame or piece of timber, he shall heare the knocke or pricke that is made but with a pen-knife at the other end, be the piece neuer so long, by reason that the sound goeth along the streit grain of the wood. By this means also a man shall find when the timber doth twine, and whether it run not euen, but be interrupted with knots in the way.

Some trees there be that haue certain hard bunches bearing out and swelling like to kernels in the flesh of a Swines necke: and these knobs or callosities haue not in them long grain and broad veine, as is aboue said, but only a brawny flesh (as it were) rolled round together: And to say a truth, when such knurres and callosities as these be, are found either in Citron or Maple trees, men make great account of them, and set no small store by that wood. All other sorts of Tables, when the trees are clouen or sawne into planks, are brought into a round compasse with the grain: for otherwise, if it were slit ouerthwart to make them round against the grain, it would soon breake out. As touching the Beech, the graine of it runneth crosse two contrary wayes like combe teeth; but in old time the vessels made of that wood were highly esteemed. As for example, *Manius Curius* hauing subdued his enemies, protested, and bound it with an oath, That of all the booty and pillage taken from them, hee had not reserued any thing for himselfe, but only a cruet or little Ewer of Beech wood, wherein he might sacrifice vnto the gods.

There

A There is no wood but floteth aloft the water, and waueth in length: like as that part which is next to the root is far more weighty, setleth faster downe and sinketh. Some wood hath no veins at all, but consisteth only of a meere grain, streight and small in maner of threds, & such commonly is easie to be clouen. There is again wood that hath no such direct graine, and that will sooner breake out than cleaue; and of this nature is the Oliue and Vine-wood. Contrariwise, the whole body and woody substance of the Figge tree is nothing but flesh. The Mast-holme, Cornel, Oke, Tretifolie, Mulberry, Ebony, and Lotus, which haue no pith and marrow within, as is before said, are all heart. All wood for the most part turneth to a blackish colour. The Cornel tree is of a deep yellow, whereof are made the faire Bore-speare staues, which shine again, and be studded (as it were) with knots, and chamfered betweene both for decencie and handsonnesse. The Cedar, Larch, and Iuniper wood is red.

C H A P. XXXIX.

¶ *Of the Larch tree, the Firre, and the Sapine: the manner of cutting or felling such like trees.*

There is a female Larch tree which the Greeks call *Ægis*: the wood whereof is of a pleasant colour, like to hony. Painters haue found by experience, that it is excellent good for their tables, both for that it is so euen and smooth, not apt besides to chink and cleaue: as also because it will endure and last for euer. And that part they chuse which is the very heart of it, and next the pith, which in the Fir tree the Greekes call *Leufon*. In like sort the heart of the Cedar is hardest which lieth next to the pith or marrow aboue named (much after the manner of bones in the bodies of liuing creatures) when the muddy carnositie is scraped off and taken away. The inward part also of the Elder by report is wondrous hard & tough, and they that make thereof staues for Bore-speares prefer it before any wood whatsoeuer. For it standeth only vpon skin and bone, that is to say, of the rind and heart.

As touching the falling and cutting downe of trees, to serue either in temples or for other vses, round and entire as they grow, without any squaring; as also for to barke them, the onely time and season is, when the sap runs, and that they begin to bud forth: otherwise you shal neuer be able to get off their bark: for bark them not, they wil rot and become worm-eaten vnder the said barke, and the timber withall waxe dusky and blacke. As for the other timber that is squared with the axe, and by that means rid from the barke, it would be fallen or cut downe between mid-winter and the time that the wind *Favonius* bloweth: or, if we be forced to vse the timber before, and to prevent that time, trees may be fallen at the setting of the star *Arcturus*, or of the *Harp*-star before it. Finally, the utmost and last time thereof is at the summer Sunnest. But forasmuch as most men be ignorant of these seasons, and know not when these starres aboue named do either rise or fall, I will hereafter shew the reason both of the one and other in place conuenient. For this present, as touching the time of felling trees, the common sort make no more scruple, but thinke it sufficient to obserue, that no trees which are to be hewne square for carpenters work be cast down and laid along before they haue borne their fruit. As for the hard and sauge Oke, if it be felled in the spring it will be subiect to the Worme: but cut it down in mid-winter, it will neither warpe, ne yet cleaue and chink: being otherwise subiect vnto both, namely, as well to cast and twine, as to rift and gape: a thing incident to the Cork wood, be it cut down in as good a season as is possible. Moreouer, it passeth to see how much the age of the Moon auaileth in this case: for it is commonly thought that timber would not be fallen but in the wain and namely in the last quarter, from the 20 day of the Moon, till the thirtieth. And this is generally received among all good workmen, That the best time to cut downe any timber, is in the coniunction of the Moon with the Sun, euen in the very day of the change, before she sheweth new. *Cerres Tiberius Cesar* the Emperor gaue order to fel the Larch trees that came out of *Rhoetia*, to repaire and re-edifie the bridge that serued to represent the shew of a naual battell vpon the water (which fortun'd to be consumed with fire) iust at the change of the Moon. Some say, that we must precisely obserue the point of the conjunction, and that the Moon withall be vnder the earth, when such trees should be felled: which cannot be but in the night. But if it fall out besides, that this conjunction or change of the Moone, and the last day of the Winter Sun-head meet together at one instant; the timber then cut downe will last a

Theophrastus writeth this of the Cornel tree.

world

world of yeares. Next vnto it is that timber which is fallen in the daies and signes aboute rehearted. Others affirme moreouer, that the rising of the Dog-star would be considered and chosen for this purpose: for at such a time was that timber felled which serued for the stately hall or pallace of *Augustus*. Moreouer, for to haue good and profitable timber, the trees would be cut down that are of a middle age, for neither yong poles nor old runts are fit for durable building. Furthermore, there be that hold opinion, that for to haue the better timber, the trees should haue a kerse to the very heart and pith round about, and so let it stand an end still, that all the humor by that means might run out, before they be ouerthrowne and laid along. And verily a wonderfull and miraculous thing is reported in old time, during the first Punicke war against the Carthaginians, namely, that all the ships of that fleet which was conducted by General *Duellius* the high Admiral, were shot into the sea and vnder saile, within sixty daies after the timber wherof they were built was cut downe in the wood. And *L. Piso* hath left in writing, That against king *Hiero* there were 220 ships made & furnished in 45 daies after the timber grew. Also in the second Punicke war, the Armado which *Scipio* imploied, was set afloat and bare saile forty daies after the fall of the timber. See how forcible and effectuell in all things is the season and opportunitie of time duly taken, especially when need driueth to make speed and hasten apace.

Cato the chiefe and only man of all others for experience and knowledge in euery thing, in his treatise of all kind of timber to be imploied in building, giues these rules following. Make thy pressing plank especially of the black * *Sapine* or Horn-beam tree. *Item*, Whensoever thou meanest to stoke vp either Elme, Pine, Walnut tree, or any other whatsoeuer for timber, see thou dig it out of the ground, in the wane of the Moon, and that in the afternoon, and take heed in any wise that the wind be not South. *Item*, The right season to fell a tree for timber, is when the fruit is full ripe. *Item*, Beware in any case, that thou neither draw forth of the ground, nor yet square a tree when the dew falleth. And a little after: Beware thou meddle not with timber trees but either at the change or full of the Moon. And in no hand, neither stork it vp then, nor hew it hard to the ground. But within foure daies after the full Moone, plucke vp trees hardly, for that is the best time. *Item*, Be well aduised, that thou neither fell, square, nor touch with the ax, any timber that is black, ylesse it be dry. And meddle not with it, if either it be frozen or full of dew. *Tiberius* the Emperour aboue named obserued likewise the change of the Moon, for cutting the haire both of head and beard. And yet *M. Varro* gaue a rule, That to prevent baldnesse and the shedding of haire, the Barber should be sent for alwaies after the full Moon.

But to come again vnto our timber trees: The Larch and Fir both (but the Fir especially) if they be cut down, bleed a long time after, and yeeld abundance of moisture. Indeed, these twain of all others be the tallest, and grow most streight and vpright. For Mast-poles and crosse saile-yards in ships, the Fir or Deale is commended and preferred before all other, for the smoothnes and lightnesse withall. The Larch, the Fir, and the Pine haue this propertie common to them all, To shew the graine of their wood running either parted in foure, forked in twaine, or single one by one. For fine carpentry and Ioiners feeling within house, the heart of the tree would be clouen or rent. The quarter timber, or that which runneth with foure grains, is simply the best, and more pleasant to be wrought than the rest. They that be skilfull woodmen, and haue experience in timber, wil soon find at the first sight the goodnes of the wood by the very bark. That part of the Fir tree which groweth next to the earth is without knots, euen and plain: the same is laid to foke and season in the water, and afterwards the barke is taken off, and so it commeth to be called *Sapinus*. The vpper part is knotty, and harder than the nether, and the Latins name it *Fufterna*. In sum, what tree soeuer it be, that side which regardeth the North is more strong and hard than the other. And generally, the wood of those trees that grow in moist and shady places is worse: contrariwise, that which commeth from ground exposed to the Sun-shine is more fast and massie, and withall endureth a long time. And herupon it is, that at Rome the Fir trees that come from the nether sea side out of Tuscane, be in better request than those from Venice side, vpon the coast of the vpper sea.

Moreouer, there is great ods between Firre trees, in regard of diuers Countries and Nations where they grow. The best are those of the Alps and the Apennine hills. Likewise in France there are excellent good Firs vpon the mountains Iura and Vogesus: as also in Corsica, Bithinia, Pontus, and Macedonia. A worse kind of them grow in Arcadia and about the mountains neere

A neare *Anea*. The worst be those of *Pernassus*, & *Euboea*: for in those parts they be full of boughs and grow twined, besides, they soone doe putrifie and rot.

As for Cedars, the best simply be those that grow in Candy, Affricke, and Syria. This vertue hath the oile of Cedar, That if any wood or timber be thoroughly anointed therewith, it is subiect neither to worme nor moth, ne yet to rottenesse.

The Juniper hath the same propertie that the Cedar. They proue in Spaine to be exceeding big and huge, the Berries also greatest of all others. And wheresoeuer it grows, the heart thereof is more found than the Cedar.

A generall fault and imperfection there is common to all wood, When the graine, and the knots run into round balls, and such they call in Latin *Spiræ*. Also in some kind of timber, like as in marble also there be found certaine knurs like kernils, as hard they be as naile heads, and they plague sawes, wheresoeuer they light vpon them. Otherwhiles they fall out to be in trees, by some accidental occasion, as namely, when a stone is got into the wood, and enclosed within it: or, in case the bough of some other tree be incorporat or vnited to the foresaid wood. There stood a long time a wild Oliue in the market place of Megara, vpon which the hardie and valiant warriors of that citie vsed to hang and fasten their armor, after some worthy exploit performed: which in tract and continuance of time were ouergrown with the bark of the said tree, and quite hid. Now was this a fatal tree vnto the same city and the inhabitants thereof, who by way of Oracle were forewarned of their wofull destiny and vtter ruin, which was to happen. When that a tree should be with yong, and deliuered of harneis: which Oracle was fulfilled when this tree was cut downe, for within the wombe thereof were found the mourrions, jambriers, or grieues, of braue men in times past. To conclude, it is said, That such stones so found in trees be singular good for a woman with child, to carie about her, that she may goe her full time.

CHAP. XL.

¶ Of diuers sorts of timber. Of some trees of extraordinarie bignesse. What trees they be that neuer be worme-eaten, nor decay and fall. What wood doth endure and continue a waies good.

THE greatest tree that to this day had euer been knowne or seene at Rome, was that, which being brought with other timber for the rebuilding of the foresaid bridge called *Nau-machiaria*, *Tiberius Caesar* commanded to be landed and laid abroad in view for a singular and miraculous monument to all posteritie: and it remained entire and whole, vntill the time that *Nero* the Emperour built his stately Amphitheatre. This peece of timber was of a Larch tree: it contained in length 120 foot, and caried in thicknesse euery way two foot, from one end to the other. Whereby a man may guesse and judge the incredible height of the whole tree besides, to the very top. Such another tree there was to be seen in our daies, which *M. Agrippa* left for the like singularity and wonder of men, in those stately porches and cloisters that hee made in *Mars* field: and it continued still after the building of the muster place and treasurers hall named *Diribitorium*. Shorter it was than the former by 20 foot, and caried a foot and half in thicknesse. As for the Fir tree, which serued for a mast in that huge ship, which by the commandement and direction of *C. Caligula* the Emperour transported and brought out of *Aegypt*, that Obelisk which was erected and set vp in the Vatican hill, within the cirque there, together with the foure entire stones which bare vp the said Obelisk as supporters; it was seen of a wonderfull and inestimable height aboue all others: and certaine it is, that there was neuer knowne to float vpon the sea a more wonderful ship than it was. She receiued 120000 Modij of Lentils for the very ballast; she tooke vp in length the greater part of the left side of *Hostia* harbour: for *Claudius* the Emperour caused it there to be sunk, together with three mighty great piles or dams founded vpon it, and mounted to the height of towers, for which purpose there was brought a huge quantity of earth or sand from *Puteoli*. The maine bodie of this mast contained in compasse 4 fadom full. And a common by-word it is, currant in euery mans mouth, that Fir mast for that purpose, are vually sold for eight hundred Sesterces a peece, and more monie: whereas for the most part planks which are set together and serue in stead of boars, ordinarily cost but forty. Howbeit, the kings of *Egypt* and *Syria*, for default and want of Fir (haue vsed by rep ort) in stead thereof Cedar wood about their shipping. And verily, the voice goes of an exceeding

ceeding big one which grew in Cyprus, and was cut downe for a mast to serue that mighty gal-
leace of king *Demerius*, that had eleuen bankes of oares to a side; a hundred and thirtie foot it
was high, and three fatham thicke. And no maruell, since that the pyrats and rousers, who haunt
the coasts of Germanie, make their punts or troughs of one entire peece of wood and no more,
wrought hollow in manner of a boat, and some one of them will hold thirtie men.

To proceed now vnto the sundry natures of wood. The most massie and fast wood, and there-
fore the weightiest of all other, by judgment of men, is that of the Ebene and the Boxe: both
small trees by nature. Neither of them twaine swims aboue the water, no more will the Corke
wood, if it be barked, nor the Larch. Of all the rest, the saddest wood is that of Lotus, I meane
that which at Rome is so called. Next to it, is the heart of Oke, namely, when it is rid of the
white sappie wood: the heart (I say) which comes neare to a black color; and yet the Cytisus or
Tetrifolice is blacker, and seemeth most to resemble the Ebene. Howbeit, you shall haue some
who affirme that the Terebinth of Syria be blacker than it. There was one *Thericles* a famous
Turner, who was wont to make drinking cups, mazers, and bowles of the Terebinth; which is a
sufficient prooffe, that the wood is fine and hard. This wood alone of all others, louth to be oi-
led, and surely the better it is for the oile. But a maruellous prety deuice there is to set a passing
faire blacke color, and a shining glosse vpon it; with Walnuts and wild Peares, namely, boiling
these together, and making thereof a mixture and composition to giue the said tincture. All
these trees abouenamed haue a sad and fast wood. Next to them in that respect is the Cornell
tree: and yet I cannot properly range it in the order of timber trees, so small and slender it is.
Neither is the wood thereof in manner good for nought else but for spokes in cartwheels, also
to make wedges to cleaue wood, and tough pins, that will hold as fast well neere as yron spikes. In
like sort, the Mast-helm, the Oliue both wild and tame, the Chestnut tree, the Hornbeam, and
the Poplar, be of an hard substance, and meet for this purpose. The wood hereof hath a curled
graine like the Maple, and surely would be as good timber as any, but for often lopping the
boughs, which gueldeth and deminisheth the strength. Moreouer, many of them there bee, and
the Oke especially, so hard, that vnlesse they be foked first in water, it is impossible to bore a
hole into them with an auger, or to pluck forth a nail if it be once set fast, water them as much
as you will. Contrariwise, the Cedar will not hold a nail. The wood of the Linden tree seemes
of all other to bee most soft, and hottest withal: for prooffe whereof, this reason men doe alleadge,
because it soonest turnes and dulles the axe edge. Of a hote nature also are the Mulberrie tree,
the Lawrell, and the Yvie, and in one word, all those that serue to strike fire with. This experi-
ment was first found out by spies, that goe between camp and camp, by shepheards also in the
field: for hauing not flint euermore readie at hand to smite and kindle fire withall, they make
shift for to rub and grate one wood against another, and by this attrition there fly out sparkles,
which lighting vpon some rinder, made either of drie rotten touchwood, or of bunts and wither-
ed leaues, very quickly catch fire, and burne not out. And for this intent, there is nothing bet-
ter than to strike the Yviewood, with the Bay. In this case also the wilde Vine (I mean not La-
brusca) is much commended: and it climbeth and runneth vpon trees in manner of Yvie.

The trees that grow in waterie grounds be coldest of all others: but such be toughest and
therefore best to make bucklers & targuets, the wood whereof, if it be cut, comes quickly toge-
ther, and closes vp the gash againe, and in that regard, much adoe there is to pierce it thorough
with any weapon whatsoever. And of this sort are Fig trees, Willowes, Lindens, Birch, Elder,
Ash, and Poplar. Of all these, the Fig tree and the Willow be lightest, and therefore fittest for
that purpose. These trees last rehearsed, be good for caskets and foffers; wicker baskets also and
prettie paniers, which be made of winding twigs. Their wood besides is faire & white, streight
also and easie to be grauen. The plane wood is soft and gentle, but moist withall; and so is the
Alder. Elme likewise, Ash, Mulberry, and Cherry-tree wood, is pliable, but drier and more pon-
derous. The Elme, of all kinds of wood, will keep streight and stiffe best, and not warp at all: &
because it twines and casts not, it is passing good for hinges and hooks, for sawne bords for led-
ges in dores and gates, so as this regard be had of exchange, that the vpper end of the bord that
grew toward the head of the tree, be fitted to the nether hinge or hooke of the dore; and con-
trariwise the butt end, serue the higher. The Date tree and the Corke, haue a soft and tender
wood. The Apple tree, Pear tree, and Maple, haue as sad and massie; but brittle it is, like as
all wood that goeth with a crosse and frised grain. And look what tree soeuer is naturally hard
and

A and tough, the wild and the male of the same kind, haue their wood more churlish than other-
wise it is in the rest. Semblably, those that beare no fruit, are of a faster and firmer wood than
the fruitful: vnlesse it be that that the males be bearers and the female barren, of which sort are
the Cyresse and Cornell trees. The wood of Cyresse, Cedar, Ebene, Lotus, Box, Yewgh, Lu-
niper, and the Oliue both sauage and gentle, is neuer worme-eaten, ne yet rotteth for age. As for
all other trees, long it is before these decay, to wit, the Larch, the Oke, the Corke tree, Chestnut
and Walnut tree. The Cedar, Cyresse, and Oliue wood, neuer doth chinke or cleaue of it self,
vnlesse it be by some accident.

It is commonly thought, that the Box, the Ebene, the Cyresse, and the Cedar wood, is euer-
lasting and will neuer be done. An euident prooffe thereof as touching all these sorts of timber,
by the judgment and choise of so many men, was to be seene in that famous temple of *Diana* in
B Ephesus: for al Asia set to their helping hand and contributed toward that work, which in foure
hundred yeres and not before, they brought to an end & finished. The beames, rafters, and spars
that went to the making of the rouse, were by the generall voice of the whole world, of Cedar
timber. As touching the statue or image it selfe of the goddesse *Diana*, it is not certainly known
of what wood it was: all writers, saue only *Mutianus*, report that it was of Ebene. As for him, a
man who had been thrice Consull of Rome, and one of the last who vpon their owne sight of
the said thing, wrote thereof, auoucheth that it was made of Vine wood; and that, howsoeuer
the temple was ruined and rebuilt againe no lesse than seuen times, yet the foresaid image was
neuer altered nor changed. Who saith moreouer, that *Caenias* chose that wood for the best (for
so he named the workman that cut and carued it.) And I much maruel therat, considering that
C by his saying this image was of greater antiquity than that of lady *Ameria*, much more than of
prince *Bacchus*. He addes moreouer and saith, that this statue was embawled within, by reason
of the precious oile of Spiknard, which was distilled into it at many holes: by means of which
medicinal liquor, the wood was nourished, and the joints held close and fast together, where-
at I cannot chuse but maruell againe very much, that considering the statue was so small, it should
haue any peece or joint at all. Now as touching the leaues of the dores belonging to this tem-
ple, they were by his report, of Cyresse wood: and continued still fresh and new to the eye, not-
withstanding it is foure hundred yeres well neere since they were made. Where, by the way
this is to be noted, that these dores stood foure yeres glewed in the cleaue. And verily, this wood
was chosen for that purpose, because among other properties, the Cyresse alone hath the gift,
D to looke alwaies shining and polished, and neuer loseth the glosse and beauty. And for to prooue
this, we need not to goe farre: Looke but vpon the emage of * *Vejouis*, in the Capitoll, made of
Cyresse wood, doth it not endure still faire and trim? and yet was it dedicated and consecra-
ted in that temple, in the yeare after the foundation of Rome, 551.

A famous and memorable temple there is of *Apollo* at Vtica, where the beames and maine
peecees of timber, made of Numidian Cedars, remaine as whole and entire as at the first day
when they were set vp, which was when the citie was first founded: by which computation, they
haue continued alreadie 1188 yeres. Moreouer, it is said, that at Saguntum a citie of Spaine,
there is a temple of *Diana* still standing, a little beneath the citie: and yet as king *Burchus* mine
Author saith, 200 yeres before the ruine and destruction of Troy, the same men that brought
E the image of the said *Diana* from the Island Zacyntus, founded the temple abouesaid. For the
antiquity and religion whereof, *Annibal* made some conscience to demolish it, and would not
once touch it: and therein are to be seen at this day the beames and rafters of Luniper, sound and
good. But aboue all other, memorable is the temple of the said goddesse *Diana* in Aulis, which
was built many hundred yeres before the Trojan war: but what kind of timber was employed
about the Carpentrie thereof, is not well knowne. Howbeit, this we may boldly resolute vpon,
that the more odoriferous any wood is, the more durable also it is and euerlasting.

Next to these trees aboue rehearsed, the wood of the Mulberrie tree is most commended,
which in tract of time as it grows to be old, waxes also blacke. Moreouer, some kinds of wood
as they be more lasting than other, so they continue better being employed in one kind of work,
F than they do in another. The Elme timber will well abide the aire and the wind. The wild Oke
Robur louth to stand within the ground, and the common Oke is good in the water: let it be
vsed aboue ground to take the aire and the weather, it will cast, warpe, and cleaue too bad. The
Larch wood agreeth passing wel with water works, and so doth the black Alder. As for the Oke
Robur,

Thus it hath beene knowne that doore-hinges and hookes made of Oliue wood (which otherwise is most hard) if they haue rested any long time, and not beene worne by shutting, and opening too and fro, haue put forth fresh buds, as if they had growne still in the plant. As for the dore-barrs and bolts, *Cato* would haue them made of Holly, Bay-tree, and Elme. The handles and helues of rusticall tooles, mattocke steeles, and spade trees, *Hyginus* willethe they should be either of Hornebeame, Holme, or Cerrus. For fine painell in fret-woke, for feeling also and ouerlaying other wood, these are the chiefe, the Citron, Terebinth, Maple of all sorts, Box, Date tree, Huluer, Holme, Elder root, and the Poplar. The Alder tree likewise (as hath beene said) affordeth certain swelling bunches & hard knots, which may be cut and clouen into most daintie flakes and precious leaues, as faire and pleasant to the eie for their damask branch, as either Citron or Maple: setting which three aside, there be no knurs and nodosities in any treeworth ought and of account.

Moreover, yee shall haue trees ordinarily in the mids toward the heart, carie a more crisped and curled wood; and the neerer it is to the but or root end, the finer is the graine, more branching also, and the streaks winding in and out. Loe, from whence first came the superfluous expence to couer and seele one wood with another! See how those trees which for their very wood were of no price, are become more costly and dearer, when they serue as a barke to clau others! that one tree forsooth by this means, should be so sold many & sundry times at a feuerall price. Thus haue beene deuised (I would not els) thin leaues of wood, like gold or siluer-foile. And yet that is not all: for there is come vp of late a deuise, to paint and die in sundrie colors the hornes of beasts, to cut and saw their teeth into thin plates: and whereas at first there was fret-works only inlaid and set out with Iuorie here and there, soone after it came to passe, that the wood was couered all ouer therewith. Neither hath the ryot and wastfull prodigality of the world staid there, but proceeded farther, euen to searcho into the deepe sea for that, which might serue in stead of wood and timber. Thus the tortoise shel hath been cut into flakes and leaues, for want forsooth of wood vpon drie land. And now of late daies, certaine monstrous spirits, during the Empire of *Nero*, haue found out a deuise to disfigure the Tortoise shel also with paintings, that it might be sold the dearer when it lookt like wood. Thus means are wrought, that the price of beds should be raised and set vp by this meanes: thus they would haue the Terebinth wood to be excessive deare and aboue the worth: thus must the Citron wood be enhaunfed to an higher rate: and thus the Maple is counterfeited, Tortoise shells are foisted in the place and bought for it. To conclude, of late daies the curiositie of men was such, that they could not content themselves with rich and costly wood; and now for to beautify and set out ther wood, Tortoise shells must needs be bought, there is no remedie.

CHAP. XLIII.

¶ The age of trees: what kind of trees they be that are of least continuance. Semblably, of Missello, and the Priests called Druids.

If a man would consider the hidden corners of the world, and the inaccessible desarts that be in it, he might by infallible arguments conclude and resolute, that there be some trees that haue continued time out of mind, and liued infinitely. But to speak of their age only that are known (euen by the testimonie of ancient records, and those faithfully deliuered vnto vs) there are to be seen standing or growing at this day, about Linternum (a towne in Campaine) certain Oliue trees, that *Scipio Africanus* (the first of that name) planted long since with his owne hand. In the same place also there is a Myrtle tree, of a rare and admirable greatnesse; and vnder it, a caue or hole in the ground, wherein (by report) there lyeth a dragon that keepes the ghost and soule of the said *Scipio*. And at Rome, in the court-yard belonging to the chappell of goddesse *Diana Lucina*, there is yet to be seen a Lote tree standing before the said chappell, built in the yeare of the Anarchie, what time as Rome stood desolate of all magistrates, and that was 369 yeares after the foundation of the citie: but how much more auient this tree is than the said temple, God knoweth: for elder it is without all question, considering that of the groue or tuft of trees there growing, which the Latines call *Lucus*, the said goddesse *Diana* tooke her name * *Lucina*. Now it is 450 yeares or thereabout, since that time, and so old it is doubtlesse. Another Lote tree there is and elder than that, but the age thereof is likewise vncertain: known it is by

* *Gratia Lucina* dedis hoc tibi nomina *Lucus*. Ouid.

A by the name *Capillata*, [i. hairie:] so called, because the haire of the vestall Nuns heads is vsually thither brought, & there consecrated, and yet is there a third *Lotus* at Rome in the court-yard and cloister about the temple of *Vulcan*, which *Romulus* built for a perpetuall monument and memoriall of a victorie, and defraied the charges out of the tenths of the pillage and spoile that he woone from his enimies; and this tree is at least full as old as the citie of Rome, if it bee true that *Massurius* writeth. The roots thereof, passing along the street where the Burg-woifes vse to keep their residence, doe reach as farre as the statly market-place or Hall of *Casar*. There grew by it a Cypresse tree also of the same age, the which by an ouersight and careless neglect, fell downe no longer since then the last yeare of *Nero* the Emperour. But why stand wee long hereupon? there is an Holme growing in the Vatican, elder than Rome it selfe, with a plate of brasse vpon it engrauen in Tuscan letters, containing an inscription or title: whereby it appeareth, that euen in those daies the said tree for antiquity, was worthy of peoples deuotion. Moreover, it is well knowne, that the Tyburtines are more antient than the Romans, and their citie Tybur founded many a yeare before Rome: and yet certain it is, that there be yet three Holmes there remaining alie, elder than Tyburus himselfe, their first founder: vpon which trees (as the voice goeth) he obserued the flight of birds, and thereby tooke his auspices and warrant from the gods to build the said citie. And (by report) the sonne he was of *Amphiarauus*, who died at Thebes an hundred yeares before the Troiane warre. Writers there be who affirme, that both that Plane tree which groweth before the temple of *Apollo* at Delphos, was set by king *Agamemnon* owne hand: also another in the second groue of Caphys in Arcadie. Furthermore, C at this day, there be trees neere vnto the streight of Callipolis, sometime called *Hellespontus*, ouer-against the citie of the Ilians, where old Troy stood, growing close vnto the tombe or sepulchre of *Proetislaus*: which euery fourteene yeres so soon as they are shot vp so tall only as they may seeme to discouer and see the citie Ilium, immediatly begin to wither and fade, and afterwards spring againe and grow anew vnto that age and height aforesaid. Hard by the citie of Ilium, there be certain Okes also (as folke say) neer vnto the tomb of *Ilius*, which were then planted or set of acornes, when Troy began to be called Ilium. It is reported moreover, that the Oliue tree remains yet alie at Argos, vnto which *Argus* tied lady *Io*, after she was transformed or turned into an Heifer. About *Heraclea* in Pontus, there be certaine altars erected to the honor of *Iupiter* surnamed *Stratius*, ouer which there stand two Okes, both set by the hands of *Hercules*. In the very same tract there is an haue, ennobled and renowned by the name of *Amycus* the K. of the Bebrycians there slaine. His tombe, from the very day of his sepulture, hath been ouershadowed with a Bay tree (planted there and then for that purpose) which the people of that country do call The raging or mad Lawrell; for pluck but a branch or twig thereof be it neuer so small, and carie it into a ship; all the marriners and passengers within, will fall a brawling, and neuer agree vntill it be cast out and throwne away out of the vessell, that was brought thither from the tree aforesaid. Of a certain region we haue before written, called *Auloerene*, lying in the way between *Apamia* and *Phrygia*; & there the paissants of that country can shew you that very Plane tree, on which *Marsyas* the musitian hung himselfe in a melancholly mood for that he was ouermatched in his owne cunning and professed skill, by *Apollo*: and surely like it is, that euen then he made choise of that tree for the bignes: ouer and besides, in the Isle *Delos*, there is a Date tree to be seen, which hath remained there euer since that the said god *Apollo* was borne and reared there. The wild Oliue tree at *Olympia* (wherof *Hercules* wore the first coronet or guirland) is kept and tended still with great deuotion. The very same Oliue tree also (by folks saying) continueth this day at Athens, which sprung vp at the very time that *Minerva* and *Neptune* strove together about giuing the name to the citie Athens. And thus much of long-liued trees.

Contrariwise, Pomgranat trees, Fig trees, and Apple trees, liue a very short time: & of these, the hastie kind or Ienitings, continue nothing so large as those that bear and ripen later: neither yet those that carie sweet fruit, last so well as they that bring forth fower. The Pomgranat tree also with the more pleasant fruit, is shorter liued than the other. The like is to be said of Vines, and namely, such as bear greater burden of grapes & vield most wine. Howbeit *Gracinus* saith, That there haue been vine trees known to liue three score yeres. It seems also, that trees which come vp in waterish and moi st places, are not of any long continuance, but soone die. In deed Bay trees, Apple trees, and Pomgranat trees, do age & looke old quickly; howbeit they spring fresh,

fresh again from the root. Well then, the Oliue trees hold out life and liue very long: for after the common opinion and agreement of all writers, they continue ordinarily 200 yeares. There is a little hil named *Carnè* within the territory of *Tusculum*, not far from *Rome* city side, clad and beautified with a goodly groue and tuft of Beech trees, so euen and round in the head, as if they were curiously kept, cut, and shorne artificially with garden sheares: which groue was consecrated in old time to *Diana*, by the common consent of all *Latium*, which did their deuotions there. In it there was one especiall faire tree about the rest, which *Pasienus Crispus*, a man in our daies of great authoritie (as hauing been twice *Consull* in his time, & reputed an excellent *O-rator*, who also afterward mounted to higher place of reputation by marrying *Agrippina* the *Empresse*, by which match he became father in law to *Nero* the *Emperor*) cast a fancie and extraordinary liking vnto: in so much as he was wont not only to take his repose and lie vnder it, to sprinkle and cast wine plentifully vpon it, but also to clip, embrace, and kisse it otherwhiles. Neere adioining as a neighbour to the said groue, there is an *Holme*, which of it selfe alone is much renowned: it beareth in compasse about the butt therof 35 foot, and sends out ten monstrous big armes from the bodie, which may goe well enough for as many trees, and those euery one so great as it is wonderfull. Surely this one tree alone (a man would say) resembled a whole wood.

Moreover, there is nothing more certaine than this, that *Iuie* killeth trees. The like is to be said (in some sort) of the *Misselto*, although it is generally thought, that the harme thereby is not so soon seen. And this you must thinke, that this *Misselto* is not to be taken for the fruit of a tree, and therefore as great a wonder it is in nature, as any other: for some things there be, that not willing to grow out of the earth, engender in trees; & hauing no proper place of their own habitation to seat themselves in, sojourn as it were & make their abode with others, and of this nature is the *Misselto*. Also, in *Syria* there is a certain hearbe named * *Cadyas*; which windeth about, not trees onely, but also very bushes and thornes: likewise, all about the pleasant vale *Tempe* in *Thessalie*, you shall haue a kind of *Ferne* called *Polypodie*, to doe the same: also, the *Pulse* named *Dolychos*, which is *Fasels* or *Kidney* beanes, and the wild running-laced *Thyme*, *Serpillum*. Semblably, that which the *Greeks* call *Phaunos*: the very same, that after a man hath cut and pruned the wild *Oliue*, engendreth thereupon. The like is to be said of *Hippopheston* which groweth vpon the *Fullers* thorne or *thistle*: it beareth certaine little heads and hollow knobs with nothing in them, small leaues, and a white root; the juice wherof is singular good to euacuate and purge the bodie, for the diuersion of ill humors, in the falling sicknesse. But to returne againe to *Misselto*, there be three kinds thereof. For that which groweth on the *Firre* and *Larch* tree, is called *Stelis* in *Eubœa*, and *Hyphear* in *Arcadia*. And as for that which properly is *Misselto* indeed, most men are of opinion, that it groweth fast to the common *Oke*, the wild *Robur*, the *Holme*, wild *Plumtree*, and the *Terebinth*, and not lightly on any other trees. Howbeit, in greatest plenty it is seen vpon the *Oke*, and that is named *Dryos Hyphear*. A difference there is in the *Hyphear* and *Misselto*, on what tree soeuer they are found (except the *Holm* and common *Oke*) in regard of the sauer, which is strong and stinking in the one more than the other. The leafe of them both hath no pleasant smel, and in the *Misselto* it is bitter, clammy, and viscous besides. Of the two, *Hyphear* yet is the better to feed sheep and such cattell fat: only at the first it purgeth yll humors, and makes them to scoure apace, but afterwards it fattereth them; I mean such as were able to bear the said purgation. But in case any of them were deeply tacked and infected with the rot, or other inward consuming disease, they can neuer endure the taking of the said *Hyphear*, but they die vpon it. The only fit time for this kind of curing them, by the way of purging, is in *Summer*, and that for 40 daies space together. There is moreover, by mens saying, another difference in *Misselto*: for that which groweth vpon trees, shedding their leaues in winter, loseth also his owne leaues; but contrariwise, it continueth alwaies green vpon such trees as hold their leaues all the yeare long. Moreover, set or sow this *Misselto* what way soeuer you will, it will neuer take and grow: it comes onely by the mewting of birds, especially of the *Stockedone* or *Quoist*, and the *Blackbird*, which feed thereupon, and let it passe thorough their body. And this is the nature of it, vnlesse it bee mortified, altered and digested in the stomacke and belly of birds, it will neuer grow. It exceedeth not at any time a cubit in heighth, notwithstanding it be alwaies greene and full of branches. The male beareth a certaine graine or berry: the female is barren and fruitlesse. But sometimes neither the one nor the other beareth at all.

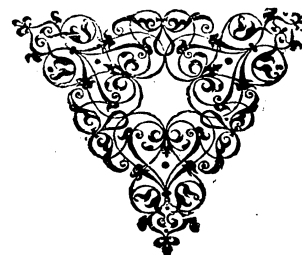
Now

*Some take
this for *Cassia*-
tha, or *Cuscuta*
Dodder.

- A Now as touching Birdlime, it is made of the berries of *Misseltoe*, gathered in haruest time before they are ripe; for if they should tarry still to take showres of rain, wel might they thrice and increase in bignesse, but their strength and vertue would be gon clean, for euer making any such glew or birdlime aforesaid. Being so gathered, as is before said, they must be laid abroad a drying, and when they be once dry, they are braied or flamped, and so put in water to sleepe, and let to putrifie for the space of 12 daies or thereabout. This one thing yet in the whole world is the better for putrefaction, and serueth to good purpose. When this is done, the said berries thus putrified and corrupt, are beaten or pummed once again with mallets, in running water; by which means when they are husked and turned out of their skins, the fleshy substance within, becommeth glutinous, and will stick too, in manner of glew. This is the way to make birdlime.
- B for to catch poore birds by their wings, entangled therewith; which toulers vie to temper and incorporate with the oile of *Walnuts*, when they list to set limetwigs to take fowle.

And so far as we are entred into a discourse as touching *Misselto*, I cannot ouerpasse one strange thing thereof vsed in *France*: The *Diuidæ* (for so they call their *Diuijors*, *Wise-men*, & the state of their *Clergy*) esteeme nothing more sacred in the world than *Misselto*, and the tree wherupon it breeds, so it be on *Oke*. Now this you must take by the way, These priests or *Clergy* men chofe of purpose such groues for their diuine seruice, as stood only vpon *Okes*; nay, they solemnise no sacrifice, nor perform any sacred ceremonies without branches & leaues thereof, so as they may seem well enough to be named thereupon *Dryidæ* in *Greek*, which signifieth as much as the *Oke* priests. Certes, to say a truth, whatsoeuer they find growing vpon that tree ouer and besides the own fruit, be it *Misselto* or any thing else, they esteeme it as a gift sent from heauen, and a sure signe by which that very god whom they serue giueth them to vnderstand, that he hath chofen that peculiar tree. And no maruel, for in very deed *Misselto* is passing geason and hard to be found vpon the *Oke*; but when they meet with it, they gather it very deuoutly and with many ceremonies: for first and formost, they obserue principally, that the *Moon* be iust six daies old (for vpon that day they begin their months and new yeares, yea and their secular ages, which haue their revolutions euery thirty yerres) because she is thought then to be of great power and force sufficient, and is not yet come to her halfe light and the end of her first quarter. They call it in their language *All-Heale*, (for they haue an opinion of it, that it cureth all maladies whatsoeuer) and when they are about to gather it, after they haue well

D & duly prepared their sacrifices and festiual cheare vnder the said tree, they bring thither two yong bullocks milk white, such as neuer drew in yoke at plough or wain, and whose heads were then and not before bound by the horn: which done, the priest araied in a surplesse or white vesture, climbeth vp into the tree, and with a golden hooke or bill cutteth it off, and they beneath receiue it in a white soldiers cassock or coat of armes: then fall they to kil the beasts aforesaid for sacrifice, mumbling many oraifons & praying deuoutly: that it would please God to blesse this gift of his to the good and benefit of all those to whom he had vouchsafed to giue it. Now this perswasion they haue of *Misselto* thus gathered, That whatliuing creatures soeuer (otherwise barren) do drink of it, will presently become fruitfull thereupon: also, that it is a soueraign countrepoison or singular remedie against all vermine. So vain and superstitious are many nations in the world, and oftentimes in such frivolous and foolish things as these.



Vu 3

THE

THE SEVENTEENTH BOOKE OF THE HISTORIE OF NATVRE,

WRITTEN BY C. PLINIUS

SECVNDVS.

CHAP. I.

¶ The wonderfull prices of some Trees.



AS touching the nature of all those trees which of their owne accord doe grow, as well vpon the main land as the sea coast, we haue already treated sufficiently. It remaineth now to discourse of those which (to speake more properly) are made rather and forced by art and wit of man, than otherwise come by nature and of themselves. But before I enter into this treatise, I cannot chuse but maruel how it is come to passe, That those trees which for necessity & need we hauing taken from the wilde and brute beasts, and possessed in common with them (considering that men maintaine fight and scramble with them for the fruits that fall, yea and otherwhiles with the fowles of the aire, about those which hang vpon the tree) should grow to so excessive a price, as to be esteemed among the principall delights of this world? And that this is so, appeareth by that most notable example (in mine opinion) of *L. Crassus* and *Cn. Domitius Anobarus*. This *L. Crassus* (a right renowned Orator of Rome as any one of his time) had a stately and sumptuous dwelling vpon mount Palatine: howbeit that house of *Q. Caelius* (who defeated in battell the Cimbrians, together with *C. Marius*) went beyond it a faire deale in magnificence, and stood likewise within the pourprise of the same mount. But the goodliest and fairest Pallace knowne in that age, was that of *C. Aquilius* a Gentleman or Knight of Rome, scituate vpon the hill of Osiers, called Viminalis: in regard whereof there went a greater name of him, than for all the skill he had in the Ciuill Law, which was his profession. Yet of all those three, *Crassus* onely was challenged and reproched for that foresaid house of his. And in this manner is the storie deliuered: *Crassus* and *Domitius* (great personages both, and descended from most noble Houses in Rome) after they had bene Consuls, happened also to be chosen Censors together: and this fell out to be in the six hundred sixty two year after the foundation of the city: but during this Magistracie of theirs there passed many a foule day and bitter fit betweene them; so dissonant were their natures, and their conditions so farre vnlike. Now it fortuned vpon a time, that *Cn. Domitius* (as hee was hot and hasty man by nature, and carried an inward hatred besides in his heart, which soone is kindled and set on fire, yea and most insatiable, vpon emulation and enuy betweene Concurrents, such as they two were) reprooued *Crassus* verie sharply for his excesse in expence, and namely, That any Censor of Rome should dwell in so stately and sumptuous a Pallace as he did; and euer and anon made offer to buy the House, and pay him downe-right for it an * hundred Millions of Sesterces: whereat *Crassus* (being a man quicke of spirit, and of a prompt and present wit, finely conceited withall, and not to seeke for a ready answer) tooke him at his word, and accepted of the offer; refering only six trees that grew about his house. Tush (quoth *Domitius*, replying againe) take those Trees a way, and take all; if they be gone, I will none of the house though I might haue it for a single denier. Then *Crassus* hauing gotten the vantage and start of him, rejoyned and came vpon him thus: Tell me now I pray you good *Domitius*, whether of vs twaine giueth a scandalous example to the world? Whether am I my selfe (I say) offensive, and deserue to be taxed and noted by mine own Censorship, who can be contented to liue quietly and louingly among my neighbours in mine owne house, and that house which came to me by way of inheritance from my father;

* *Militer Sestertium*. An incredible price for a dwelling house: and therefore as *Madams* thinke, this place must be corrected, by conference with *Val. Max.* who for *(militari)* hath *(sexaginta)* which amounts little more than to the 20 part of the other summe.

A father; or you rather, that for six trees bid 100 millions of Sesterces? Now, if a man be desirous to know, what these trees might be? truly they were no other but six *Lote* trees, very faire and beautifull indeed, but there was nothing in them commendable, save only their spreading and casting a goodly shade. And verily, *Cacina Largus*, a Nobleman and principal citizen of Rome, vsed many a time and often (I remember well) to throw me when I was a yong man, those trees about his house. And since our speech hath bin of such trees as liue very long, these I wrote well, continued for the space of 180 yeres after *Crassus* death, to the great fire that *Nero* caused to be made for to burne Rome; fresh and green they were with good keeping, and looked yong still, like to haue liued many a faire day more, had not that prince hastened the vntimely death euen of trees also [as well as of citizens.] Now lest any man should think, that all the sumptuositie of *Crassus* consisted only in those trees, and that the furniture otherwise of his house was but mean and simple, and could minister vnto *Domitius* no matter of such contesting and reproofe, disposed as he was to quarrel and find fault: know he thus much, That the said *Crassus* had before that time set vp in the open hall of that house, foure goodly pillars of Hymettian marble, which in the yere of his Edileship were brought abroad to rich and beautifie the Theatre, the Stage and Shew-place of the solempne plaies by him set out: for as yet there had not bin in publicke place at Rome any marble pillars seen: so how lately is come vp this excessive expence in rich & glorious building, so common in these daies. See (I say) how in those times, faire trees beautified pallaces more than any thing els; in so much, as *Domitius* for the want of six trees only, would not stand to the price that him selfe first made, no not to buy his very enemy out of house and home with it: but no maruel if trees were accounted of so highly, seeing that our ancestors in old time thought not foon to take otherwhiles their surnames from them. Thus that braue and valiant fouldier came to be named *Fronatius*, who (maugre the beards of *Anibal*) swum ouer the riuer *Vulturnus*, with a chaplet of green leaues (answerable to his name) set vpon his head, and performed many feats of arms and worthie exploits against him. Thus they of the noble *Licinian* family had for their addition *Stolons* (i. the vnprofitable water-shoots that putt forth from the root or tree it selfe, and neuer proue or come to any good.) And why so? For that one of the said house deuised the means to cleanse trees & vines of such superfluous twigs (the practise & feat of cutting which a way, is called *Pampinatio*) and therupon was one *Licinius* first surnamed *Stole*. Moreouer, our predecessors in ancient time made good statutes and ordinances for the maintenance of trees: and expressly provided it was by the laws of the 12 Tables at Rome, in these words, *That whosoever made wilfull waste, and cut downe any trees growing in another mans ground, should be peined in the court for a trespassse done; & forfeit for euery such tree, 25 pound of brasse money.* But what should we thinke of this? Did these law-makers throw ye, suppose or imagine that other wilde trees would euer haue growne to that high reckoning about named, and which now they are come vnto, who valued fruitfull trees at no greater price, and set the penalty for the trespassse, so low? But neuer maruell we any more hereat, considering to what a proportion Apple-trees, and such like are risen vnto. For there be many of them here about the city of Rome, in the villages neere adioining, which are set for a yearely rent of 2000 Sesterces; and one of them yeeldeth more profit and reuenue by the yere to the owner, than a pretty ferm in times past of good domaine, to the land-lord. Hereupon came the inuention of grafting trees: for this purpose haue we such bastard fruits intermingled one with another, of sundry kindes; as if Apples and other fruits were not for poore men to eat, but grew only for the rich. Hence forward now therefore will we shew the right, perfect, and absolute manner how to order and cherish them, that it may appeare by what means especially, such annuall commodity can be made of them, as is before said. For the better performance of which discourse, I meane to leaue the common and ordinary way; neither will I handle the vsuall and vulgar manner of that point in husbandry, wherein euery man is perfect, and whereof no man maketh question: but deliuer such matters onely, as be vncertaine and doubtful, whereby oftentimes folke are deceived and beguiled. For to break my head or busie my brains in needlesse trifles, and therein to affect a kinde of curiositie, was neuer my manner yet, nor is it any part of my meaning and intention now. But before I doe enter into particulars, my purpose is to treat in generalitie of this matter, and touch briefly the consideration of heauen and earth both, so farre forth as may concerne in common all kindes of trees whosoever.

CHAP.

CHAP. II.

¶ Of the nature of the Skie respectiue vnto trees: and what quarter thereof they should regard.

Trees generally do like best that stand to the Northeast wind: for it nourisheth them well, causeth them to spread thick and grow euery way in length and breadth, and withall maketh the timber more fast and strong. But in this rule most men doe erre, and be much deceived; for in vnderpropping vines, the forks would not be set opposite against that wind to hinder the blast thereof; a point that is to be obserued in regard of the North wind only. Moreouer we find by experience, that if trees haue a kindly winter and cold season in their due time, their wood will be more firme, and so likewise will they bud and shoot out best: otherwise, if the warm Southerne winds blow vpon them much, ye shall haue the trees proue soft and feeble, and their blossoms come to nothing, blooming as they do before time: for if it chance that presently after their floures be fully out, and ready to shed, there fall any flore of raine, the fruit is quite gone for that yeare. And as for Almond trees and Peare-trees, if it be but close and cloudy weather only, without any raine, or the wind stand South when they floure, sure they be to lose their fruit. Certes, a glut of rain in May, at what time as the Brood-hen star called Virgilie doth arise, is exceeding hurtfull to Vines and Oliue-trees: for then is the very season of their knitting or conception. Then be the foure decretorie or criticall daies, that giue the doome of Oliue trees, either to good or bad: this is the Southerly point of filthy, foule, and glowmie weather, whereof wee haue spoken before. Moreouer, all manner of graine feelth the inconuenience of Southern wind at the time of their ripening. Well may come make hast and ripen sooner, but it shal neuer haue the kind maturity and perfection as it ought. As for the cold pinching black frosts and Northern winds, which blow out of season, come they early or come they late, they be hurtfull all. But if the wind stand Northeast in winter, there is nothing so good generally for all fruits of the earth. And verily, a good shower now & then during that time, wil do no harm; and that men wish for rain then, the reason is euident: for why? trees with bearing of fruit, are drawne dry and haue lost their naturall moisture, with shedding their leaues they be poore and feeble; so that it is kind for them to be hungry then, and to haue a greedy appetite to new food, which is raine. Now if the winter be open and warm withal, that so soone as the trees haue don bearing, they rest not between, but conceiue again presently vpon it (that is to say, bud & spurt anew, yea, and fall afresh to blossome, whereby they haue another euacuation that way also, to spend their sap and radicall moisture) we find by experience, that there is nothing in the world so bad for them. Nay, if many such yerres come together, immediately one after another, the very trees themselves will die; for who can looke for better, when they are thus pined and famished? He then whoseuer he was that said, Husbandmen were to wish for faire winters: surely he was no friend therein to trees, nor neuer praised for them: neither are wet Mid-summer good for Vines. But in truth, That winter dust should cause plentiful haruest, was a word spoken in a bravery, and proceeding from a pregnant wit and jolly spirit: for otherwise, who knoweth not, that euery man (wishing well to trees and corn indifferently) praieth, that snow might lie long vpon the ground? The reason is, for that not only it keepeth in & enloseth the vitall breath & soule (if I may so say) of the earth, ready to exhale out and vanish away, yea, and driueth it back again into the blade and root of corn, redoubling thereby the force and vigor thereof: but also because it both yeldeth moisture and liquor thereunto gently by little and little, and the same withall fine, pure, and passing light: considering, that snow is nothing els but the fume or froth of rain-water from heauen. This humor therefore, not falling forcibly all at once to drown the root, ne yet washing away the earth from it (but distilling drop-meale a little at once, in that proportion and measure as thirst requireth and calleth for it) nourisheth all things, as from a teat or pap; nourisheth (I say) and neither drencheth nor ouerfloweth them. The earth also for her part, by this means wel foked, swelleth and houth as it were with a leauen, and lieth thereby more light and mellow: thus being full of iuice and moisture it selfe, & not barren, but well replenisht with seeds sown, and plants suckled, thus continually in her womb; when the open time of the spring is once come to discharge her, she sheweth her selfe fresh and gay, and willingly entertaineth the warme weather of that season.

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A By this meanes especially, we see how come liketh well vpon the ground, and thrueth apace euery where, vnlesse it be in climates where the aire is alwaies hot, as in Egypt. For continuance and ordinarie custome alone effecteth the same there, which the season of the time, & moderate temperature of the aire elswere. And in one word, be the place whatsoeuer, passing good it is to keep away the thing that is hurtfull. For in the most parts of the world it happeneth, That when either corn is winter-proud, or other plants put forth and bud too carely, by reason of the mild and warme aire; if there follow any cold weather vpon it, all is nipped, blasted, and burnt away. Which is the cause, that late winters do harme vnto the wild trees also in the forest. The more paine and sorrow likewise such trees abide, by reason of their owne thicke branches shading one another, and not easily admitting the warme Sun; and destitute they are besides of mans helping hand to cure them: for growing as they do in wild and desart Forrests, impossible it is to lap and wrap them about with wreaths and thumb-ropes of straw, and so to cherish and defend them when they be yong and tender. Wel then, to conclude this matter, Winter raine principally is seasonable and good for all plants: and next to it the dewes and showers that fall immediately before their sprouting time: a third sort also there be of showers that come when fruits hang on the tree, and are in their growth, yet not too soon, namely, before they bee strong and able to abide some hardnesse.

As touching trees which be late-ward and keep their fruit long ere they ripen, such also as require store of nourishment and more food still, as namely, the Vine, the Oliue, & Pomgranat trees; it is good for them to be watered with raine in the later end of the yeare. And to say a truth, euery kind of tree requireth a seuerall rain by it selfe, in due season, for that some ripen their fruit at one time, and some at another: so as a man shall see ordinarily the selfsame showers, to hurt one sort, and to help another; yea, and that diuers effect is to be seen in trees & fruits of the same kind, as for example, in Pyrries: for the late-ward of them call for raine at one time, and the hasty or forward at another, and yet indifferently all doe require alike the seasonable showers of winter, as also those before budding time. In which regard, the winds Northeast are better than the Southern, and such winters be most kindly. Semblably, by the same reason the Mediterranean or mid-land parts of any country are for this purpose preferred before the maritime or sea-coasts (as being for most part colder) the high & hilly regions before the plaines and vallies: and last of all, the night rains are held to be more profitable than those that fall by day time: for lands new sowne, and any yong plants, inioy more benefit by such shoures in the night, for that the Sun commeth not so presently vpon them againe to dry and drink vp all the moisture.

Hereunto ought to be annexed the consideration of Vine-yards, hort-yards, and Groues, as touching their situation, and namely, what part of the heauen they should regard. Virgil condemned altogether the planting of any trees, respectiue to the West: some haue chosen that quarter before the East. And this haue I obserued, that in most mens opinion, the South is best. But if I should speak what is mine own conceit indeed, there can no generall and infallible rule be giuen concerning this point, for to hold alwaies. All our skil and art herein must be directed by the nature of the soile, the disposition of the climat and temperature of the aire. In Africke although it be nothing profitable for Vine-yards to be planted so as they look into the South, yet kind it is & whole some for the Vine-planter and husbandman, by reason that all Africke lieth vnder the Meridionall or South climat. And therefore he that shall set vines there, either into the West or North (how soeuer Virgil alloweth not of the West) shall make an excellent, medley between the temperature of that aire and the nature of soile together. As for the North no man seemeth to make any doubt or question, but that vines so planted, wil proue right well. And verily there are not found any vines to prosper better, or to beare more fruit in all Italy than in that tract which lieth on this side, and vnder the Alpes: and there for the most part the Vineyards are so planted.

Moreouer in this case the winds would be much considered; for in Languedoc or the prouince of Narbone, in Liguria and part of Tuscan, they are reputed vnskillfull husbandmen that plant any vine-yards directly vpon the Northwest wind: but it is counted contrariwise a special point of prouidence and good husbandry, to cast it so, as the said wind may flanke it on the side. For this is the wind, which in those quarters qualifies and tempereth the excessive heat of the summer: howbeit, many times, so violent and blustering he is, that hee beareth downe before him the

the rooffe of many a house, and carrieth it cleane away.

CHAP. III.

¶ *The societie of the skie and aire with the earth, respecting to trees.*

SOME men do force the skie for to be obedient & conformable to the earth: as namely, when planting in dry grounds, they haue regard to the East and North: and contrariwise, when in moist places they respect the South. Moreover, it falleth out, that they be driuen otherwhiles to follow the nature of the very Vines, and thereby to be ruled: wherupon, in cold ground they plant such as be of the hastic kind, and soone ripen their grapes; to the end that they may come to their maturity and perfection, before cold weather comes. As for such Vines and trees bearing fruit, as cannot abide dewes, those they set in to the East, that the Sun may soon dispatch and consume the said dew: but looke what trees do loue dewes, and like well therewith, those they will be sure to plant against the West, or at leastwise toward the North, to the end they may inioy the full benefit thereof. All others againe (grounding in manner vpon natural reason only) haue giuen counsell to set as well Vines as Trees, into the Northeast. And *Democritus* verily is of this mind, that such fruits will bee more pleasant and odoriferous.

CHAP. IIII.

¶ *The quality of sundrie regions.*

AS touching the proper seat of the Northeast wind, and of all other winds, we haue spoken already in the second booke: and our purpose is in the next following, to treat of the rising and falling of signes and notable stars, of other Astronomical points also concerning heauen. Now in the mean time for this present, it is sufficient, that in the former rule of the North wind, we seem to rest and resolute vpon the apparent and euident argument of the wholesome and healthfull climate of the heauen: forasmuch as we see, that euermore all such trees as stand into the South, soonest shed their leaues: the same reason also is to be giuen of those that grow vpon the sea coasts: and albeit in some places the winds blowing from thence, and the very aire of the sea be hurtfull, yet in most parts the same are good and profitable. Certaine plants and trees there are, which take pleasure to be remot from the sea, and ioy to haue the sight of it only a farre off: set them neerer to the vapors and exhalations ascending from thence, they will take harm and mislike therewith. The like is to be said of great riuers, lakes, and standing pooles. As for those which we haue spoken of, they either burn their fruit with such mists, or refresh and coole such as be hot with their shade, yea, & take ioy and prosper in the frost and cold. And therefore to conclude this point, the surest way is, to beleue & trust vpon experience: thus much for this present, concerning the heauen: our next discourse will be of the Earth and Soile, the consideration whereof is no lesse difficult to be handled than the other.

First and formost, all grounds are not alike good for trees and most kinds of corne. For neither the black mould (such as Campain standeth vpon much) as in all places best for Vines; or that which fumeth and sendeth vp small and thin mists: neither is the red veine of earth any better, how soeuer there be many that commend it. The white earth or chalkie marle, the clay also within the territory of Alba and Pompeij, for a vineyard, are generally preferred before all other countries (although they be exceeding fat, which in that case is otherwise vially reiect.) On the other side, the white sand about * *Ticinum*: likewise, the blacke mould or grit, in many places, as also the red sandy ground, although it be wel mingled & tempered with fat earth are all of them nothing to the purpose for increase & fruitfulness. And herein must men take heed, because oftentimes their judgement may faile when it goeth but by the cie: for wee must not streight waies conclude, that the ground is rich & battle, wheron we see goodly faire & tall trees to grow, vlesse it be for those trees only: for where shal we meet with any, higher than the Fir: & is there a tree again that possibly can liue where it doth? No more is rank grasse & plentiful forrage a true token alwaies of a good ground: for there is no better pasture nor grasing to be found than in Almaine; and yet dig but vp the Greene sould and the thinnest coat of turfe that may be, ye shal presently come to barren sand vnder it: ne yet is it by & by a moist ground, that hath vpon it deepe grasse and hearbes shooting vp in height: no more verily, than a fat and

* *i* Pauc.

A and rich soile is knowne by sticking to one fingers, as appeareth plainly in all sorts of clay. And verily, no earth doth fill vp the trenches euen againe, out of which it was cast, that thereby a man might find out whether the ground be sad, or hollow: and generally all sorts thereof will cause yron to rust that shal be put into it. Moreover, there is no weighing of earth in ballance, to know by that means which is lighter or heavier: for who could possibly euer set down the iust weight that earth should haue? Again, the ground that is cast vp into banks by the ouerflow of great riuers is not alwaies commendable: seeing that some plants there be that decay, if they be set in water. And say that some such bank were ground good enough, yet it continueth not so long, vlesse it be for Willowes and oillers onely. But if you would know a rich ground indeed, one of the best arguments and signes therof is this, when you see it to bring forth a thick & strong haulme or straw, such as usually groweth in that noble territorie Laborine within Campaine; which is of that bignesse, that the people of the country vse it for fewell in stead of wood. Now, this ground, so good as it is, where & whensoever we haue found it, is hard enough to be tilled, and requireth great labour and husbandry, putting the poore husbandman to more paines in manner with that goodnesse of it, than possibly he could haue with any defects and imperfections thereof. For euen the hot earth, called by the name of Carbunculus, which vseth to burn the come sown therupon, may be helped & remedied (as it is thought) by setting it with plants of poore & hungry vines. The rough grauell stone which naturally will crumble as grit, many writers there bee that allow and commend, for vines. As for *Virgi*, he findeth no fault with the ground that beareth fern and brake, for a Vineyard. The earth that is brackish, and standeth much vpon saltpetre, is thought to be more found for many plants than others; and in regard of vermine that vse to breed therein, much safer also. Neither do high banks and hills remaine vntilled and naked for want of good husbandry, if so be a man haue the cast of it, to care & breake them vp skilfully. As for the plaines, they are not all of them exposed to the Sun or subiect to the wind more than need requireth. And to speake of frosts, mists and fogs, there be Vines (as we haue said already) which are nourished and fed with them. And to conclude, hereby we may see, that in euery thing there is some one deep secret or other, wherein it behoueth each man to employ his spirit and set his mind for to search them thoroughly and find them out: what shall we say then to this, That oftentimes those things which haue bin approoued by long experience and many obseruations, become otherwise, and change their visuall manner? In Thessalie about Larissa, the whole region, by reason of a lake that was let out and drained drie, proued much colder: and the Oliues which there grew before, left bearing and died all, vpon it. In like sort, neere vnto *Enos*, the Vines were all scorched and burnt, by occasion, that the course of the riuier *Enbrus* was brought neere vnto them, an accident that beforetime neuer befell vnto them. Semblably, about the citie *Philippi*, the whole country being made drie by sluices and trenches artificiall; altered withall the whole disposition of the aire and weather, and changed the very habite of the heauen about their heads. But in the territory of *Syracusa*, the forraigne Coloners that thither came to inhabit and practise husbandry, by ridding the ground from all the stones, marred all the corn in the country, so mirie and durty it was by that meanes, vntill such time as they were driuen to lay the stones againe where they had them. In *Syria*, the husbandmen goe lightly ouer with their plough, & take no deep stich in making their furrowes, for feare of the stony rocke lying ebbe vnder the good ground, which in Summer season will burne all their graine and seed sowne there. Now, there be certain parts of the world, where a man shall see one and the same effect to proceed both of extreame heat, and also of exceffue cold. *Thracia* is exceeding cold, and thereby plentifull in corne. *Africke* and *Egypt* be as hot, and yet come not after it for fertilitie in that kind. In *Chalcia*, an Island belonging to the *Rhodiens*, there is one place about the rest so fruitful, that the Barly which was sowed in the due time & season of the yere, they mow once, and presently put it into the ground againe, which will be ready to be cut downe the second time, with other corne in haruest. In the *Venafrane* tract within the realme of *Naples*, the grauellie ground is thought meetest for Oliue trees, & therein they bear most plentifully: contrariwise, about *Bætica* in *Spaine*, the fattest soile is best for that purpose. The excellent grape that makes the good *Punicke* wine, ripeneth soon vpon the very rockes: but the *Cæcube* Vines stand soaked & drenched (as it were) in the marish low grounds of *Pomptinum*. See what a difference and diuersitie there is in causes, to make this variety in sundry plots of ground! *Cæsar* *Tepesens* being conuicted before the *Censors*, and there pleading his cause, affir-

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med openly, that the plaines of Roſea were the very fat of Italy, and reſembled the kell or leafe of a fed and franked ſwine: wherein (quoth he) if a man left forks or props to day, they will bee ouergrowne and couered with graſſe by to morrow. But ſurely, this ground is good for nothing but paſture. Yet now withſtanding, Nature would haue vs ſtill to learne and grow ſkilfull euery day more than other, and for that intent ſhe hath laid open the defects and imperfections of the ground, euen there, whereas the commodities thereof be neither ſo certain, nor ſo well knowne. And therefore let vs in the firſt place ſpeake of thoſe faults for which the earth is blamed.

CHAP. V.

¶ Sundry ſorts of earth.

If a man would know which is a lean, hungry, & bitter ground, there is no better experiment and prooſe thereof, than by the blackiſh, miſliking, and vnkind herbs growing thereupon: like as, when they come vp ſcorched and burnt, they ſhew a cold ſoile: alſo, when they ſeem ill fauoured and vnpleaſant to the eye, the earth no doubt is foked and drowned in wet. As for red ſandy ground and clay, you need go no farther than to your owne eye ſight. And ſuch ſoiles as theſe be, is of all other, hardeſt to be wrought and tilled; they ſo clog and load both the harrow teeth and the plow ſhares, with huge and heauie clods. Howbeit, the ground that is thus churliſh to be eared and husbanded, is not alwaies bad and naught for increaſe. But it fareth cleane contrary with the pale and wan aſhie earth, as alſo with the white ſandy ſoile: for the barren ground is ſoon found by a thicke and callous cruſt that it hath, euen at the firſt dent of culter or ſtroke of mattocke.

Cato ſetteth down briefly, as his maner is, all the defects and faults of ground in theſe words: Take heed (quoth he) of a rotten ground, and ſee that you ſtir it neither with cart, nor touch it with beaſt. What ſhould we thinke was his meaning by this term of his, that he ſhould feare rotten ground ſo much, as to forbid in a manner to tread and goe thereupon? Let vs call to mind the rottenneſſe that is in wood: and thereby ſhall we find thoſe faults that he abhorreth and deteſteth ſo much in the earth. In good faith, by rotten earth hee vnderſtandeth dry, ſpungeous, and full of holes, rugged, hoary, caren, old, and hollow. So as in that one ſignificant word (*Carioſa*) hee ſaid more than could be expreſſed poſſibly by any multiplicity of language whatſoeuer: for if a man would rip vp to the quicke the imperfections that are in grounds, he ſhould find, that ſome pieces thereof be of it that may be termed truly old and ouerworne, not for any age (for who can ſay properly, that earth is ſubiect to old age) but by reaſon of their naturall defects: in regard whereof, a ground may be weake, feeble, barren, and no longer good for to bring forth any thing. The ſame Cato iudgeth, That ground to be principall which lieth at the foot of an hill, and nunneth forth in manner of a plaine, into the South, which is the very ſituation of all Italy: and by a blackiſh and wart earth, which he calleth (*Pulla*) he meaneth a gentle, tender, and mellow ſoile. And this we will determine to be the beſt ſimply both for worke or tillage, and alſo for gaine and increaſe: now let vs (if ye pleaſe) ſtand a little vpon this word *Tenera* [*i. Tender*] which he ſeteth in this ſence: you ſhall find a marvellous ſignification thereof: and that he implieth thereby, as much as your heart can wiſh to be in a ground. That is it, which is ſo temperat in fertility, that is it which to be wrought is ſo gentle, ſoft, pliable, and mellow; neither wet, nor yet dry and thirſty. Now doth this ground ſhine againe after the plough ſhare, reſembling that veine of earth, which Homer, the very fountaine and ſpring of all good wits, reported to haue bin engrauen by a * god, in the armour of (*Achilles*): adding moreover, that the ſaid earth looked black withall: wherein hee obſerued a wonderfull piece of workmanſhip, notwithstanding it was wrought in gold. This is that ground, I ſay, which beeing new broken and turned vp with the plough, the threwd and buſie birds ſeek after, and goe vnder the plough ſhare for it: this is it, that the very Rauens follow the plough man hard at heeles for, yea, and are readie for greedineſſe to pecke and job vnder his very feet. And here, in this place I cannot chuſe but relate the opinion that is currant among our roſtous and delicate gallants: which ſome other thing alſo making for our purpoſe, in the diſcourſe of this argument which wee haue in hand. Certes Cicero, a man reputed (as he was no leſſe indeed) for a ſecond light of all good learning and literature. Better are eſteemed (quoth hee) the ſweet compositions and ornaments which taſt of earth, than of ſaffron: where note by the way, that this great Clarke choſe to vſe the word

A of taſt rather than of ſmell, in ſuch odoriferous perfumes and mixtures. Well, to ſpeake at a word, ſurely that ground is beſt of all other, which hath an aromaticall ſmell and taſt with it. Now if we liſt moreover to be better inſtructed, what kind of ſauour and odour that ſhould be, which we would ſo gladly find in the earth; we may oftentimes meet with that ſcent, euen when ſhe is not ſtirred with the plough, but lieth ſtill and quiet, namely, a little before the ſun ſetting, eſpecially where a rainbow ſeemeth to ſettle & pitch her tips in the Horizon: alſo, when after ſome long and continuall droughe, it beginneth to rain; for then being wet and drenched therewith, the earth will ſend vp a vapor and exhalation (conceiued from the Sun) ſo heavenly and diuine, as no perfume (how pleaſant ſoeuer it be) is comparable vnto it. This ſmell there muſt be in it when you ere it vp with the plough: which if a man find once, he may be aſſured it is a right good ground; for this rule neuer faileth: ſo as (to ſay a truth) it is the very ſmel and nothing els, that will iudge beſt of the earth: and ſuch commonly are new broken grounds, where old woods were lately ſtocked vp: for all men by a generall conſent, do commend ſuch for excellent. Moreover, the ſame ground for bearing is held to be far better, whenſoeuer it hath reſted between, and either lien ley or fallow; whereas for vineyards it is cleane contrary: and therefore the more care and diligence is to be employed in chuſing ſuch ground, leaſt wee approoue and verifie their opinion, who ſay, That the ſoile of all Italie is already out of heart and weary with bearing fruit. This is certaine, that both there and elſewhere, the conſtitution of the aire and weather, both giueth and taketh away the opportunitie of good husbandrie, that a man cannot otherwiſe do what he would: for ſome kind of grounds there is ſo fat and ready to reſolue into mire and dirt, that it is impoſſible to plough them and make good worke, after a ſhower of rain. Contrariwiſe, in Byzacium a territory of Africke, it is far otherwiſe: for there is not a better and more fruitfull piece of ground lieth without dore than it is, yeelding ordinarily 150 fold; let the ſeaſon be dry, the ſtrongest teeme of oxen that is, cannot plough it: fall there once a good ground ſhower, one poore aſſe, with the help of a filly old woman drawing the plough ſhare at another ſide, will be able to go round away with it, as I my ſelfe haue ſeen many a time and often. And whereas ſome great husbands there be, that teach vs to enrich and mend one ground with another, to wit, by ſpreading fat earth vpon a lean and hungry ſoile; & likewiſe by caſting drie, light, and thirſtie mould, vpon that which is moiſt and ouer-fat, it is a meere follie and waſtfull expence both of time and trauaile: for what fruit can he euer looke to reape from ſuch a mingle mangle of ground?

CHAP. VI.

¶ Of the earth which Britaine and France loue ſo well.

The Britaines and Frenchmen haue deuifed another meanes to manure their ground, by a kind of lime ſtone or clay, which they call Marga [*i. Marle*]. And verily they haue a great opinion of the ſame, that it mightily enricheth it & maketh it more plentiful. This marle is a certaine fat of the ground, much like vnto the glandulous kernels growing in the bodies of beaſts, and it is thickened in manner of marrow or the kernell of fat about it.

CHAP. VII.

¶ The diſcourſe of theſe matters continued according to the Greekes.

The Greekes alſo haue not ouerpaſſed this in ſilence: for what is it that they haue not medled withall? The white clay or earth wherewith they vſe to marle their grounds in the territory of Megara, thoſe onely I mean which are moiſt and cold, they call Leucargillæ. Theſe marles (all the kind of them) do greatly enrich France and Britaine both, and therefore it would not be amiſſe to ſpeak of them more exactly. In old time there were two ſorts thereof, and no more: but of late daies (as mens wits are inuentiue euery day of one thing or other) they haue begun to find out more kindes, and to vſe the ſame: for there are now diuers marles, the white, the red, the Columbine, the clay ſoile, the ſtony, and the ſandy: and all theſe are but two in nature, to wit, either hard and churliſh, or elſe gentle and fat. The triall of both is knowne by the handling and a twofold vſe they yeeld; either to beare corne onely, or els for graſſe and paſture alſo. The ſtonie or grauelly ſoile is good only for to nourish corne; which if it be white

withall, and the pit thereof found among springs or fountains, it wil caufe the ground to be infinite fruitfull; but it is rough in handling, and if it be laid too thick vpon the lands or leyes, it wil burn the very ground. The next to it is the red marle, called also Capnumargos, which hath intermingled in it a certaine small stony grit full of sand: This stony marle the manner is to break and bruiſe vpon the very lands; and for the first yeares, hardly can the straw be mowne or cut downe for the said stones. Lighter is this marle than the rest by the one halfe, and therefore the cariage thereof into the field is least chargeable. It ought to be spread and laid thin, & some thinke that it standeth somewhat vpon salt. But both the one and the other will serue well for fifty yeares, and the ground enriched thereby, will (during that time) yeeld plenty as well of corne as grasse.

CHAP. VIII.

¶ Sundry sorts of Earth and Marle.

OF those marles which are found to be fat, the white is chiefe; and thereof be many sorts. The most mordant and sharpest of them all, is that whereof wee spake before. A second kind there is of chalkish clay, which our gold-smiths vse (called Tripela:) this lieth a great depth within the earth, inſomuch as many times men are driuen to sinke pits 100 foot deep, for it; and those haue a small and narrow mouth aboue, but within-forth and vnder the ground they be digged wider, by reason that the veine thereof runneth many waies, in manner of other mettall mines. This is the marle so much vsed in Britain: the strength thereof being cast vpon a land, will last 80 yeares; and neuer yet was the man known that herewith marled the same ground twice in all his life time. The third kind of white marle, is that which the Greekes call Glischromargon: it is no other than the Fullers chalkie clay mixed with a viscous and fatty earth. The nature of it, is to breed grasse better than to beare corne: for after one crop of corne is taken off the ground in haruest, before seed time is come for winter grain, the grasse wil be so high growne, that a man may cut it down and haue a plentiful after-math for hay; and yet all the while that it hath corn vpon it, you shall not see it to beare any grasse besides. This marle continueth good 30 yeares: if it be laid ouer-thick vpon a land, it choketh the ground in manner of * Cumine. The Columbine marle, the Gauls call in their language, by a name borrowed of the Greeks, Pelias, (i. Doue or Pigeon marle:) it is fetched out of the ground in clots and lumps, like as stones be hewed out of quarries: with Sunne and the frost together, it will resolue and cleaue into most thin slates or flakes. This marle is as good for corne as for herbage. As for sandy marle, it will serue the turn for want of other: yea and if the ground be cold, moist, and weely, the husbandman will make choice thereof before other.

The Vbians, vpon my knowledge, vse to enrich their ground and make it more battle (though their territory otherwise be most fertile) with any earth whatsoever; provided alwaies that it be digged vp three foot deep at least, and laid a foot thick; a deuise that no other country doth practise: howbeit this soile and manner of manuring, continueth good not aboue ten yeares: the Hedunans and Pictones, haue forced their grounds and made them most plentifull, with lime-stones, which is found also by experience to be passing profitable for vines and oliues.

To come now to the ordering of this piece of husbandry: the ground ought to be ploughed first, before marle of any sort be cast vpon it; to the end that the medicinable vertue & substance thereof, might the sooner and more greedily be receiued into it. Now forasmuch as marle is at the first ouer-rough and hard, not so free in the beginning as to resolue and turne into blade or grasse, it had need of some compost or dung to be mingled with it: for otherwise, be it neuer so rich, it will rather do harm than good to the ground, by reason that it is yet strange and not acquainted therewith: and yet help it this way as well as you can, it will not bring forth any plenty the first yere after it is laid on. Last of all, it skilleth much to consider the nature of the ground, which you mean to marle: for the dry marle, forteth well with a moist soile; and the fatty, hiteth that which is dry and lean. But when the ground is of a middle temperature between both, it mattereth not whether you vse the white gold-smiths chalker, or the Columbine-marle, for either of them will serue well enough.

CHAP.

CHAP. IX.

¶ The vse of ashes vpon lands: of Dung: what graine or pulse (swine, doth make the ground more plentifull, and what burneth it.

THE people dwelling beyond the Po, make such account of ashes for to enrich the grounds withall, that they prefer it before horse-muck, and such like: which dung (because they take it to be very light) they burne also into ashes for that purpose. Howbeit (as we haue said before) in one and the same corn-land, they vse not ashes and mucke both at once: no more doe they cast ashes in hortyards for to nourish yong trees, nor in fields, for some kind of corn. Some are of iudgement, that grapes are fed with dust: who also do cast dust vpon them when they begin to bloome, yea and bestrew dust vpon the roots as well of Vines as other trees. Certain it is, that in the prouince of Narbon they vse so to do, and they are assuredly persuaded, that grapes ripen better and the vintage cometh the sooner thereby: because in those parts dust doth more good than the Sun.

As for mucke, there be diuers sorts thereof, and in old time much vse there was of it: for in Homer we read, that long ago the good old king [Laertes] was found laying soile and dung vpon his land with his own hands. The first that deuised mucking of grounds, was (by report) Augur a king in Greece: but Hercules divulged the practise thereof among the Italians, who in regard of that inuention immortalized their K. Stercutius the son of Fauus, M. Varro esteemeth the dung of Blackbirds (gathered out of their bartons where they be kept in mew) aboue all others.

He highly magnifieth and extolleth it also, for that it bringeth forth so good forage to feed kine, oxen, and swine withall: auouching for certaine, that they will become fat beefe and pork with no meat sooner. We must thinke well therefore and hope the best of the world now adaies, since that our ancestors and forefathers so long ago had so great bartons and pens, that the dung of fowls there kept, was sufficient to help their hard and hungry grounds. In the second degree of goodnesse, Columella rangeth Pigeons dung gathered out of Doue-cotes: the third place hee giueth to that of Hens, and other land pullen, reiecting altogether the dung of water-fowle. Howbeit all other Authors (setting these two aside) attribute with one voice and consent vnto the excrements of mans body, the greatest praise for this purpose. Some of them prefer mans urine, and namely, when the haire of beast-hides haue bin foked therewith and quicke-lime together, in the Tanners pits. Others vse urine alone by it selfe, only they mingle water with it againe, but in greater quantitie a good deale, than they (whose urine it was) did put to the wine when they drinke it: and good reason too; for more need there is now to correct and repress the malice thereof, considering that besides the native malignitie of the wine it selfe, mans bodie hath giuen and imprinted into it, a strong and vsaurie quality. Thus you may see how men labour, strue, and try conclusions, to feed and enrich the very ground, the best way they can deuise. Next vnto the ordure and urine of mans body, the filthy dung of swine is most commended: only Columella condemneth it. Some praise the mucke of any foure-footed beasts whatsoever, so they were fed with Tree-trifolie, called Cytisus. Others prefer the dung of Pigeons before any other; in the second place that of Goats; thirdly of sheepe; then of kine and oxen; and lastly of cart-jades, mules, asses, and such like. Thus you see as well what difference there was in times past, between this dung and that; as also what were the rules (so farre as I can guesse and learne) whereby they went, in the vse and ordering thereof: for, to say a truth, the old way is best, cūen herein as well as in other matters. Ouer and besides, the practise hath bin already seen in some of our prouinces (where there is so great store of cattell bred) to riddle and sift their dung ouer their ground through sieues, in manner of meale; and so in proceſſe of time it loseth not only the stinking sent and ill-fauored sight that it had, but also turneth into a pleasant smell, and looketh louely withall. Of late, found it hath been by experience, that Oliue trees doe like and prosper very well, if the ashes of lime-kills especially be laid to their roots. Varro, among many other precepts, addeth and saith, That corne grounds would be manured with horse-dung, because it is the lightest; but meadows require compost that is heavier, and namely, made by beasts that haue barley for their prouender; for that such soile bringeth plenty of grasse. Some there bee also, that preferre the dung made by horses, before the mucke of kine and Oxen; likewise sheeps treddles, before Goats dung; but Asses mucke before all other, because

* Cymini.
Turnub. reades
Siginis, & mea
neth thereby
shards of pot-
ters worke and
such like rub-
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they eat and chew their meat most leifurely. But daily experience teacheth the contrary, and testifieth againft the one and the other. And thus much as touching compoft of mucke.

Furthermore, all men are of opinion, that nothing is better for the ground, than to fow Lupines therupon, prouided alwaies, that before it coo, it be turned into the ground by the plough, fpede, or two-piked yron forke; alfo when it is cut down, to make it into wads or bottles, and fo to bury them at the roots of trees, and vines efpecially. In countries where there are no cattell to better the lands, it is thought good to manure the fame in ftead of beafts dung, with very hawme, ftraw, and ferne. *Cato* hath a deuife to make an artificiall mucke or compoft of litter, lupine ftraw, chaffe, beane stalks, leaues and branches both of Malt-holm and oke. He faith moreover to the fame purpose: Weed out of the ftanding corn * Walwort [otherwife called Dane-wort] and Hemlock; alfo from about oſier-plots, plucke vp ranke weeds, or ground Elder; alfo Reeke or Sea-graffe, and dead leaues or branches lying rotten vnder trees: when thou haſte ſo done, ſtrew, and lay a courſe of them vnder ſheep where they be folded. *Item*, If the Vine begin to decay and wax leane, burne the fthreads and cuttings of the owne, and turne the aſhes vnder ground hard to the roots thereof. *Item*, where thou meaueſt to ſow any wheat or ſuch like bread-corn, draw thy ſheep thither, and there fold them. He faith moreover, that the ſowing of ſome graine is as good as a dunging to the ground: for theſe be his very words, The fruit it ſelfe of the earth is a batling to the earth; and namely, Lupines, Beans, and Vetches, for they muck the lands: like as on the contrary ſide, Chiches do burn the ground, both becauſe they are plucked, and alfo for that they ſtand vpon ſalt. Semblably doth Barley, Foenigreeke, Eruiſe, and generally all kind of pulſe which are pulled and not mowne downe. *Item*, Take heed (quoth *Cato*) that you ſet no pepins or kernels, where you meaue to ſow corne. As for *Virgil*, he is of opinion, that the ſowing of Line-feed for flax, likewiſe of Otes and Poppies, do burne corne-ground and pill it out of heart. He alſo giueth rules as touching mucke-hills, That they ſhould be made in the open aire, within ſome hollow place where it may gather water; that they be couered ouer with ſtraw and litter, for feare they ſhould dry in the Sun; and laſt of all, that they haue a good ſtrong ſtake of Oke pitched and driuen in about the mids thereof, for ſo there will no ſnakes nor ſuch like ſerpents breed and ingender therein. Moreover, as touching the ſpreading of mucke, and mingling it with the mould of a land, it is exceeding good to do it when the winde ſetteth full Weſt, ſo that the Moon then be paſt the full and in the Waine. But this rule many haue miſtaken and not conſidered aright, ſuppoſing that they ſhould ſo do when the Weſtern wind Fauonius beginneth to riſe, and namely in the moneth of Februarie only; whereas indeed moſt countries require this point of huſbandry in other moneths as wel. But looke what time ſoeuer you liſt to do it, be ſure in any hand that the wind do then blow from the Equinoſſiall point of the Weſt, and that the moone then be in the waine, and drie withall. Haue regard to theſe rules and obſervations, you will wonder to ſee the effects thereof, and what increaſe the earth thereby will yeeld.

CHAP. X.

¶ The planting and ſetting of trees: the manner how trees do grow, by a ſion ſlued and plucked from the root.

Now that we haue already ſufficiently treated of the conſiderations as well of the aire and ſkie, as of the earth, belonging vnto plants and trees; me thinks it were to good purpoſe to diſcourſe of the induſtry and artificiall meanes that men haue vſed to make trees grow: and verily we ſhall find no fewer kinds of them that come by mans hand, than of ſuch as nature it ſelfe hath brought forth; ſo kind and thankfull we haue bin to her, as to make recompence in this behalfe. Firſt and formoſt therefore this is to be noted, That all trees do grow either of ſeed ſowne, or of branches growing to the tree and couched in the ground, or of an old ſtocke from whence new imps may ſprout: alſo, either of a ſlip or ſprig plucked from another tree, and ſo laid in the ground; or of a young ſhoot, twig, impe, or ſion, engrafted in the very trunk of a tree, ſlit and clouen for that purpoſe. For I cannot chuſe but maruell much at *Trogus*, who was verily perſuaded, That about Babylon the leaues onely of Date trees beeing ſet or ſowne, would proue trees. Now whereas there be ſo many deuifes abouefaid for to nourish trees, this you muſt vnderſtand, that ſome trees there be which will grow by many of theſe waies before ſpecified,

A ſied, and others by them all. And verily the moſt part of this knowledge hath beene taught by Nature her ſelfe: for firſt of all, we haue learned by her for to ſow ſeed, by occaſion that we haue ſeen ſome to fall from trees, which being received by the ground, haue chitted, taken root, and liued. And in very truth, ſome trees there be that grow no otherwiſe, as Cheſtnut, and Walnut-trees, excepting onely thoſe that being cut downe, doe ſpring new again from the root. Of ſeed alſo (although the ſame be farre vnlike to others) thoſe alſo will grow; that are vſually plucked otherwiſe; as for example, Vines, Apple trees, and Pyrries: for in theſe the ſtone and pepin within, ſeructh in ſtead of the ſeed; and not the fruit it ſelfe, as in thoſe before rehearſed, the kernels whereof [i. the fruit] are ſowne. Medlars likewiſe may come vp of ſeed. But all the ſort of theſe that ſpring after this manner, be late ere they be come forward, and ſlow in growth: they turn alſo to a degenerat and baſtard nature, and had need to be graſſed anew ere they be reſtored to their owne kind: which is the caſe of Cheſtnuts alſo otherwhiles. Howbeit there be others for them againe, which (ſow or ſet them what way you will) neuer grow out of their owne kind; and ſuch be Cypreſſes, Date trees, and Lawrels: for the Lawrell commeth vp by ſowing, by ſetting, and planting, after ſundry ſorts. The diuers kinds whereof, we haue deſcribed already. Of all which, the Lawrell Auguſta with the broad leaues, the common Bay tree alſo that beareth berries, as alſo the wild kind named Tinus, be ordered all three after one and the ſame ſort. The manner whereof is this: the Bayes or berries thereof, be gathered dry in the moneth of Ianuary when the Northeaſt wind bloweth: they are laid abroad thin to wither, one apart from another, & not in heaps, for feare they ſhould catch a heat. This done, ſome put them afterwards in dung; and being thus prepared and ready for to be ſowne, they ſteep them in wine. Others take and lay them within a large basket or twiggen panier, trample them vnder their feet in a brook of running water, vntill they be pilled and rid of their outward ſkins: for otherwiſe their ſkin is of ſo tough and moiſt a ſubſtance, that it would hardly or not at all ſuffer them to come vp & grow. After all this, in a plot of ground wel and thoroughly digged once or twice ouer, a trench or furrow muſt be made a handfull deepe, and therein the berries ought to be buried by heaps, to wit, twenty or thereabout together in one place: and all this would be done in the month of March. Lawrels alſo will grow, if their branches or boughes be bended from the ſtocke and laid within the ground: but the Triumphall Lawrell will come vp no other way but by ſetting a graffe or impe cut from it. As for the Myrtle, all the ſorts thereof within Campaine, come of berries ſown: but we at Rome vſe to interre only the boughes of the Tarentine Myrtle, growing ſtill to the body, and by that means come to haue Myrtle trees. *Democritus* ſheweth another deuife alſo to increaſe Myrtles, namely, to take the faireſt and biggeſt berries thereof, & lightly to bruife or bray them in a mortar, ſo that the grains or kernels within be not broken; & then to beſmeare with the batter or ſtamped ſubſtance thereof, a courſe cord made of Spart or Spaniſh broome, or els hempen hurds, and ſo lay it along within the ground. Thus there wil ſpring therof, a maruellous thick hay or wall (as it were) of yong Myrtles: out of which, the ſmall twigs you may draw which way you will, yea, and plant them elſewhere. After the like manner, folke vſe to ſow thorns or brambles for to make hedges & mounds, namely, by anointing ſuch another hempen rope with bramble blacke-berries, and interring the ſame. As for Bayes thus ſowne, when they come once to beare a dark and blackiſh leaſe: Myrtles alſo, when their leaues be of a wine color, to wit, of a deep red (which commonly happeneth when they be three yerres old) it will be time to remoue and tranſplant.

Among thoſe plants and trees that are ſowne of ſeeds, *Nago* maketh much ado, and is ſouly troubled about thoſe trees that beare nuts, & ſuch like fruit in ſhells: for to begin with almonds firſt, he would haue them to be ſet in a ſoft clay ground that lieth into the South: & yet he faith again that Almond trees loue a hot and hard ſoile; for in a fat or moiſt ground, they will either die or els wax vnfruitful. But aboue all, he giueth a rule to chuſe Almonds for to ſet or ſow, that be moſt ſhoked, and eſpecially ſuch as were gathered from a young tree: alſo he ordaineth, that they ſhould be well ſoked or infuſed in ſoft beaſt ſterne or thin dung, for three daies together: or at leaſt wiſe in honied water, a day before they be put into the ground. *Item*, they ought (by his ſaying) to be ſet charily with the ſharp and pointed end pitched downward, and the edge of the one ſide to turne into the Northeaſt. Alſo that they muſt ſtand three and three together in a triangle, for ſooth, ſo as there be a handbreadth iuſt between euery one. Moreover, that euery tenth day they ought to be watered, till they be ſhot vp to a good bigneſſe. Now to come vnto

walnuts, they be laid along within the earth, with this regard, that they do ly vpon their joints. **G** As for pine nuts, there would be six or seuen of their kernels put together into pots that haue holes in them, and so buried in the ground: or else they should be ordered after the manner of the Bay tree, which commeth of berries bruised, as hath been shewed before.

The Citron tree will grow of seed, and may be set also of sprigges or twigs drawne to the ground from the tree, and so couched. Seruis trees come of the grains thereof sowed of a quick-set plant also with the root, or of a slip plucked from it. But as the Citron trees liue in hot grounds, so these Seruises loue cold and moist.

As concerning seminaries and nourse-gardens, Nature hath shewed vs the reason and maner thereof, by certaine trees that put forth at the root a thick spring of yong shoots or fions, but lightly the mother that beareth these imps, killeth them when the hath done, with her shade and dropping together. And this is euident to be seene in Lawrels, Pomegranate trees, Planes, **H** Cherry trees, and Plum trees: for standing as these imps doe, a number of them without all order vnder their mother stocke, they be ouershadowed and kept downe so, that they mislike and neuer come to prooffe. Howbeit some few there be of this sort, that are not so vnkinde to their yong breed, as to kill them with the shadow of their boughs, and namely Elmes & Date trees. This would be obserued by the way, that no trees haue such yong imps springing at their feet, but they only whose roots for loue of the warm sun and moist rain, spread aloft and ly euen within the ground. Moreover, the manner is not to set these yong plants presently in the place where they must remaine and continue for altogether, but first they are to be bestowed in a piece of ground where they may take nourishment, to wit, in some nourse-garden for the nones, vntill they are grown to a good stature, and then they are to be removed a second time to their due place. And a wonder it is to see, how this transplanting doth mitigate euen the saue nature of the wildest trees that are: whether it be that trees as well as men are desirous of nouelties, and loue to be traueilling for change; or that as they go from a place, they leaue behind them their malicious qualitie, and being vsed to the land, become tame and gentle like the wild beasts; especially when such yong plants are plucked and taken vp with the quicke root. Wee haue learned of Nature also another kinde of planting like to this: for we see that not only water shoots springing out of the root, but other sprigs slipped from the stocke, liue and doe full well: but in the practise of this feat they ought to be pulled away with a colts foot of their owne, so as they take a quicke parcell also of their mothers bodie with them, in manner of a fringe or border hanging thereto. After this manner they vse to set Pomegranate, Filbert, Hazell, Apple, **K** and Seruis trees; Medlars also, Ashes, and Figge trees; but Vines especially: marie, a quince ordered and planted in that sort, will degenerate and grow to a bastard kinde. From hence came the inuention, to set into the ground yong sprigs or twigs, cut off from the tree. This was at first practised with foot-sets for a prick-hedge, namely, by pitching down into the earth, Elder, Quince-cuttings, & brambles; but afterwards men began to do the like by those trees that are more set by, and nourished for other purposes, as namely Poplars, Alders, and the Willow, which of all others may be pricked into the ground with any end of the cutting or sprig downward, it makes no matter whether, for the smaller end will take as well as the bigger. Now al the sort of these are bestowed and ranged in order at the first hand, euen as a man would haue them and where he list to see them grow, neither need they any remouing or transplantation at all. But before we proceed any further, to other sorts of planting trees, it were good to declare the **L** manner how to order seminaries, seed-plots, or nourse-gardens.

For to make a good pepinier or nourse-garden, there would be chosen a principal and special peece of ground: for oftentimes it falleth out, yea and meet it is, that the nourse which giueth sucke should be more tender ouer the infant, than the owne naturall mother that bare it. In the first place therefore, let it be found and drie ground, howbeit furnished with a good and succulent elemental moisture, and the same broken vp and afterwel digged ouer and ouer with mattock and spade, and brought to temper and order, so as it be nothing coy but readie to receiue al manner of plants that shall come, and to entertain them as welcome guests; & withall, as like as may be to that ground vnto which they must be removed at last. But before al things this would be looked to, that it be rid clean of all stones, surely fenced also and paled about, for to keep out cockes and hens and all pullen: it must not be full of chinkes and cranies, for feare **M** that the heat of the sunne enter in and burne vp the small filaments or stringes and beard of the

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A new roots: and last of all, these pepins or kernels ought to stand a foot and a halfe asunder: for in case they meet together and touch one another, besides other faults & inconueniences, they will be subiect to wormes: and therefore I say there would be some distance between, that the ground about them may be often harrowed and raked, to kill the vermin, and the weeds pluckt vp by the heeles that do breed them. Moreover, it would not be forgotten to proin these yong plants when they are but new come vp: to cut away, I say, the superfluous sprigs vnderneath, and vse them betimes to the hooke. *Cato* giueth counsel to sticke forks about their beds a mans height, and lay hurdles ouer them, so as the Sun may be let in vnderneath: and those hurdles to couer and thatch ouer with straw or holme, for to keepe out the cold in winter. Thus are yong plants of Peare trees and Apple trees nourished: thus Pine nut trees, thus Cypresses which do **B** likewise come vp of seed, are cherished.

As for the grains or seeds of the Cypres tree, they be exceeding small, and so small indeed, that some of them can scarce be discerned well by the eye. Wherein the admirable worke of Nature would be considered, to wit, that of so little seeds should grow so great and mightie trees, considering how far bigger are the cornes of Wheat and Barley (to make no reckoning nor speech of Beans) in comparison of them. What should we say to Peare trees and Apple trees? what proportion or likenesse is there between them, and the pretty little pepins whereof they take their beginning? Maruell we not, that of so slender and small things at the first, they should grow so hard, as to checke and turne againe the very edge of ax and hatchet: that frames and stocks of presses should be made thereof so strong and tough, as will not shrinke vnder the heauiest poise and weights that be: that Mast-poles comming thereof should be able to beare **C** faile in wind and weather: and finally, that they should afford those huge and mightie Rams and such like engins of batterie, sufficient to command towers and battils, yea, and beat downe strong walls of stone before them? Lo what the force of Nature is! see how powerfull shee is in her works! But it passeth and exceedeth all the rest, that the very gum and liquour distilling out of a tree, should bring forth new plants of the same kind, as we will more at large declare in time and place conuenient. To returne then againe to the female Cypres (for the male as hath bin said already bringeth forth no fruit) after that the little balls or pills (which be the fruit thereof) be gathered, they are laid in the Sun to dry, during those moneths, which we haue before shewed, and being thus dried, they will breake and cleaue in sunder. Now, when they are **D** thus opened, they yeeld forth a seed which Pismires are very greedy of. Where another wonder of Nature offereth it selfe vnto vs, That so small a creature as it should eat and consume the seed which giueth life and being to so great and tall trees as the Cypres. Well, when the said seed is gotten, and the plot of ground laid euen and smooth, with cylinders or rollers, it must be sowne of a good thicknesse in the moneth of Aprill: and fresh mould sifted and strewed ouer with riddles an inch thicke and no more: for if this grain be buried ouer-deep and furewed ouer, it is not able to break through against the weight of the earth, but in stead of rising vp, the new chit turneth and benderth backward vnder the ground. And hereupon it is that folke forbear either to go at all vpon it, or else they tread very lightly. Being thus sowed, it must be gently watered for three daies following, after the Suns setting, (that the earth may drinke equally in **E** all places) vntill the sprouts appeare aboue ground. Now, after they haue had a yeares growth, they be translated and re-planted againe in rewes: for by that time they are come to a span or nine inches in height: but great care must be had that the time be temperat, that is to say, that the weather be fresh and faire without any wind. Certes a wonderfull thing it is to be spoken, that all the danger or security of this tree, standeth vpon the choice of that only day wherein it is replanted: for let there fall neuer so smal a rain or dew, nay let the wind blow neuer so little, it is a great hasard whether it will die. For euer after it is warished and safe enough, howbeit it cannot abide a glut of rain at any time following. Moreover, as touching Iuybes, they are likewise set of their graines in the moneth of Aprill. But that kinde of Peaches or Abricors which be called Tuberes, loue better to be grafted either vpon a skeg or wilde Plum-stocke, or **F** Quince, or else vpon the wild Hart-Rhamme, called Calabrium, [or Spina Cervina.] To knit vp this discourse, the fruit Sebesten and the Seruises may be grafted and planted both vpon the same kind of stocke: and looke what will beare the one, is apt to receiue the other.

CHAP.

CHAP. XI.

¶ The manner of translating or replanting out of one seminarie or nource, vnto another. How Elmes are to be planted. Also as touching trenches.

Some would haue vs to remoue plants out of one seminarie into another, before they be set indeed where they should be for to continue: which me-thinkes is a matter of more toile and curiositie than necessitie, howsoeuer they make promise, that by such transplanting, the leaues will proue larger and broader.

Now for Elms, their seed or grain is to be gathered about the * Calends of March, when it beginneth to turn yellow, and before the leaues break forth. After it hath bin dried in the shadow for two daies, it is to be sown thick in a plot of ground well broken vp and laid hollow beforehand, and then must there be mould searced ouer through a fine riddle, to the same thicknesse as we haue appointed for the Cypres. In case no raine do fall in due time, it ought to be watered by hand. After one yere, the plants that come herof must be taken vp out of the trenches and ranges wherein they came vp, and translated directly into the Elme plots where they are to grow; with this care & good regard, that they stand a foot at least euery way distant one from another. As for the male Elmes, vnto which Vines are wedded, because they are without seed, it is better they were planted in the Autumne: and for that they want seed they would be set of plants. Here with vs about Rome tude they vse to replant them again in their groue-plots when they be five yeares old, or as fone would haue it, so foon as they be come to 20 foot in height. The maner whereof is this, in a trench or ditch called * Nouenarius, 3 foot deep in the ground, and as many broad, or rather more, they are set: which done, for three foot in height euery way about the foot of each tree from the ground as it stands, there must be banks raised of some earth, after the maner of those seats which they cal Arulæ in Campanie. As for the spaces between tree and tree, they ought to be set out and disposed according to the nature and scituation of the place, and as the ground wil giue leaue. In the champion and plain country, those would be planted that are of a drier nature, and likewise in a thinner course. As for Ashes and Poplars, because they make haft to spring, leafe, and bud out betimes, it is meet that their plants likewise were set and ranged with the first, that is to say, about the * Ides of Februarie; for they also grow of plants, and may well be replanted.

Now for the order of setting trees either in groves, hort-yards, or vine-yards, wee ought to follow the vsuall maner of checquer row, called Quincuncial, which is not so common, but it is also as necessarie: not only good to admit all kindes of winde to passe betweene, but also faire and pleasant to the eye, considering, that which way soeuer a man looks, there offer to his sight both the allies, and reues, directly ranged in order.

The Opiets or Wich-Hazels are sown of seed after the same maner as Elme: in like sort also are they to be remoued & transplanted out of their nource-plots, as if they were wild, drawn from the very forrests.

Moreover, aboue all things this would be considered, that a tree to be remoued ought to be translated either into the like ground from whence it came, or else into a better. For we must take heed how we remoue plants out of warme grounds, & where the fruit is early ripe, into others that be colder or late in ripening. Semblably, out of cold & hard places, they would not be translated into warm, mellow, and forward. Item, if it be possible, let the trenches be cast and digged so long before, that a good thicke green sould be ouergrowne against the time that you mean to plant. *Mago* is of opinion, That the said trenches should stand made a yere before at the least, that they might be fully seasoned with the Sun, and receiue all rain, winde, & weather thoroughly. But in case it fall out otherwise, that the opportunitie thereof be ouerslipped, or our leifure wil not serue, he would haue fires to be made in the midft of them two moneths before, and in no case any trees to be set but after showres of rain. And if the ground be rough or hard, and standing vpon the cley, the ditches ought (according to *Mago*) for to be three cubits deepe euery way: and if they be to plant plum trees, he would haue them be a hand-bredth more, or spanne in deapth, and digged on euery side hollow, and vaulted in manner of a founaine, with a narrower mouth in the top. In a blacke veine of ground, by his direction, it is sufficient that they be two cubites and a hand-breadth or spanne deepe, and made foure-square in man-

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A ner of a quadrangle. In the measure and proportion of these ditches, the Greeke writers doe accord in one, saying, that they ought not to be more than two foot and a halfe deepe, nor wider than two foot bare also, that in no place it must be vnder a foot and a halfe deepe, for that in a moist soile, we shal come ordinarily neer to water about that skantlin, and not before. But *Cato* is of another judgment, if (quoth he) the place be waterish, let the trenches be three foot broad in the mouth, but in the bottome not aboue a foot and a hand-breadth, but see they be foure foot deepe: provided alwaies, that they be * paved beneath with stone: and for want thereof, laid with green willow bastons, and for default of them, with vine cuttings, or such triouffe, so that they lie halfe a foot thicke. But considering the nature of trees wherof we haue before written, I think it not amisse to adde somewhat of mine owne, namely, The more ebbe that any roots of trees creepe vnder the ground, the deeper they must be set into the earth, as for example, the Ash and the Oliue tree: for they and such other like ought to stand foure foot deepe. As for all the rest, it skils not, if they goe no deeper than 3 foot, for that is thought sufficient. [Stocke me vp this root here (quoth *Papirius Curs* for a Roman in General, in a brauery, when he meant to terrifie the Pretors of the Prænitines.) Whereby it is plain that the more secure & safe way in his judgment was rather to cut the stocke and maister Root indeed, than slightly to pare away those bare roots that appeare naked aboue ground; for that might be done, and the tree neuer the worse for it.] Some there be that would haue round pebble stones laid in the bottome of such ditches, which might as wel contain and keep water, as let it forth and giue issue thereto: whereas broad flat stones would not so doe, but besides, hinder the root that it should not goe downe and take hold of the earth. For to keep therefore a meane betweene, it were good in mine opinion, to lay grauell vnder the root.

Moreover, there be diuers men of this mind, that a tree should not be remoued, either vnder two yeares old, or aboue three: whereas others make no question to transplant them after the first yere, without more adoe. *Cato* alloweth not of translating a tree, vnlesse it beare in thicknesse more than 5 fingers. And verily, so exactly hath he written hereof, that he would not haue forgotten, to marke in the barke of trees the South side, before they were taken vp, in case, hee had thought that it was material to the replanting of them, that they should stand just in the same position and accustomed coast of the heauen, as they did before, for feare least that side which regarded the North, if now it should be opposed against the South, might cleaue and rift with the heat of the Sunne, not vsed thereto: and contrariwise, the parts which looked Southward, might now by the Northern winds, be clunged and congealed withall. Now there be some that affect a cleane contrarie course, and namely, in the Fig tree, and the Vine, exchanging the one side for the other: being fully persuaded, that by that means they will beare leaues thicker, preserve and defend their fruit better, and in the end shed fewer: more particularly, that the fig tree thereby wil be the * more easie to climb. Most men take great heed of this only, that when they prune trees, and cut off the top ends of boughes, the cut may be toward the South, without any regard or consideration, that in so doing they expose the boughs to the danger of cleaving, by reason of the hote Southern wind which lieth vncessantly beating vpon them. Yet hold I rather with them, that would haue branches cut Southeast or Southwest, namely, toward the points where the Sun is, at the fift and eight houres of the day. Another secret there is besides, wherof they are as ignorant, howbeit, not to be neglected, namely, to beware that the roots of such trees as are to be replanted, stay not long aboue ground, and thereby wax drie also, that trees bee not digged vp, either standing into the North, or in any quarter between that point and the Southeast, where the Sunne riseth in midwinter, in case the wind sit in those corners: or at leastwise, that the roots be not exposed bare against any of those winds: for surely, many a tree dies hereby, and husbandmen neuer know the cause thereof. *Cato* utterly condemneth all maner of winds whatsoeuer, yea, and raine too, all the while that trees be in remouing. Moreover, in this case it is singular good, that there hang to the roots of these trees, when they be translated, as much of the old earth wherein they liued and grew before, as may bee, yea, and (if it were possible) to bring them away with the turfs whole and entire, lapped fast about the roots. And therefore *Cato* provided wel, that such yong plants should be caried in baskets, earth and altogether with the roots. Doubtlesse, not without very great reason there is one Author saith, That it is sufficient that the vppermost course of the old mouth that lay at the foot of the tree, should be put vnder the root thereof now when it is replanted. Some write, that if the bottome of the hole or

grauce

* It seems that *Cato* meant of trenches to drain water out of low grounds: and not as *Pliny* mistaketh.

* *Scantlin*, reading it *Scantlin*, book 16 for *Scantlin*, or *Scantlin*, (i.) more or less and in full.

* The first of March.

* Nine foot distant euery way from another, for trees were planted ordinarily with that space between: as may appeare in the next chapter.

* The 23 day of Februarie.

graue be pained with stone where Pomegranate trees should stand, the Apple or fruit that they bear, wil neuer burst nor cleaue vpon the trees. Also, that the roots of trees when they are to be set, should be laid bending at one side, and not stand direct and streight. Moreouer, that the tree in any case be set iust in the mids of the ditch or hole made for it. It is said moreouer, that if a man plant a fig-tree, together with the sea-onion, Scilla (that is a kind of the Bulb) it will make haist to bear Figs, and those wil not be subject to the worme: and yet other fruits will be worm-eaten neuertheless, set them with the said Scilla as well as you can. As for the roots of a tree who makes any doubt, that great care should be had in the taking of them vpon so as they might seeme rather drawn forth gently, and not plucked vp violently. But my purpose is not to dwell in these matters, nor to stand much vpon such points, which haue a manifest reason, and wherof no man is ignorant or doubtfull; to wit, that the earth is to be well driuen and beaten downe close with a rammer, that it may lie fast about the roots, which *Cato* judgeth to bee a principall point for to be obserued in this businesse: who also giueth a rule, that the place where a tree is cut in the body, should be plaistered ouer with dung, couered ouer also, and fast tied with leaues.

CHAP. XII.

¶ *Of the spaces and distances that ought to bee betwene trees planted: of their shadowes and droppings: of the place where they should be planted.*

IT belongeth to this place properly for to speak of the distances between tree and tree, in the setting. Some writers are of opinion, That Pomgranat trees, Myrtle trees, & Lawrels, should be planted thicker than ordinarie, howbeit, with this regard, that they be set 9 foot asunder one from another. As for Apple trees, they may stand a little more at large, Peare trees somewhat wider than they, Almond trees, and Fig trees yet a little more than all the rest. But herein must we be ruled & directed by the boughs spreading more or lesse, by the room of the place it selfe, and according to the shadow that each tree casteth. There is not (I say) any one of these considerations to be neglected, and the shade especially of all others would be obserued. For such trees as branch round as it were in compasse, although they be otherwise great, as namely Apple trees, and Pyrries, yet they yeeld no great shadow: whereas a man shall see Cherry trees and Lawrels take vp an exceeding deale of ground with their shade. Now these shadowes of trees haue their properties by themselves, for that of the Walnut tree is noisome and hurtfull euē to man, breeding heauinesse in the head: and an ill neighbour it is besides to all plants either vnder or neere vnto it. The Pine tree also with her shadow nipeth and killeth the yong spring of all plants within the reach thereof. Howbeit, both it and also the Walnut tree resist the force of winds notably, and therefore they serue in good steed to protect vineyards, and are projected against the winds to breake their violence. The dropping of the Pine, Oke, and Mast-holme, by reason of the raine water wherewith they are much charged, is very heauy and ponde-rous, and therefore hurtfull. As for the Cypress tree, it droppeth little or nothing, by reason that it receiueth so small a deale of rain: and in truth of all others the shade is least, the boughs are knit and trust so round, and run vp sharpe pointed in the top. The Fig tree giueth no thicke shadow, howeuer the boughs spread large ynough; which is the cause, that no man forbiddeth the planting of them in Vineyards among Vines. And as for Elmes, their shade is so milde and thin, that it nourisheth whatsoeuer it ouerspreads vnder it. Howbeit, *Atticus* is of opinion, That the shadow of Elmes is one of the thickest and most hurtfull: neither doe I make any doubt thereof, if they be let to spread into great armes and boughes at liberty: marie, if the branches thereof, or if any tree within-forth be shrugged, I thinke that the shade will doe no harme at all. The Plane tree carieth a heauie head, and therefore casteth a thicke shade, howbeit, pleasant it is, and refreshes those that sit vnder it: safe resting there is vpon the grasse, rather than the bare ground: and there is not a tree againe where grasse groweth thicker and longer, to couer the banks and seats vnder it. As for the white Poplar or Aspen tree, it maketh little or no shade at all, the leaues keep such a wagging & trembling, and neuer hang still: the shadow of the Alder tree is fat and battie, it feeds whatsoeuer is sowne or set vnder it. The Vine hath shade ynough to serue her owne turne: the leaues are euer stirring, and by their motion and turning often too and fro, there is a good temperature of shade and Sunne by that means: they serue also in steed of a couert in time of raine, and beare off a good shower. Generally, all trees in manner that haue

A haue their leaues hanging by a long taile, cast but a light and slender shadow. And truly the knowledge hercof would not be contemned, nor set in the last place of such points as belong to husbandrie, considering there is not the shadow of any one tree, but either is a kind nource, or a shrewd and curst step-dame, that is to say, either profitable or incommodious to all the fruits of the earth. For without all question, the shade of Walnut trees, Pine trees, Pitch trees, & firs is no better than poison to all that is within the compasse of it, and kills whatsoeuer it toucheth. And thus much of Shadowes.

As touching the dropping of trees, a man may conclude in one word all that belongs thereto. For looke what trees soeuer be so defended and clad with thick leaued branches, that the raine cannot passe readily through them, be sure the dropping and diffillation of such is naught and dangerous. And therefore it skilleth very much in this matter and question now in hand, to know the nature of the earth wherin we meane to plant, how many trees it may well bear and nourish. As for hills, they require of themselves not so great distance betwene tree and tree, as the plaines beneath: besides, in such places exposed to the wind, it is good that they be planted thicker. Howbeit, Oliues require the greatest space between of all others: and therefore *Cato* following the judgment of all Italie, ordaines in these words, That they should stand asunder five and twentie foot at the least, and thirtie at the most: but this rule holdeth not alwaies, for herein guided we must bee by the nature and site of places, which varie and differ much. For in *Beetica*, which is a part of Spaine, there is not another tree growing bigger than the Oliue: and if we may giue credite to authors that haue written hercof, there bee in *Affricke*, by their report many of them called *Milliariae*, for that euery yeare they yeeld a thousand pound weight of oile; apeece. And therefore *Mago* allowed threescore and fifteen foot euery way, for distance between Oliue trees, or else five and forty at least, euē in leane and hard grounds, and those that were exposed to the winds. And in *Beetica* verily, the people vse to reap great plenty of corn among Oliue trees.

Now of all other follies this is one, and bewraith shamefull blindnesse and ignorance, To be driuen to make glades between trees when they be grown to a good bignes: and namely, either by lopping their boughs too much for to let in light between, and so by this means to hasten their age and decay; or els to draw them by cutting them downe cleane: wherin oftentimes they that did set them at first, take themselves in the manner, and blame their own want of skill. D Considering therefore, that there is no greater shame can happen to husbandmen than to repent when a thing is done, and then goe about to vndoe it, much better it is of the twain in this case, to fault in ouerwise, than too streight roume.

CHAP. XIII.

¶ *What trees grow but slowly: and which they bee that soone come forward: also, of the Saine.*

SOME trees by nature are slacke of growth, and principally those that come of seed, and liue longest. But such as soone decay and die, are quicke of growth, as the Fig tree, Pomegranat tree, Plumme-tree, Apple-tree, Peare-tree, Myrtle, and Willow: but they make amends for their short life in this, that they goe before others in fruit, and enrich their masters quickly, for they begin to beare well at three yeeres age, yea, and they make a shew thereof in their blossom before. Of all these the Pear-tree is the slowest. But the Cypress, as wel the true & legitimat as the bastard (which is a shrub called *Pseudo. Cypress*) come fastest forward of any other, for they beare at first both blossome and fruit. This is a generall thing obserued, That all trees will thrive and prosper better, yea, and grow sooner to perfection, if the shoots and suckers that put out at the root, as also other water twigs, be rid away, so that all the nourishment may be turned to the principall stocke only.

The work of Nature in sending out these sprigs, taught vs the feat to couch and lay sets in the ground by way of propagation: and euē after the same manner briars and brambles doe of themselves put forth a new off-spring: for growing as they do, smal and slender, and withal running vp to be very tall, they cannot chuse but bend and lean to the ground, where they lay their heads againe, and take fresh roor of their owne accord without mans hands: and no doubt, ouer-grow they would and couer the whole face of the earth, were they not repressed and withstood by

by good husbandrie. The consideration whereof maketh me to enter into this conceit. That men were made by Nature for no other end but to tend and look vnto the earth. See yet what a commodious deuice we haue learned by so wicked and detestable a thing as this bramble is, namely, to lay slips in the ground, and quick-setts with the root. Of the same nature is the Yuiue also, euen to grow and get new root as it creepeth and climbeth. And by *Cates* saying, not onely the Vine, but Fig trees & Oliues also, wil grow & increafe of cuttings couched in the ground; likewise Pomegranate trees, all kinds of Apple-trees, Baies, Plum-trees, Myrtles, Filberds, Hazels of Præneste, yea, & Plane-trees. Now be there two waies to increafe trees by way of propagation or entering their twigs. The first is, to force a branch of a tree as it grows, downe to the ground, & so to couch it within a trench foure foot square euery way; & after two yeares to cut it arow, where it bent from the tree; and after three yeares end to transplant it. But if a man list to haue such plants or young trees to beare longer, the best way were to burie the said branches at the first within mould, either in paniers or earthen vessels, that when they are once rooted, they might be removed all whole and entire in them, and so replanted. The second is a more curious and wanton deuice than this, namely, to procure roots to grow on the very tree, by carrying, and conueighing branches, either through earthen pots or oisier baskets, full of earth, thrust close to the said branches; and by this means, the branches feeling comfort of the warme earth enclosing them on euery side, are easily intreated to take root, euen among Apples and other fruits, in the head of the tree, (for surely by this meanes we desire to haue roots to chuse, growing vpon the very top.) So audacious are men and of such monstrous spirits, to make one tree grow vpon another, far from the ground beneath. Thus in like manner as before, at 2 yeares end, the said imps or branches that haue taken root, be cut off and carried away in the foresaid pots or paniers; thither where they shall grow. As for the Sauine, an hearb or plant it is that wil take if it bee in this sort couched in the ground; also, a sprig if it be slipped off cleane from the stocke, will come again and root. Folke say, that if a man take wine lees, or an old bricke out of the wall broken small, and either pour the one, or lay the other about the root, it wil prosper and come forward wonderfully. In like manner may Rosemarie be set as the Sauine, either by couching it, or slipping off a branch from it, for neither of them both hath any feed. To conclude, the hearb or shrub Oleander, may be set of any impe, and so grow, or else come of seed.

CHAP. XIII.

¶ *Of encreasing trees by seed: the manner of grafting one in another: how the fine deuise of inoculation by way of scutcheon and emplaster was deuised.*

Nature not willing to conceal any thing from man, hath also taught him to engraft trees with their seed and graine. For oftentimes it happeneth, that birds being hungrie, haue greedily gobbled vp seed and fruit whole and sound, which after they haue moistened in their gorge, and tempered it also with the warmth and natural heat of their stomach, they send forth and squirt out again when they meute, together with their dung, that giueth vnto it a vertue of fecunditie, and so lay it vpon the soft beds of tree leaues, which many a time the winds catch and driue into some clifts and cranies of the barke, by meanes whereof, wee haue seene a Cherrie tree vpon a Willow, a Plane tree vpon a Lawrell, a Lawrell vpon a Cherrie tree; and at one time Berries and fruits of diuerse sorts and sundry colors hanging at one and the same tree. It is said moreover, that the Chough or Daw hath giuen occasion herof, by laying vp for store, seeds and other fruit in creuises and holes of trees, which afterwards sprouted and grew. From hence came the manner of inoculation or grafting in the scutcheon, namely, to cut out a parcel of the barke of that tree which is to be grafted, with a sharp knife made in manner of a shomakers nall blade; and then to enclose within the said concavity, the eie or seed taken out of another tree with the said instrument. And in old time verily this was the only maner, of inoculation vsed in fig-trees and apple trees. *Virgil* teaches vs to open a concavity in the knot or joint of a bud that driueth out the barke, and within it to enclose the gem or bud taken out of another tree. And thus much for the grafting that Nature hath shewed.

But there is another way of grafting, which casualtie and chance hath taught. And to say a truth, this Maister hath shewed well neer more experiments, now daily practised, than Nature her selfe. Now the manner of it came by this occasion. A certain diligent & painfull husbandman,

A man, minding to mound and empale his cottage round about with a fence of an hedge; to the end that the stakes should nor rot, laid a sill vnder them, of Iuue wood: but such was the vitall force of the said Iuue, that it took hold fast of the stakes and clasped them hard, inso much as by the life thereof, they also came to liue; and euident it was to the eye, that the log of Iuue vnderneath, was as good as the earth to giue life and nourishment vnto the stakes afore-said.

To come then vnto our grafting, which we haue learned by this occasion: first, the head or vpper part of the stock must be sawed off very euen, and then pared smooth with a sharp garden-hook or cutting-knife: which don, there offers vnto vs a two-fold way to perform the rest of the worke: The first is, to set the graffe or Sion between the barke and the wood: for in old time truly, men were afraid at first to cleaue the stocke; but soon after they ventured to bore a hole into

B the very heart of the wood: and then they set fast into the pith just in the mids thereof, but one Sion or graffe, for by this kind of grafting, impossible it was that the said pith should receiue or beare any more. But afterwards they deuised a finer and more subtile inuention to graffe, by cleauing the stocke gently thorough the mids; and after this manner they might well set into it six imps or Sions at once: as being persuaded, that by such a number they might supply the defect of any, if they chanced to die or miscarry any way. Now when the said clift was made, they held it open with a wedge of wood put between, untill such time as the impe or graffe being thwitted thin and sharp beneath were set hand somely close within the rift. In the practise of which feat, many points are to be obserued: first and foremost, it would be considered, what trees will thus sort together and be vnited; namely, what stock will beare this maner of engrafting, and of what tree an impe or Sion will agree well to be set into it: for be ye sure of this, all trees are not alike, neither haue they all their sap in one and the same part. Vines and Fig trees are drier in the mids of the tree, than in the head; and toward the top they are more apt to take and conceiue, and therefore from thence it is good to make choise of imps to be grafted. Contrariwise, the sap of Oliues is most frim about the mids, and from thence they afford Sions; for the tops are drie. Moreover, soonest of all other doe those trees incorporate one into another, if when the stock and graffe haue barks both of one nature, if they blossom together at one time, if they bud and put forth their spring at the same season, and last of all, if their saps doe agree one with another. On the other side, long it wil be ere they take, when the stock is drie and the graffe moist; or when the barke of the one is tender, and of the other tough and hard.ouer and besides, carefull heed must be taken in this businesse, that the stocke be not clouen in a knot;

C for the churlish hardnesse thereof will not willingly receiue and entertaine a guest, that choise also be made of the smoothest and fairest place in the stocke, where the graffe would be set: *Item*, That the clift be not aboue 3 fingers deepe; that it be streight and direct; and lastly, that the impe stand so close barke to barke in the socket, that a man may not see between it and the stocke. *Virgil* will in no wise haue a Sion or graffe to be taken from about the top of a tree, for such are all naught. But this one thing is generally held for certain, That the good imps to bee grafted are those, which be gathered from those armes of the tree that regard the Sun-rising in summer: *Item*, That all such grafts come from the boughs that beare well: also that they be new tender shoots of the last yeare (vnlesse they are to be grafted in the stock of an old tree, for then there should bee chosen such as are stronger:) moreover, this is to be regarded, that they be well budded, yea and knotted too, making shew and giuing good hope euen then, that they would bear fruit the same yere, but in any wise the same ought to be of 2 yeres growth at least, and not smaller beneath toward the stocke than a mans middle finger. As for the graffes, the manner is to set them in the stocke with the lesser end downward, when our purpose is, that the tree should spread rather in breadth, than run vp in height. Aboue all, it would be looked wel to, that they be neat and bright, so as they shine againe; that no part of them be seene either scorched drie with the sunne, or cicatrized (as it were) and blistered. Good hope there is that the graft will take, if the pith or marrow of the sion do fall jump with the joynt, so as it ioyne close to the wood and inner barke of the mother stocke: for this is farre better than to let it meet just

E and euen with the bark without-forth. Moreover, a carefull eie must be had in thwitting and sharpening the graffe or imp, that the heart or woody substance be not stript all naked and left bare: howbeit gently and with a light hand a man must go ouer it with a fine and sharp instrument, in such sort, as it may go downe into the clift wedgewise, no deeper than 3 fingers bredth: the which may right easily be don, if it be shauen and pared presently after it hath bin dipped

in water. Moreover, wee ought be well aduised, that wee sharpen not the end of a graffe in the wind, and that the barke goe not either from it or the stock. As for the graffe it selfe, it must be driuen downe into the clift, close to the shoulder where the owne barke goeth round, and from whence you began to sharpen it: but take heed in thrusting and forcing therof, that it stand not out of joynt, ne yet that the barke thereof turne vp in wrinkles: and therefore chosen they would not be which are ouer moist, no more (I assure you) than those that be too drie, for as the excessive humiditie of the one looseth the rind, so the want of vitall moisture in the other, will not suffer it to vnite & conuincorporat. Ouer and besides, in the working of this feat, men obserue a certain religious reuerence, namely, that the fions be set into the stocke when the moone is croissant (to wit, before the full) and with both hands forsooth, or els all is marred: and otherwise in this businesse there is an opinion, that two hands together are put to smaller streffe, and haue better stay of themselves than one alone; and therefore such a moderation is right necessarie: for the more forcibly the graffes be set into the stocke, and the faster that they are settled, the longer it will be ere they take to beare, but surer they be, and continue the longer: contrariwise, if they stand slacke, the tree indeed will the sooner beare, but last the lesse while. Furthermore, regard would be had in this case, as well that the clift of the stocke gape not too much (as being ouerwide for the graffe,) as that it be not too little and ouer-straight, for feare that either it flurt it out againe, or clasp it and gird it so hard that it kill it quite. This principally we must take heede of at the first, that there be no spill or little chip left behind in the mids of the clift, nor any thing besides the graffe it selfe, to fill vp the place. Some there be, that enter the clift first in the stock, with a bill, and with an oser twig tie and bind vp the very brims or edges therof: which done, they driue the wedges in, to make such an ouerture as is meet, for by reason of the foresaid bonds, they need not feare the gaping of it too wide. Some stocks there be that the very same day that they be grafted in the nource garden, are without any harme remooued to the place where they must grow. If the stocke wherein you graffe be big and round, the best way is to set the fion between the barke and the wood therof, and to diuide the one from the other with a wedge of bone, least in enlarging of the barke it chance to breake. In grafting of a Cherry tree stocke, the ouer rind or barke would be taken away before the clift be made. [Now these trees alone of all others may be grafted very well presently after mid-winter.] When the said rind is gone, you shall see therein a certain down, that if it chance to clasp about the graft, it rots the same incontinently. But to return again to our worke of grafting: After the wedge is taken forth whole and sound at the point (which is a token that no spill remains within) you may be bold to bind the head of the stocke all about. Yet this would be considered by the way (which I had like to haue forgotten) that the best & handsomest grafting, is as neere the ground as may be, in case the knots will giue leaue and the stock beare it: also that the grafts would not conueniently stand without the stock about six fingers breadth. Now when al is done and sure work made (as hath been said) *Cato* willet vs to take cley, or the sandie grit of chalk, mixed together with oxe or cow shearn, to worke and temper all these together in maner of a tough past or cataplasme, and then to lay the same within the clift, & round about to daube all. And verily by this and other such rules which he hath left in writing, it appears plainly, that in those daies the manner was to graffe betweene the barke and the tree, and not otherwise; as also to set the fions in the stocke, not about two fingers deepe. As for Apple trees and Pyries, he prescribeth that they should be grafted in the Spring, also 50 daies after the summer Sun-stand, and again after vintage: but Oliues and Fig-trees in the Spring only, obseruing the age and disposition of the Moon, when she is in the wane and thirtieth, that is to say, drie: moreover, after noonetide, and when no Southern wind doth blow. And I cannot chuse but wonder much at the curiositie and double diligence of *Cato*, who not content to haue defended the graft with clay or past afore said, yea and to preferue it with turfe and mosse against the iniurie of rain and cold, to haue bound it about also with little knitches of soft oser twigs sluied in twaine; must giue charge besides to couer it with Oxe-tongue (a kind of herb there is so called) i. Buglosse: and yet hee hath not done, but the same must be bound with wispes and wreaths of straw and litter aloft. Now adaeies men make no more adoe, but thinke it sufficient to stop and close vp barke and al, with earth or cley and chaffe tempered together, thinking it sufficient, the graft beare out two fingers breadth about. They that wait vpon the Spring season for to graffe, are many times driuen to their shifts for want of time, by reason that all trees make hast then to bud, and do break

out

A out of a sudden, vnlesse it be the Oliue, the oilers or eies wherof be longest while in coming forth, as hauing least sap of all other, running vnder the barke; the which if it were ouermuch would fiske and choke the grafts. As for the Pomegranat and Fig tree, howsoeuer otherwise they seem to be dry, yet good it is not to defer and put off the grafting of them. The Pearre tree may well enough be grafted with the blossom on the head, and it makes no matter if a man do stay and graffe it within the moneth of May. To be short, if a man be constrained to fetch his fions or imps of Apple trees, and such like, far off, it is thought that they will keepe their sap best, if they be stuck or set fast in a Rape root. Also if one would preferue them a certain time before they should be occupied, it is passing good to lay them close betweene two ereft tiles, well stopped on euery side with earth, and that neere to some riuers or fish-ponds.

B CHAP. XV. ¶ The manner how to graffe a Vine tree.

A S for the cuttings or sets of vines, they may be kept wel a long time, couered all ouer with straw or litter in dry ditches; and afterwards they are to be laid within the earth, all billed or couered, saue only that their heads be seen aboue ground. *Cato* graffeth a vine stock three maner of waies: First, he willet that the mother stock should be cut ouerthwart, & then clouen through the very pith or heart in the mids, wherein he would haue the yong imps (thwitted and sharpened as is before said) to be set and ingrafted so, as the marrow of the one and the other may ioine and meet iust together. The second maner is, when two vine stockes doe reach one to the other, for to cut byas or allaunt (after the manner of a goats foot) two twigs or branches, of either one, with this regard, that these cuts be of a contrarie side the one vnto the other, and withall so deep, as that they come vnto the pith or heart: then to fit one to the other, ioining pith to pith, and then binding them fast together so close, that no aire may enter between, vntill such time as the one hath adopted the other. The third deuise is, to bore holes in an old vine, not directly, but aslope, as far as to the pith; and then to put into them yong imps 2 foot long, and to bind them fast: which done, to make a certaine batter or mortar [with clay, beasts dung, and sand together] and therewith to dawbe the place: but with this regard, that the graft stand halfe vpright, or somewhat leaning. This manner of grafting hath bin checked and corrected of late daies by our countrymen, who leauing the hand-piercer, haue taken the French Vibrequin or brest-wimble, which gently and quickly boreth a hole, and hurteth not the wood: for all chafing heate caused by the said piercer, dullerth the vigor both of stock and imp. Also they haue deuised, that the said imp to be ingrafted, be gathered from the tree when it begins to bud or burgen: and when it is set into the stocke, that it be left standing out with no more than two eies or buds out of the grafting place; that it be well bound also with the winding rods of an Elme: moreover, that on either side of it the mother stock be slit or cut in two places on both sides, to the end that from thence rather than otherwise, the waterish humour may distill and drop forth, which of all things hurteth vines most. After all this, they would haue the said graffe remain bound, vntill such time as it haue put forth shoots two foot long; and then the foresaid bands to be cut in sunder, that they may burnish in thicknes and at ease accordingly. The season which they haue allowed for to graffe vines, is from the Equinoctial in Autumne, vnto the time that they begin to bud forth. Generally all trees that are tame and gentle may wel be grafted into stocks and roots of the wild, which by nature are dryer: contrariwise, graffe the wild and sauage kind vpon the other, you shal haue all degenerate and become wild. Touching other points belonging to the feat of grafting, all dependeth vpon the goodnesse or malignitie of the sky and weather. In sum, a dry season is good for all trees grafted in this maner: and say that the drought were excessive, there is a good remedie for it, namely, to take certain earthen pots of ashes, and to let water distill through them softly, by little and little to the root of the stock. As for inoculation, it loueth small dewes otherwhiles, to refresh both stock, scutcheon, and Oiler.

CHAP. XVI.

¶ Of Emplastration or grafting with the Scutcheon.

F The manner of grafting by way of emplastre or scutcheon, may seme also to haue come from inoculation: and this deuise agreeth best with those trees that haue thick barks, as namely Fig trees. To goe therefore artificially to worke, the mother stocke or tree to be grafted,

Y y 2

grafted,

grafted, must be well rid and clenfed from the branches all about the place where you mean to practise this feat, because they should not suck the sap from thence; and chuse the neatest and frimmet part, which seems most fresh and liuely: then cut forth a scutcheon of the barke [but be careful that your instrument pierce no farther than the bark, nor enter into the quick wood] which done, take from another tree the like scutcheon of the bark, sauing the eye or bud thereon, and set it in the place of the other; but so equall this must be to the place, and so close ioyned and vnted to it, that a man may see no token at all or apparance in the ioyn, of any wound or skar made, to the end, that presently they may conorporat, that no humor of the sap may issue forth, nor so much as any wind get between: and yet to make sure work, the better way is to lute it well and close with clay, and then to bind it fast. This deuice of grafting thus with the scutcheon was but lately found out, by their saying, that fauor all new and modern inuentions: howbeit I find that the antient Greeks haue written thereof: yea and *Cato* also our own Countryman, who ordained to graffe both Oliue and Fig tree in that order: and (as he was a man verie diligent and curious in all things that he tooke in hand) he hath set downe the iust measure and proportion of the scutcheon; for he would haue the barks both the one and the other, to be cut out with a chissell foure fingers long, and three in bredth, and so to close vp all in manner aforesaid, that they might grow together; and then to be dawbed ouer with that mortar of his making aforesaid: after which manner Apple trees also may be grafted.

Some there be who haue intermingled and comprehended vnder this kinde of grafting with the scutcheon, that deuise of making in the side a cleft, and namely in vines; for they take forth a little square piece with the bark, and then set in an impe very hard & close, on that side where it is plain and euen, to the very marow or pith. Certes, neere to Thulie in the Tyburtines country, I haue seen a tree grafted all these waies abouesaid, and the same laden with all manner of fruits; one bough bearing Nuts, another berries, here hung Grapes, there Figs; in one part you should see Peares, in another Pomegranats; and to conclude, no kind of Apple or other fruit, but there it was to be found: many this tree liued not long. Howbeit, let vs vse what diligence we can, yet neuer shall we able with all our experiments to attain vnto the depth of Natures secrets. For some Trees there be that come vp of themselves, and by no art and industry of man wil be made to grow: such also loue ordinarily to be in wild forests and in rough desarts, where they prosper well; whereas the Plane tree wil beare all manner of grafting best of any other; and next vnto it the wild and hard Oke: but both the one and the other corrupt and mar the tast of what fruit soeuer is grafted thereupon. Some trees there be that refuse not to be ingrafted vpon any stock, and what way soeuer they be grafted it skils not, as fig trees and Pomgranat trees. As for the Vine it will not beare the scutcheon, neither any Tree besides that hath a thin barke, or which doth pill and rift: no nor such as be dry or haue small store of sap within them can away with inoculation. Howbeit this maner of grafting is most fruitfull of all other; and next vnto it that which is done by way of scutcheon or emplaistre: yet trees so grafted be of all others most tender and feeble: as also such as rest and stay vpon the bark only, are with the least wind that is, soonest dispianted and laid along on the ground. The surest and strongest way therefore is, to graffe imps vpon the head of a stocke, yea, and more plentifully by far, than to sow them of seed, or plant them otherwise.

CHAP. XVII.

¶ An historie shewing the example and prooffe hereof.

IN this discourse and question concerning grafts, I cannot passe ouer the rare obseruation of one example, practised by *Corellius* a Knight of Rome, borne at Atefe: This Gentleman of Rome, in a ferme that he had within the territorie of Naples, chanced to graffe a Chestnut with an imp cut from the same tree: This graft tooke and bare faire Chestnuts and pleasant to the tast, which of him took their name. After the decease of this gentleman, his heire (who had bin sometime his bond slaue, and by him enfranchised) grafted the foresaid *Corellian* Chestnut tree a second time: and certainly between them both was this difference, The former *Corellian* bare the more plenty, but the nuts of the other twice grafted were the better. As for other sorts of grafting or planting, mans wit hath deuised, by obseruing that which hath fallen out by chance: thus are we taught to set broken boughs into the ground, when we saw how stakes pitched

A ched into the earth, took root. Many trees are planted after that maner, and especially the Fig tree, which will grow any way, saue only of a little cutting: but best of all, if a man take a good big branch thereof, sharpen it at the end in manner of a stake, and so thrust it deepe into the ground, leauing a small head about the ground, and the same couered ouer with sand. The Pomegranate likewise and the Myrtles are set of branches, but the hole first ought to be made easie and large with a strong stake or crow of iron. In sum, all these boughs ought to be made long, smaller in compasse than a mans arme, sharpened at the one end, and with the barke saued whole and sound with great care. As for the Myrtle tree, it wil come also of a cutting; the Mulberry will not otherwise grow: for to couch and plant them with their branches, we are forbidden, for feare of the lightnings. And forasmuch as we are fallen into the mention of such cuttings, I must now shew the manner of planting them also: about all things therefore regard would be had, that they be taken from such trees as be fruitfull, that they be not crooked, rough and rugged, nor yet forked; ne yet slenderer than such as would fil a mans hand, or shorter than a foot in length. Item, That the barke be not broken or rased; that the nether end of the cut be set into the ground, and namely, that part alwaies which grew next the root; and last of all, that they be banked wel with earth about the place where they spring and bud forth, until such time as the plant haue gotten strenght.

CHAP. XVIII.

¶ The manner of planting, ordering, and dressing Olive trees. Also which be the conuenient times for grafting.

WHAT rules (by the iudgment of *Cato*) are to be obserued in the dressing and husbanding of Oliues, I think it best to set downe here word for word, as he hath deliuered them. Thus he saith therefore: The trunches or sets of Oliue trees which thou meanest to lay in trenches, make them 3 foot long; handle them gently and with great care, that in cutting, sharpening, or squaring them, the bark take no harm nor pill from the wood. As for such as thou dost purpose to plant in a nourse-garden, for to remoue again, see they be a foot in length, and in this manner set them: Let the place be first digged thoroughly with a spade vntill it be well wrought, lie light, and brought into temper: when thou putttest the said trunchen into the ground, beare it downe with thy foot; if it goe not willingly deepe enough by that means, drive it lower with a little beetle or mallet; but take heed withall, that thou ruse not the barke in so doing. A better way there is, To make a hole first with a stake or crow, before thou set it into the ground, and therein maist thou put it at ease, and so will it liue also and take root the sooner: when they be three yeares old, haue then a carefull eye to them in any case, and marke where and when the bark turneth. If thou plant either in ditches or furrowes, lay three plants together in the earth, but so as their heads may stand a good way asunder about the ground; also that there be no more seen of them than the bredth of foure fingers: or els, if thou thinke good, set the buds or eyes only of the Oliue. Moreover, when thou art about to take vp an oliue plant for to set again, be wary and carefull that thou break not the root: get as many spurs or strings (called the beard) as thou canst, earth and all about them: and when thou hast sufficiently couered those roots with mould in the replanting, be sure thou tread it down close with thy foot, that nothing hurt the same.

Now if a man demand and would gladly know what is the fittest time for planting oliues; in one word I will tell him, Let him chuse a dry ground in seed time [i. in Autumne] and a fat or battle ground in the spring; furthermore, begin to prune thy Oliue tree 15 daies before the Equinox in the spring, and from that time forward for the space of forty daies, thou canst not do amisse. The maner of pruning or disbranching them, shall be thus, Looke where thou seest a place fertile, if thou spy any dry or withered twigs, or broken boughs that the wind hath met withall, be sure thou cut them away euerie one: but if the plot of ground be barren, care it vp better with the plough, take pains (I say) to till it well, to breake all clors and make it euen, to clense the trees likewise of knurs and knots, and to discharge them of all superfluous wood: also about Autumne bate the earth from about the roots of Oliues, and lay them bare, but in stead thereof put good mucke thereto. Howbeit if a man do very often labor the ground of an oliue plot, and take a deep stich, he shall now and then plough vp the smallest roots thereof, so ebbe

they will run within the ground, which is not good for the trees; for in case they spread aloft, they will wax the thicker, and so by that means the strength and vertue of the Oliue will turne all into the root.

As touching all the kinds of Olive trees, how may they be; also in what ground they ought to be set, and wherein they will like & liue best; likewise what coast of the heauen they should regard; we haue shewed sufficiently in our discourse and treatise of Oile. *Mago* hath giuen order in his books of husbandry, that in planting them vpon high grounds, in dry places, and in a vein of clay, the season should be between Autumne and mid-Winter: but in case you haue a fat, moist, or waterish soile, he sets down a longer time, namely from haruest to mid-winter. But this rule of his you must take to be respectiue to the climat of Africk only: for in Italy at this day, verily men vse to plant most in the Spring: howbeit if a man hath a mind to be doing also in Autumne, he may be bold to begin after the Equinox: for during the space of 40 dayes together, even to the setting of the * Brood-hen star, there are no more but 14 days ill for planting. In Barbarie the people haue this practise peculiar to themselves, For to graffe in a wilde Oliue stock, whereby they continue a certain perpetuity: for euer as the boughs that were grafed, and (as I may say) adopted first, wax old and grow to decay, a second quickly putteth forth afresh, taken new from another tree, and in the same old stock sheweth yong and liuely; and after it a third successiue, and as many as need; so as by this meanes they take order to eternise their Oliues; inasmuch as one Oliue plant hath bin known to haue prospered in good estate a world of yeares. This wilde Oliue afore said may be grafed either with sions set in a cliffe, or els by way of inoculation with the scutcheon afore said. But in planting of Oliues this heed must be taken, that they be not set in a hole where an Oke hath been stocked vp by the root: for there be certain canker-wormes, called *Eruca* in Latine, or *Rauca*, breeding in the root of an Oke, which eat the same, and no doubt will do as much by the Oliue tree. Moreover, it is found by experience better for Oliue trees, that their sets be not interred in the earth, nor yet dried, before they be planted. Also, the same experience hath taught, that for old Oliue trees, ouergrown with a kind of mossie skurfe, it is passing good, ech other yeare to scrape and claw them well, between the Spring and Equinox, and the rising of the starre *Vergilia* or the Brood-hen: likewise to bestow mossie round about the root: many euery yere they would be digged round about the root and laid bare after the sunstead, with a trench made two cubits broad, and a foot deep: as also once in three yeres it were not amisse to cherish them with good dung.ouer and besides, the same *Mago* saith, that almond trees ought to be planted between the setting of *Arcturus* and the shortest day in the yeare. As for Peare trees, they are not to be set all at one and the same time, for they blossom not all alike. They that beare either the long or round pears, haue their season from the occultation of the Brood-hen starre, vntill mid-Winter. All other sorts, and principally those that regard either the East or the North, are to be planted in mid-winter, namely after the retreat of the star called *Sagitta* [i.e. the Shaft.] The *Lawrell* would be put in the ground, from the *Egle*-star, vnto the fall of the Shaft afore said: for certainly the obseruation of the time, pertinent to the planting of trees, agreeth much what after this maner; and for the most part, men do accord and ordaine, That it should be done in the spring and Autumne especially. Another season there is about the rising of the Dog-starre, which few men take knowledge of, because it is not so generally practised, nor found alike profitable to all countries: howbeit I must not ouerpasse it in silence, considering that my purpose is not to speake of this or that countries disposition, but to search into the nature of all things. In *Cyrenaica* therefore, a region in Africk, they vse to set trees about the time that the *Etesian* Northern winds do blow: in Greece likewise they do the same, and namely in *Laconia* they suppose that to be the best time for the Oliue tree: & in the Island *Cos* the maner is then to plant Vines also. In all other parts of Greece they make no doubt to inoculate and to graffe in that season; but in no wise will they plant whole trees then. But herein it skilleth much to consider the nature of each tract and region: for in Egypt, they set, plant, and replant euery moneth of the yeare: in *Ethiopia* likewise, and India; and generally in all Countries wheresoeuer it raineth not in Summer. Setting these respects aside, Trees require of necessitie to be planted in Autumne. Like as therefore there be three seasons of planting Trees, so there are as many wherein they bud and put forth new shoots; to wit, the Spring, the rising of the Dog-starre, and the apparition of *Arcturus*. And verily this is a thing worthy to be noted, that not onely

* *Vergilia*.

A beasts and other liuing creatures haue an appetite to engender, but the earth also, and all the plants thereupon, are much more lusty and hot that way. And therefore to make them to conceiue in due season, the time would be well obserued, when they be as it were in loue, and desire the act of generation. And not onely in the earth and trees therein planted, is this to be seen; but in grafts and stocks also particularly by themselves, since that they haue a mutual and respectiue appetite, one to ioine and incorporate with the other. They that make choise of the Spring for this purpose, begin to put them as it were together for to engender, presently after the Equinox; giuing out in these plaine termes, that trees then are broody and ready to put forth sprouts; which is the reason, that their barks at such a time will knit and ioine together easily. But such as prefer the Autumne before the Spring, fall to this businesse immediately vpon the rising of the star *Arcturus*, for then they suppose, that plants will take root forthwith, & by the time that the Spring is come, they will be better prepared to put forth lustily; considering that their vertue is not streightwaies spent in budding, but rather imployed in taking good root. Howbeit, some trees there be that haue their set times and seasons of the yere limited; whether it be to plant or to graffe: and the same indifferently in all places; as namely, Cherry trees and Almond trees about the mid-winter. But for the most part, the situation of the place will be able to guid and order all this matter best: for cold and waterish grounds ought to be planted in the Spring; but dry and hot in the Autumne. With our peasants here in Italy, it is ordinary to diuide their times and seasons for planting in this manner following. They set out for the Mulbery all the time from the Ides of February to the spring Equinox: for the Pear tree they allow the Autumne, and so forward till 15 daies before the point of mid-winter, and no longer; for Summer apples and quinces, for Seruises likewise and plums, they assigne the space between the winter tropicke or Sun-stead, and the Ides of February. As for Carobes of Greece, and Peach trees, they haue all the Autumne and the whole yere before them vntill mid-winter approach. All Nut-trees, as namely, Walnut trees, Pine-trees, Filberds, Hazels, and Chestnut-trees, would be planted from between the first day of March, and the 15 thereof. To conclude, the only time for willowes and broom, is about the Calends or beginning of the same March. But of these two last named, the Broom loueth to be set of Nource-plants, comming of seed, in dry and light grounds: but contrariwise, the willow to be set of twigs in moist places, according as we haue before said.

CHAP. XIX.

¶ What trees they be that loue to sort and keepe companie together. The skill, and feat of baring the roots of trees, and also of hilling or banking them about.

There is besides a new manner of grafting trees, which I will not ouerpasse: for my purpose is not willingly to omit ought, that I haue found in any booke as touching this argument. And *Columella*, as him selfe affirmeth, was the first deuiser thereof, namely, to conioin trees of diuers natures, and such as otherwise cannot abide societie and fellowship together, as for example, Fig-trees and Oliue trees. He, I say, would haue a Fig-tree to be planted nere vnto an Oliue, and so nere indeed, as that a bough or branch of the oliue may reach vnto the Fig-tree at ease, considering that it is very supple and pliable otherwise, and ready to follow and be led as a man would haue it: and yet as obedient as it is, hee would haue it it euer and anon to be handled and made gentle in the meane time, that by this meanes inured first, it may bee bent and bowed to the purpose when the time serues. Which done, after that the Figge tree hath gotten some strength, and is growne to sufficient bignesse for to beare a graffe (which ordinarily is at three yeares end, or at the utmost when it is five yeares old) the head thereof must be cut or sawed off, and then the branch or bough of the Oliue before said, being well clenfed and made neat, and the head end thereof (as is before said) thwited and scraped sharpe, howbeit, not yet cut from the mother stocke, must bee set fast in the shanke of the Figge-tree, where it must bee kept well and surely tied with bands, for feare, that thus beeing forced and grafed arch-wise, it start and flurr not out againe, and returne vnto the owne. Thus beeing of a mixt and meane nature, betwene a branch or bough growing still vnto the Tree, and yet laid in the ground to take new root, and an Impe or Sion grafed, for the space of three yeares it is suffered to feed and grow indifferently betwene two mothers, or rather by the meanes thereof, two mother-

stockes

stocks are growne and vnited together. But in the fourth yeare it is cut wholly from the owne G mother, and is become altogether an adopted child to the Fig-tree, wherein it is incorporat. A pretty deuise, I assure you, to make a Fig-tree beare Oliues, the secret whereof is not knowne to every man: but I my selfe do conceiue and see the reason of it well enough.

Moreouer, the same regard and consideration about rehearsed; as touching the nature of grounds, whether they be hot, cold, moist, or dry, hath shewed vs also the manner of digging furrows and ditches. For in watery places it will not be good to make them either deep or large: whereas contrariwise, in a hot and dry soil they would be of great capacity, both to receiue and also to hold store of water. And verily, this is a good point of husbandry for to preserve not only young plants, but old trees also: for in hot countries, men vse in Summer time to raise hillocks and banks about their roots, and couer them all therewith; for feare lest the extreme heat of the Sun should scorch and burne them. But in other parts the manner is to dig away the earth, and to lay the roots bare, and let in the wind to blow vpon them. The same men also in winter doe H hake the roots about, and thereby preserve them from the frost. Contrariwise, others in the winter open the ground for to admit moisture, to quench their thirst. & But in what ground soeuer it be where such husbandry is requisite, the way of cleansing tree roots, and ridding the earth from them, is to dig a trench three foot round about. And yet this must not be don in meadows, forasmuch as for the loue of the Sun, and of moisture, the roots of trees run ebbe vnder the face of the earth. And thus much verily may suffice in generall, for the planting and grafting of all those trees that are to beare fruit.

CHAP. XX.

¶ Of Willow and Osier plots: of places where reeds and Canes are nourished: also of other trees that be vsually cut for poles, props, and stakes.

I remaineth now to speake of those trees which are planted and nourished for others, and for Vines especially: to which purpose, their wood is vsually lopped to serue the turne. Among which, Willows and Osiers are the chiefe, and to be placed in the forme rank: and ordinarily they loue to grow in moist and watery grounds. Now, for the better ordering of the Osier, the place would be well digged before, and laid soft two foot and a halfe deep, and then planted with little twigs or cuttings of a foot and a halfe in length, and those prickt in: or else stored with good big fets, which the fuller and rounder they be in hand, so much better they are for to grow, and sooner will they proue to be trees. Betwene the one and the other, there ought to be a space of six foot. When they are come to three yeares growth, the manner is to keepe them downe with cutting, that they stand not about ground more than two foot, to the end that they might spread the better in bredth, & when time serues be lopped & shred more easily, without the help of ladder: for the Within or Osier is of this nature, that the nearer it groweth to the ground, the better head it beareth. These trees also, as well as others, require (as men say) to haue the ground digged & laid light about them euery yere, in the month of April. And thus much for the planting and ordering of Osier willows, which must be employed in binding and winding. As for the other willow, which affordeth big boughs, for poles, perches, and props, those may be set likewise of twigs and cuttings, and trenched in the ground after the same manner. These lightly euery fourth yere will yeeld good poles or staues, & for that purpose would they then be ordinarily cut and lopped. If these trees become old, their boughs by propagation may still maintain and replenish the place; to wit, by couching them within the ground; & after they haue lien soone yere, and taken root, by cutting them clean from the stocke-farther. An Osier plat of one acre stored thus, will yeeld twigs sufficient for windings and bindings, to serue a vineyard of fise and twenty acres.

To the same purpose men are wont to plant the white poplar or Aspe, in manner following. First, a piece of ground, or a quarter, must be digged and made hollow two foot deep: and therein ought to be laid cuttings of a foot and a half in length, after they haue had two daies drying: but so, as they stand one from another, a foot and a handbreadth, & be couered ouer with mould two cubits thick.

As touching canes and reeds, they loue to grow in places more wet and waterish than either the Willows and Osiers abovesaid, or the Poplars. Men vse to plant their bulbous roots, which some

A some call their oillets or eies, in a trench of a span depth: and those two foot and an halfe asunder. These reeds do multiplye and increase of themselves (if a plot be once planted with them) after the old plants be extirped & destroyed. And surely, this is found now adaies to be the better and the more profitable way, euen to commit all to Nature, rather than to gield and weed them out where they seem to grow ouer thick, as the practise was in old time: for the manner of their roots is, to creepe one within another, and to be so interlaced continually, as if they were twisted together. The fit and proper time to plant and set these canes or reeds is a little before the calends of March, to wit, before the oillets or eies abovesaid begin to swell. They grow vntill mid-winter, at which time they wax hard, which is a signe that they haue done growing: and this is the only season also for to cut them. Likewise, the ground would be digged about them, as often as vines. The order of planting them is two manner of waies, for either the roots be laid ouerthwart or across, and but shallow within the ground (and look how many eies there be in the root, so many plants will spring about the earth: or els they be pitched down-right, within a graue or trench of a foot depth, so as there be two eies or buds vnder the ground, & the third about, but close and meet with it: but this caueat is to be giuen, that the head thereof may bend forward toward the earth, for feare that it drinke in any dew, which might stand and settle vpon it. This also is obserued, that they be cut euer in the wane of the Moone: as also, before that they are imploied about Vineyards for to beare vp vines, they would haue a whole yeares drying, for such are more profitable than the greene.

The best staies to beare vp Vines, are made of the Chestnut-tree: for why? the wood is gentle and tractable, tough withall, and induring long: besides, it hath this property, that cut it when you list, it will spring againe more plentifully than any willowes. It loueth to grow in a gentle and sandy ground, but principally, if the same stand vpon a moist grauell or a hot earth full of little pebbles, and namely, where there is good store of such soft stones, as will soone crumble into grit: neither makes it any matter how much the place be shadowed, nor how cold and exposed to the Northern winds, for such it liketh well enough, yea, although it be the side or hanging of an hill, as bleake and cold as may be. But contrariwise, it may not abide the red French earth, the chalkie or marle ground, nor in one word, any that is battle or fruitfull. Set it is of a Nut, as we haue before said: but it commeth not vp, vnlesse there be fise in a heape piled together, and those of the fairest & biggest sort. Moreouer, the plot wherein you mean to haue Chestnuts grow, must be ouertly broken vp aloft, from between Nouember and Februarie: in which time the Nuts vse to be loose, and to fall of themselves from the tree, and spring vnderneath, finding the ground light and hollow vnder them. Betwixt each heape set in manner aforesaid, there ought to be a foot space euery way, and the trench wherein they be set, of a span depth: out of this plot, as out of a seminary and nource-garden, these young plants are to be translated into another, and then they must be set two foot asunder. Howbeit, they ought to be about two yeres old first, before they be removed and replanted. Moreouer, a man may increase Chestnut-trees by propagation; to wit, by couching and trenching the branches thereof, as they grow to the mother: and there is not another tree againe that sooner taketh that way, than it doth; for the root thereof being laid bare, the whole branch must bee interred along in the trench made for the purpose, leauing out the end only about ground. Thus shall you haue one tree spring from it, and another from the root. Howbeit, planted in this wise, it loueth not to be transplanted; it cannot lodge elsewhere, but dreadeth and hateth all change of soile: and therefore such plots of ground as do afford coppises of Chestnut-trees, are stored with plants comming of marrons or nut-kernels, rather than quicke-fets or plants set with the root. For the ordering and dressing of them, there is no other labour required, than the others before rehearsed; namely, for the two first yeares insuing to dig the ground loose about their roots, and to proue or cut away the superfluous twigs: for euer after they will shift well enough, & manure themselves, by reason that their owne shade will kill those superfluous water-shoots that spring out either from the root or the sides of the tree. A coppise of these trees is cut ordinarily within euery seuenth yere: and one acre of them will yeeld props enough for to serue a vineyard of twenty acres: for besides that one pole of them will abide to be clouen and make two props apeece, they will last very well vntill the next fall of the wood or coppis be past.

Moreouer, the Mast-tree called Esculus, is planted and commeth vp in like sort: howbeit, passing vntoward and vnwilling they are to grow, and therefore they stand ten yeres at least before they

they be cut and lopped. Set Acorns of this tree Esculus wherfoeuer you please, they wil surely take and come vp: but the trench must be a span deep, and the Acornes two foot asunder. And foure times a yeare are they to be lightly raked and clenfed from weeds. A forke or prop made of this wood, lasteth very well and rotteth not: and in very truth, the more that the tree it selfe is cut and mangled, the better it springeth and putteth forth new shoots.

Ouer and besides these trees abouenamed, there be others that vse to be cut and lopped for Vine props and staies; to wit, the Ash, the Bay tree, the Peach and Hazell tree, yea, and the Apple tree: but these are all of them lateward and slow of growth: neither will they indure so well without rotting, if they stand any time in the ground, and much lesse will they abide any wet. But on the othe side, the Elder tree of all others is most firme for to make poles and stakes of. It wil grow of sions and imps euen as the Poplar. As for the Cypresse tree, we haue of it spoken sufficiently already.

CHAP. XXI.

The manner and skill of husbanding and dressing Vineyards.

Now that we haue treated sufficiently of the instruments, furniture, and tackling as it were belonging to Vineyards, it remaineth to speake of the nature of vines, and to deliuer with especiall regard the manuring and dressing them. According therefore as wee may see in Vines and some other trees, which haue within them a spongy matter and light substance, their twigs and branches do containe a kind of marrow or pith inclosed between certain knots or ioints wherewith their stalkes are diuided and parted. As for the fistulous concavities, they are but short all of them, and toward the top shorter and shorter, but euermore betwene two knots, they inclose the ioints aforesaid. Now this marrow, this vegetatiue and vitall substance, I say (call it whether you wil) runneth forward still on end al the length of the hollow kex or pipe so long as it findeth no resistance by the way: but meeting once with a ioint or hard knot which maketh head vpon it, not suffering the same to passe forward, it beeing driuen backe, returneth downward: howbeit, in that reuerberation, breaketh out vnder those knots, and putteth forth certaine wings or pinnions like arme pits, whereas the buds or leaues doe come; but alwaies in alternatiue course, one of this side, another of that; after the maner of reeds, canes, and fennell-greene, as hath bin shewed before; in such wise, that if one wing rise forth at the bottome of the lower knot on the right hand, another springeth for it on the left hand in that next above it; and thus they keep order the whole length of the branch. These sprouts when they are come once to some bignesse, and do branch there, be called of the Latines by a pretty name, Gemmae, as it were precious stones: but so long as they are no other than buds sprouting forth vnder the concavity or pit-hole of the foresaid ioints, they term them Oculos [i. Oilets or Eies:] marie in the very top they be named by them Germina [i. Sprigs or Burgeons.] After this order are ingendered the maine branches, the smaller sprigs yearly cut away, the grapes, leaues, and yong tendrils of Vines. But hereat I wonder most, that the burgeons comming forth on the right side, be alwaies more tough and firm than those of the left. To come now vnto the planting of these vines: the shoots or branches must be cut iust in the midst between the foresaid knots or ioints, so as the marrow in no wise run out. And if you would plant fig-sets or sions, they ought verily to be a span long, and then to be prickt into the ground (but first there should bee a hole made with a little stake) with the greater end that grew next to the body of the tree downward: provided alwaies, that two oilets or buds stand above ground. Now these oilets are properly (in twigs or sets of trees) those buds called, where the new spring first shooteth forth. And herupon it is, that these sions or cuttings being set in nource-gardens, beare the same yere that very fruit which they would haue borne vpon the tree, if they had not been cut off: and namely, if they be set in the right season whiles they be plump and full: for hauing conceiued on the Tree, they do consummat the sad conception so begun, and are deliuered thereof elsewhere. And look what Fig-sets be in this manner planted, may be easily and without danger removed and translated the third yere after. For certes, as this tree of all others soon ageth and indureth not long; so in recompence of short life, this one gift it hath of Nature; That it comes forward apace, quickly groweth to the full bignesse, and beareth fruit.

As for the Vine, there is not a tree that is planted more sundrie waies, nor affoordeth greater store

A store of sions or sets than it. For first and formost, nothing thereof is planted, but that which is vnprofitable, hurtfull, superfluous, and of necessitie to be pruned and cut away. But in the pruning, this rule must be obserued, that those branches bee cut off which were portoirs, and bare grapes the yere before. The manner in old time was to plant or set a sion, headed (as it were) and taking hold on both sides of the old wood and hard stock: whereupon, because it was fashioned like a little mallet or hammer head, it was and is at this day called in Latine Malleolus. But afterwards they began to slip off a twig with a heele only of the old wood (as they vse to doe in a Fig-tree:) & there is not a better way to make a Vine surely to take and liue than this. A third sort there is besides of sions or sets which are more readily gotten, without any such heele of the hard wood, and therefore they be wreathed and twined when they be set into the ground: B whereupon they be called in Latine Sagittae [i. Shafts:] for the same sions only cut off and not wreathed, are named Trigenimes, as a man would say, twigs with 3 buds or spurts: & therefore of one and the same vine-branch, a man may in this sort make many kinds of sions or sets. Howbeit, that is to be noted, that if you set any yong sprigs that neuer bare fruit but leaue onely, the Vines comming thereof will be euer barren: and therefore none ought to be planted but such as are fruitfull. A vine-set or cutting, that hath ioints standing thin, but here & there, is thought to be fruitlesse: but contrariwise, if it be set thick with buds, by all likelihood it will beare plentifully. Some are of opinion, that no sions should be put into the ground, but those that haue floured already: also, that to set such cuttings as be called shafts, which haue no part of the old wood, is not so fit; for, that in remouing they are in danger to break whereas they were writen. C Now, when you haue gotten such sets as be meet for planting, let them be a foot long at the least, and carry five or six knots, and at this length they cannot possibly haue fewer than three buds. Moreover, the best way is presently to set them the very same day that they be gathered. But in case a man be driuen to keep them long before they be put into the ground, great heed would be taken, according to the rule before said, that they be not laid about ground; that they dry not in the Sun; that they take no wind; nor loose their fresh vigor by cold. And if it chance that they lie out any while in the dry aire, they would be laied to soke in water many daies together, vntill they be refreshed and look green again, before they be set into the earth. The plot or quarter within the nource-garden or vineyard, ought to be well exposed to the Sun, of a good largeness, and sufficiently moulded: also, it must be well digged for 3 foot broad with a grubbing double toothed forke: then must you goe deeper and cast vp the earth with a broad spade or shouell, after that the same hath bin broken vp with a mattocke or yron tooke, carying foure foot in the head, so as the ditch may go two foot directly deep into the ground. Which done, the ditch is to be clenfed, & the mould to be spread abroad, & not left lying raw in that maner, but to take a kind concoction in the weather. And herein must the labourer proceed and be ruled by measure, and trie his worke thereby: for if the earth be not well delued, it will be soone found out by the vneuen balks or beds. There would be a iust measure taken also of the allies that lie between the beds. All things being thus prepared, let vs come now to the planting of the sets aforesaid, which would be couched either in trenches made of purpose, or in long furrows; and then the finest and most delicate mould that can be found, is to be cast aloft. But all this preuaileth not in a leane and hungry ground, vnlesse fatter earth be laied as a pallet vnderneath. Moreover, this is to be looked vnto, that two sets at the least be moulded and laied within the earth together in one range: also they must be so couched, that they leane with their heads close vpon the earth next about them; yea, and with one and the same stake the said earth ought to be driuen close and fast about them. Ouer and besides, throughout the whole plot or quarter of this nource-garden, regard is to be had, that between euery two sets there be a foot & an half one way; to wit, in breadth; and halfe a foot another way, to wit, forward in length. These plants being thus ordered, after they haue growne to twelue moneths, they should be then discharged of all their burgeons, euen to the nethermost knot, vnlesse haply it bee spared and let alone: for some there be that cut it also after these, commeth forth the matter of the oilets, & shew themselves; and therewith at the third twelue month end the quick-set root and all is removed to another place in the vineyard.

Besides all this, there is another pretty and wanton deuise, more curious ywis than needfull, to plant Vines, and namely, after this manner. Take foure branches of foure vines growing together, and bearing sundry kinds of grapes; bind them wel and strongly together in that part where

where they are most ranke and best nourished: being thus bound fast together, let them passe along either through the concauitie of an Oxe shanke and maribone, or els an earthen pipe or tunnell made for the nonce. Thus couch them in the ground, and couer them with earth, so as two ioints or buds be seen without. By this meanes they inioy the benefit of moisture, and take root together: and although they be cut from their owne stocke, yet they put out leaues & branches. After this, the pipe or bone aforesaid is broken, that the root may haue libertie both to spread and also to gather more strength. And will you see the experience of a pretty secret? you shall haue this one plant thus vnited of foure, to beare diuers and sundry grapes, according to the bodies or stocks from whence they came. Yet is there one fine cast more to plant a Vine, found out but of late, and this is the manner thereof: take a Vine-set or cutting, slit it along through the midst, and scrape out the marrow or pith very cleane; then set them together again wood to wood, as they were before, and bind them fast: but take heed in any case that the buds or oilets without-forth be not hurt, nor rased at all. This done, put the same cutting into the ground, interre it I say wel within earth and dung tempered together: when it begins to spread yong branches, cut them off; and oftentimes remember to dig about it, & lay the earth light: & certes, *Columella* holdeth it for certain, and assureth vs vpon his word, That the grapes comming of such a vine wil haue no stones or kernels at all within them. A strange thing and passing wonderfull, that the very set it selfe should liue; and that which more is, grow and beare, notwithstanding the pith or marrow is taken quite away.

Furthermore, since we are entred thus far into this discourse and argument, I cannot passe by but I must needs speake of such twigs and branches of trees as wil knit and grow together euen to a tree. For, certain it is, that if you take fise or six of the smallest sprigs of box, binde them together, and so prick them into the ground, they will proue and grow to one entire tree. Howbeit, in old time men obserued, that these twigs should be broken off from a Box tree, which neuer had bin cut or disbranched, for otherwise it was thought verily they would neuer liue: but afterwards this was checked by experience, and the contrary knowne. Thus much as touching the order of Vine-plants, and their nource-garden for store.

It remaineth now to speake of the manner of Vineyards and Vines themselves. Where in the first place, there offer vnto vs fise sorts thereof. For some traine and run along vpon the ground spreading euery way with their branches: others grow vpriight and beare vp themselves without any staies. Some rest vpon props, without any traile or frame at all: others be born vp with forks and one single raile lying ouer in a long range: and last of all, there be vines that run vpon trailes and frames laid ouer crosse-wise with foure courses of railes, in manner of a crosse dormant. The same manner of husbandry that serues those Vines which beare vpon props without any other frame at all, will agree well enough to that which standeth of it selfe without any staies. For surely it groweth so, for default onely and want of perches and props. As for the vine that is led vpon a single range as it were in one direct line, which they call *Canterius*, it is thought better than the other, for plenty of liquor: for besides that it shadoweth not it selfe, it hath the furtherance and help of the Sun-shine continually to ripen the grapes: it hath the benefit also of the wind blowing through it, by which means the dew will not long stand vpon it. Moreover, it lieth more handy to the hand for the leaues to be plucked away, and for the clods to be broken vnder it: & in one word, is readiest for all kind of good husbandry to be done about it. But about all other commodities it hath this, that it is not long in the floure, but bloometh most kindly. As for the frame aforesaid, that is ranged in one line a length, it is made of perches or poles, reeds and canes, cords and ropes, or els lines of haire, as in Spaine and about Brindis. The other kind of frame with railes and spars ouerthwart, beareth a vine more free, for plenty of wine than the rest, and called this is *Compluviana vitis*, because it resembleth the hollow course of gutter tiles, that in houses receiue all raine water and cast it off. For as the crosse dormant in building shutteth off the raine by foure gutters, euen so is this Vine led and caried foure waies, vpon as many trailes. Of this Vine and the maner of planting it, we will only speak, for that the same ordering will serue well enough in euery kind besides: marie there be far more waies to plant this than the rest, but these three especially. The first and the surest is, to set the Vine in a plot well and thoroughly delued: the next to it, is in the furrow: the last of all, in a trench or ditch. As for digging a plot and planting therein, ynough hath been written already.

¶ Of furrowes and trenches wherein vines are planted: also of pruning vines.

IT sufficeth that the furrow or trench wherein a vine is to be planted, be a spade or shouels bit breadth: but ditches would be three foot long euery way. Be it furrow, trench, or ditch, wherein a vine is to be replanted, it ought to be three foot deepe; and therefore no plant thereof should be remoued so little, but that it might ouer and besides stand about ground, and shew two buds at the least in sight. Needful it is moreover, that the earth be well loosened and made more tender and gentle, by small furrowes ranged and trenched in the bottom of the ditch; yea and be tempered sufficiently with dung. Now if the vineyard lie pendant vpon the hanging of the hill, it requireth deeper ditches, and those raised vp well with earth and bedded, from the brims and edges on the lower ground. As for such which shall be made longer, and able to receiue two vine-plants growing contrary one to the other, they shall be called in Latine, *Alvei*. Above al, the root of the vine ought to stand just in the midst of the hole or ditch; but the head and wood thereof which resteth vpon the sound and firme ground, as neere as possible is, must beare directly into the point of the *Aequinoctiall* Sun-rising: and withail, the first props that it leaneth vpon, would be of Reeds and Canes.

As touching the bounding and limitation of a vineyard, the * principall way which runneth streight East and West, ought to carry 18 foot in breadth, to the end that two carts may passe easily one by another, when they meet; the other crosse allies, diuiding euery acre just into the mids, must be ten foot broad: but if the plot or modell of the vineyard wil beare it, these * allies also which lie North and South, would be as large ful as the foresaid principal high way. Moreover, this would be alwaies considered, That vines bee planted by fises, (i. e.) that at euery fifth perch or pole that shoreth them vp, there be a path diuiding euery range and course, and one bed or quarter from another. If the ground be stiffe and hard, it must of necessitie bee twice digged ouer, and therein quick-fets only that haue taken root, must be replanted: marie in case it be a loose mould, light, and gentle, you may set very cuttings and sions from the stock, either in furrow or in trench, chuse you whether. But say it be a high ground and vpon the hill, better is it to cast it into furrowes ouerthwart, than to dig it; that by this meanes the perches or props may keep vp the ground better, which by occasion of raine water would settle downward. When the weather is disposed to raine, or the ground by nature drie, it is good planting vine-fets, or sions at the fall of the lease, vnlesse the constitution of the tract and qualitie of a country require the contrary: for a dry and hot soile would be planted in Autumne or the fall of the lease, whereas a moist and cold coast may tarry, euen vntill the end of Spring. Let the soile be dry and hard, bootlesse it will be to plant, yea though it were a very quick-set, root and all. Neither will it do well to venter the setting of imps cut from the tree, in a drie place, vnlesse it be immediately vpon a good ground shower: but in low grounds, where a man may haue water at will, there is no danger at all to set vine branches, euen with leaues on the head; for they will take well enough at any time before the Mid-summer Sun-stead, as we may see by experience in Spaine: When you will plant a vine chuse a faire day; and if possibly you can, let it be when there is no wind stirring abroad; for such a calme season is best: and yet many are of opinion, that Southern winds be good, and they wish for them, which is cleane contrarie vnto *Cato* his mind, who expressly excepteth and reiecteth them. If the ground be of a middle temperature, there ought to be a space of fise foot distance between euery vine: and in case it be a rich and fertile soile, there would bee foure foot at least from one to another; but in a leane hungrie piece of light ground, there should be eight foot at the most: for whereas the *Vmbrians* and *Marfians* leaue twenty foot void between euery range of vines, they doe it for to plough and sow in the place, and therein they haue quarters, beds and ridges, called *Porculera*. If the place where you plant a vineyard be subiect to thicke and darke mists, or to a rained disposition of the weather, vines ought to be set the thinner: but in a drie quarter, it is meet they should bee planted thicke. Moreover, the wit and industrie of man hath found out meanes to saue charges, and in setting a nource-garden with vine-fets to goe a nearer way, with small expence and no losse of ground: for in replanting a vineyard with quicke-fets vpon a leuell plot, onely digged and laied euen, they haue with one and the same labour (as it were by the way) replenished the ground be-

tween euery such rooted plants, with vine cuttings for store, so as the quicksets may grow in his owne place appointed, and the sion or cutting (which another day is to be transplanted) in the mean time take root between euery course and range of the said vine quick-sets, before they be ready to take vp much ground. Thus within the compasse of one acre, by iust proportion a man may haue about 16000 quick-sets. This is the difference only, that such beare not fruit so soon by two yeres: so much later are they that be set of sions, than those that were transplanted and remaine still on foot. When a quick-set of a vine is planted in a vineyard, and hath grown one yere, it is usually cut downe close to the earth, so as but one eie or button be left aboue ground, and one shote or stake must be stickt close to it for to rest vpon, and dung laid well about the root. In like manner ought it to be cut the second yere. By this means it gathereth strength inwardly, and maintaineth the same in such wise, as it may be sufficient another day to beare and sustain the burden both of branch and bunch, when it shall be charged with them: for other wise if it be let alone and suffered to make hast for to beare, it would prooue to be slender, vined, leane, and poore: for surely this is the nature of a vine, That she groweth most willingly: in such sort, that vnlesse she be kept vnder, chafised, and bridled in this manner (her inordinat appetite is such) she will run her selfe out of heart, and go all to branch and leafe.

As touching props and shotes to support vines, the best, (as we haue said) are those of the Oke or Oliue tree, for default whereof, ye may take good stakes and forks of Iuniper, Cypressse, Laburnum, and the Elder. As for those perches that be of other kinds, they ought to be cut and renewed euery yere. Howbeit, to lay ouer a frame for vines to run vpon; the best poles are of Reeds and Canes, for they will continue good fye yeres, being bound many of them together. When the shorter branches of a vine are twisted one within another in manner of cording or ropes, and strengthened with the wood of vine cuttings amongst, thereof arch-worke is made, which in Latine they call Funeta. Now by the time that a vine hath growne three yeres in the vineyard, it putteth forth apace strong branches, which in time may make vines themselves; these mount quickly vp to the frame: and then, some good husbands there be, who put out their eies, that is to say, with a cutting hook (turning the edge vpward) fetch vp the eies budding out beneath: thus by pruning, although they seem to do hurt and wrong vnto them, yet they draw them to shoot out the longer by the meanes: for in good faith, the more profitable way it is, thus to vse & acquaint it with bearing branches lustily, and far better and easier is it besides to cut away these yong imps as the vine lieth fast joined to the frame, vntill such time as a man think it be strong enough of the wood. Others there are, who in no case would haue a vine touched or medled with all, the next yere after that it is remooued into the vine-yard; nor yet to feele the edge of the cutting hooke, vntill it haue fye yeres ouer the head; many then they agree it should be pruned & galled of all the wood it hath, saue only three burgeons. You shall haue some againe that will indeed cut them the very next yere after they be replanted, but so as they may win euery yere three or foure ioints; and when they be foure yeres old and not before, they giue them liberty to climbe vpon the frame. But this (I assure you) is the next way to make the vine fructifise slowly and late: besides, it causeth it to seem scortched and full of knots, yea and to grow like a dwarfe or wreckling. The best simply, is to suffer the stocke or mother to bee strong first, and afterwards let the branches and yong imps hardly, be as forward and audacious as they will. Neither is it safe trusting to one which is full of cicatrices or skarres (a thing that proceeds of great error and an vnskillfull hand;) for surely all such branches grow of hurts or wounds, and spring not one jot from the mother stock indeed: for all the while that shee gathereth strength, her whole vertue remaineth within her; but when she is suffered to grow and fructifise, she goeth throughly to worke, and emploiet her forces full and whole to bring forth that, which yeerely shee conceiued: for Nature produceth nothing by halfes nor by peece-meale, but is deliuered of all at once. Well then, after that a vine is once full grown and strong enough, let it presently run vpon perches, or be led in a traile vpon a frame; but in case it bee yet with the weakest, let it be cut againe, and take vp her lodging hardly beneath vnder the very frame: for in this point the question is not, what Age, but what Strength it hath: for that is it which must rule all. And verily great folly and rashnesse it were, to put a vine to it, and let her haue the will to grow ranke, before she be as big full as a mans thumbe. The next yere after that it is gotten to the frame, there would be saued and let to grow one or two branches, according to the strength and ability of the mother: & let the same the yere following also be preferred, nourished,

- A nourished, and permitted to grow on end, vnlesse her feeblenesse be against it: but when the third yere is come, and not afore, be bold to giue her the head with two branches more, and neuer let her goe but with foure at the most. In one word, hold a vine downe as much as you can, neuer cocker and cherish her, but rather repress her fruitfulness; for of this nature is the vine. Rather than her life, she would be alwaies bearing; neither taketh she such pleasure to liue long, as to beare much: and therefore the more you take away of her ranke and superfluous wood, the better will she employ her radicall sap and moisture to fructifise and yeeld good store of grapes: yet by her good will she would be euer putting forth branches for new plants, rather than busie in bearing fruit: for well woth she, that fruit will fall and is but transitory. Thus to her owne vndoing and ouerthrow, while shee thinketh to spread and gaine more ground, shee spends her strength, her selfe and all. Howbeit, in this case, the nature of the soile will guide a man and aduise him well: in a lean and hungry ground, although the vine be strong enough, you ought to keep it downe with cutting, that it may make abode vnder the head of the traile and frame aboue, and howtoeuer the may haue some hope that her yong branches may get vp to the top, (as being at the very point to mount aboue it, and so neare as that they reach therevnto) yet let her stay there and proceed no farther: suffer her not (I say) to lay her head thereupon and couch vpon the traile, nor wantonly to spread and run on at her ease. In this manner (I say) hold her head in with the bridle, that she may in the end chuse rather to grow big in body & strong with all, than to shoot forth branches about her euery way far and neare. The same branch now that is kept short of the frame, ought to haue two or three buds to burgeon at, and to bring forth more wood in time: and then let it be drawne and trained close vnto the traile and tied fast thereto, that it might seeme to beare vpon it and be supported thereby, and not to hang loosely thereupon. Being thus bound to the frame, it must likewise be tied anon, three buds or joints off: for by this means also the wood is reclaimed and repressed from running out in length beyond all measure, and the burgeons in the way between will come thicker & shoot vp on height, to furnish the husbandman with store of new sets and sions for the next yere. The very top end in no wise must be tied. Certes this property and qualitie hath the vine, That what part soeuer of it is dejected and driuen downward, or els bound and tied fast, the same ordinarily beareth fruit, and principally in that very place where it is bowed and bent in manner of an arch. As for the other parts which be backward and neerer to the old maine stocke, they send out store of new branches indeed, full of wood, but otherwise fruitlesse that yere: by reason (I suppose verily) of the spirit or vegetatiue life, and that marrow or pith whereof wee speake before, which findeth many stops and lets in the way. Howbeit these new shoots thus putting forth, will yeeld fruit the next yere. Thus there offer vnto vs two kinds of vine branches: for that which springeth out of the hard and old wood, and promiseth for that yere following nothing but sprigs and twigs onely, is called Pampinarium: whereas that which commeth more forward beyond the cup or cicatrice, and beareth shew of grapes, is named Fructuarium. As for another, springing from a yere-old branch, it is left alwaies for a breeder and kept short vnder the frame: as also that which they terme Custos, [i. the Keeper, or Watch:] a yong branch this is, and no longer than it may well carry three buds: which the next yere is like to beare wood and repaire all, in case the old vine stocke should miscarry and spend it selfe by carrying too great a burden. Also another burgeon there is close to him, bearing out like a knob, of the bignesse of a wart (called heis Furunculus) who must serue the turne and make supply, if peraduenture the foresaid Watch or Keeper faile.

Moreover, a vine if it be suffered to beare before the seuenth yere after it was first set of a cutting or sion, decaith sensibly and soon dieth: neither is it thought good to let the old wood run on still in length vpon the frame, as far as to the fourth forke that vnderproppeth it, (such old crooked branches some call Dracones, others Iuniculos) to make thereof huge and great trailes of vines termed Malesculetæ. But worst of all it is, to seeme for to propagate or draw in a long traile within the ground vines in a vineyard, when they be growne hard with age. When the vine is fye yeres old, a man may boldly wind and twine the very branches, so as out of euery one there be a twig let to grow at liberty: thus he may proceed forward to the next, cutting away the wood as he goeth that bare before. The surer way euermore is supposed to leaue the Watch or Keeper behind; marie he must le next vnto the vines maine bodie, and nearest the root, and no longer than is before set downe. Now in case the branches prooue ouer ranke,

they must be writhed and twisted in maner aforesaid, so as the vine stock may put forth no more than foure boughs at the most, or twaine if so be it rest vpon one chanter or range of perches. If you would order a vine so as it may stand alone without any proppes, at the beginning it would desire and haue some supporter or other (it makes no matter what) to rest vpon, vntill it haue learned to stand of it selfe, & rise vpright: afterwards, it is to be vsed in manner of all other vines when this training is past. This regard would be had in pruning and cutting the twigs of these vines called Pollices, That a man well guide and ballance his hand, and go euen withall in euery part indifferently, for feare lest one side be charged with fruit or branch more than the other: whereby the way, he must also remember to keepe downe the head, and not suffer it in any wise to run vp in height: for if this kind of vine be about three foot high, it will hang the head downward. As for others, they may well grow to fise foot and vpward, so that they passe not in any case the full height of a man. To come now vnto the other vines that creepe along and spread ouer the ground; they be inuironed all the way as they run, with pretty short hollow cages as it were, to rest and repose their branches in. They haue need moreouer of certaine trenches or ditches round about to run in, to the end that as the said branches wander too and fro, they should not incounter one another and strue together. And verily in most parts of the world, they vse to gather their vintage of vines thus growing low by the ground: as we may see the manner is in Africke, Egypt, Syria, throughout all Asia, and in many places of Europe. For the good vse and dressing of these vines, a speciall care would be had to keepe them downe close to the earth; and to fortifie the root, so long and in the same manner, as hath been shewed before in those, that are shored or beare vpon frames; with this charge and regard besides, to leaue alwaies the short twigs only called Pollices, with three buds a piece, in case the ground be fruitfull, or * five, if it be light and lean. And in one word, better it is without all question, that they be left many, than long. As for those points which we haue deliuered heretofore, as touching the nature of the soile, they will be more effectually seen to proue either the goodnesse or the contrary, in the grapes of this vine, by how much nearer they lie to the ground than others. Wherein consideration is to be had of the sundry sorts of vines; namely, that they be seuered apart; and nothing is better, than to fort euery one with the tract or region that agreeth best with it, and therein to plant them accordingly: for these mixtures of diuers kindes are neuer good, but alwaies discordant: naught in old wines that come to our table, much worse then you may be sure, in those that be new and not yet tunned vp. But if a man will intermingle plants of sundry vines together, yet in any case those would be ioined together (and none els) which ripen their fruit at one and the same time.

For frames and trailes wherein vines are to run, the better and more battle that the ground of the vineyard is, the plainer and euener that it lieth, the higher they would be from the ground; likewise if the place be subiect to dews, fogs, and mists, and nothing exposed to the winds: contrariwise, if the ground be leane and dry, hot, and open to the winds, they must be the lower and nearer the earth. As concerning the rafters, that lie ouer & reach from prop to prop, they ought to be tied and fastened therewith as streight and sure a knot as is possible; whereas the Vine would be bound vnto them, but slacke. Of the sundry sorts of Vines, as also which were to be planted in this or that soile, and what coasts & climats each one of them loueth, we haue shewed sufficiently in the particular treatise of their nature, and of the wines that come of them.

Toucing all other points of husbandry that remaine behind; much doubt and diuers questions are made: for many there be that feare not all Summer long to bee digging in the vineyard about vine-roots, after euery little raine. Others again forbid to meddle & be lusty therein, in the budding time: for it cannot be auoided, but that the yong oylets will either bee smitten off clean, or els galled or bruised one time or other, with their gate that go in and out between: which is the cause, that they would haue all kind of cattell to bee kept out that they come not neare, and especially such as beare wooll on their backs; for sheep of all others soonest rub off the buds as they passe by, with their shag coats. Moreouer, they are of opinion, that all manner of raking and harrowing, is an enemy to vines when they bee in their floure, and putting forth young grapes: and sufficient it is (say they) if a vineyard be delued thrice in one yere; to wit, first from the spring Equinox, to the apparition of the Brood-hen star; secondly, at the rising of the great Dog star; and thirdly, when the grape beginneth to change colour and turne blacke. Others set out these times after this maner: if the vineyard be old, they would haue it once digged

A ged betweene vintage and mid-winter; howsoeuer some be of this mind, That it sufficeth them to bare the roots only of the vines and lay dung thereto. The second deluing they would haue to be from the Ides of Aprill, and six daies before the Ides of May, that is, before they begin to conceiue and bud: and thirdly, before they fall to blossom; also when they haue done flourishing; and also at the time when the grapes alter their hew. But the more skilfull and expert husbands affirme constantly, That if the ground be ouermuch laboured, and digged too often, the grapes will be so tender skinned, that they will burst againe. Moreouer, these rules following are to bee obserued, That when any vines do require such deluing and digging, the laborers ought to goe to worke betimes before the heat of the day: mary if the vineyard stand vpon a mirie clay, it is not good then either to eare or dig it, but rather to wait for the hot season; for the dust that riseth by digging, is very good (by their saying) both to preserue the vine and grapes from the parching Sun, and also to defend them against the dropping mists.

As for disburgening of vines, and cleming them of their superfluous leaues, all men accord; that it should be done once in the Spring, to wit, after the Ides of May, for the space of eleuen daies following; and in any hand before they begin to put forth floure. And how much thereof must be thus dooiled for the first time: euery all that is vnder the traile or frame, & no more. As for the second, men be not all of one minde; some would haue the leaues to be disbranched when the vine hath done flourishing: others expect, vntill the grapes begin to be ripe. But as touching these points, the rules that Cato giueth, will resolute vs: for we are now also to shew the manner of cutting and pruning vines. Many men begin this worke immediatly after vintage, when the weather is warm and temperat: but indeed (by course of Nature) this should neuer be done before the rising of the Aegle star (as we will more at large declare in the next booke, where we are to treat of the rising and fall of the fixed stars and of their influences) or rather in truth, when the Westerne wind Faunonius beginneth to blow, forasmuch as there might be danger in going ouer soon to work, considering that haile commonly maketh wast. For this is certain, that if there come an after-winter, and chance to bite the vines newly medicined (as it were) or rather fore with this pruning, if it happen (I say) that when euery man makes reckoning that winter is gon, it come vpon them againe and whiske with his taile, their buds pinched with cold will lose their vigor, their wounds will cleaue and make rifts, in such sort, that when the humidity is distilled and dropped forth, the oylets will be nipt and burnt away with the bitternesse of the vntimely weather; for who knoweth not, that in frost it is ticklish meddling with vines, and that they be in danger soon to breake and knap asunder? To say therefore a truth, by order of Nature there would not be such haile made. But here is the matter, they that haue a large domaine and much lands to look vnto, they that must go through a great deale of work, cannot wil nor chuse but begin betimes, and make this computation and reckoning aforesaid. And in one word, the sooner that vines be pruned (if the time wil serue commodiously) the more they run into wood and leaues; and contrariwise, the later you go to work, the more plenty of grapes they wil yeeld: and therefore it is meet and expedient to prune vines that be poore and feeble, very timely; but such as be strong and hardy, last of all.

As for the manner and fashion of the cut, it ought alwaies to be aslant, like a goats foot, that no drops of raine may settle and rest thereupon, but that euery shower may soon shoot off: also that it turn downward to the ground, that it be euen and smooth made with a keen and sharpe edged bill or cutting hook. Furthermore this heed would be taken, that the cut be iust between two buds, for feare of wounding any of the oylets neere vnto that part which is cut off: and commonly this is supposed to be blacke and dusky, and so long as it is so seen, it ought to be cut and cut again, vntill you come to that which is found and cleare indeed: for neuer shall yee haue out of a faulty and corrupt wood any thing come forth that will bee worth ought. If the vine be so poore and lean that it affordeth no branches meet and sufficient to beare, cut it down to the verie ground, for best it is then to fetch new from the root, and to see whether they will be more liuely. Over and beside in disburgening and dooiling a vine, you must beware how you pluck off those burgeons that are like to beare the grape, or to go with it; for that were the next way to supplant (as it were) the grapes, yea and kill the vine, vntil it were a new and yong plant. Will you then know which are vnprofitable and may be spared? euery all those are deemed superfluous, which are come not directly from the knot or neere oylet, but grow out of the side: and no marvell, since that the verie branches of grapes which hang in this manner out of

the hard wood, are so stiffe and tough also, that vnneth a man may plucke them off with his fingers, but had need of a knife or hook to cut them away. **G**

As for the pitching of props into the ground, some are of opinion that the best way is to set them between two vines: and indeed that were the easier way to come about the vines, for to lay their roots bare when time serueth. Also, better it is far so to doe, in a vineyard where the vines run vpon one single traile, in case the said traile be strong enough, and the vineyard not subiect to the danger of winds: but where a vine runneth foure waies, it must be relieued with prop and stayes as neer as may be, to support the burden; yet so, as they be no hinderance when as men should come about the foot to lay the root bare: and therefore they would be a cubit off, and no more. Moreover, this is a general rule, that a vine be clenfed about the root beneath, before that it be pruned aboue.

Cato treating generally of all maters concerning vines, writeth thus by way of rule and precept; Let your vine (quoth he) be as high as possibly you can: fasten it to the frame decently, but take heed you bind it not too hard. Dresse and order it after this manner: After you haue cut away the tips and tops therof, dig round about the roots, and be: in then to eare vp & plow the vineyard: draw furrowes and ridges too and fro throughout. Whiles vines be yong & tender, couch the branches within the ground for propagation, with al speed: as for old vines, geld them as little as you can, & keep them with a good head; rather if need require, lay them along on the ground, and two yeares after cut them hard to the root. If it be a yong vine, attend vntill it be of strength sufficient, then will it be time and not afore to prune it. If haply the vineyard be bare and naked of vines, and that they grow but thin here and there, make furrowes and trenches between, and therein plant new quickets: but rid the weeds well from about those Trenches, for ouershadowing them: be euer also digging and delving. Then, if it be an old vineyard, so drage and pulse for prouender: if it be a lean and light ground, sow nothing that bears grain or corn. Be sure that ye lay about the heads of the said quickets, dung, chaffe, refuse of grapes pressed, and such like mullock. When the vine beginneth to put out leaues and look green, fall to disburgeoning. So long as the Vines be yong and tender, tie them surely in many places, for feare lest the wood or stalk therof do break asunder. But when a vine hath gotten head to perch aloft vpon a single traile, gently binde the tender burgeons and branches thereof, extend and stretch them out, and lay them streit. Now when they stand once vpright and are able to beare themselves, mark when the grapes begin to change colour, bind them wel and sure below. **K**

As for grafting of vines, there are two seasons of the yeare meet therefore: the one in the spring, the other when the vine doth floure, and this is held for the best. If you purpose to translate an old stock of a vine into another place, and there to replant it, cut off the first thick arm only, leauing behind two buds and no more. In taking of it vp, be carefull that you do it with such dexterity, as that you race not nor wound the root. This done, look how it grew before, so set it now, either in trench or furrow: couch it wel and close, and couer it thoroughly with good mould. After the same manner as is before said vnder set and prop it vp, bind it, turn and winde it; but aboue all be euery while digging about it. As touching the drage called Ocymum, the which **Cato** wills to be sowed in a vineyard, it is a kind of forage or prouender for horses, which the Latines in old time named Pabulum; it cometh vp very speedily and groweth fast, and besides can well away with shadowie places. **L**

CHAP. XXIII.

¶ Of Trees ranged in reues for to support Vines.

IT remaineth now in this discourse and treatise of Vines, to write of the manner of trees planted of purpose for to serue their turn. And here I cannot chuse but cal to mind, first, how this point of husbandry hath bin iudged naught, and altogether condemned by the two *Sarsenae*, both father and sonne; but contrariwise held for good, and highly commended by *Serapion*: whereas all three were reputed the most antient writers, and skilfullest in this kind next to **Cato**. **M** And yet *Serapion*, as great a patron as he is thereof, alloweth not this deuice in any clymate else but only in Italy. Howbeit, gon this hath for currant many yeares past, and time out of mind, That the best and most dainty Wines came of those grapes onely which grew vpon such Hauins or trees before said. Yea, and it was thought generally, that the higher a Vine climbed vpon

A on these trees, the better grapes it bare, and yeelded more commendable wine: and againe, the lower that those trees were, the greater plenty followed both of the one & the other. By which a man may see how materiall it is to raise Vines on high, and haue grapes growing in the top of trees. In which regard, choise also is to bee made of trees for this purpose. And here first and formost is presented vnto vs the Elme: and yet I must except that kind of it which is called *Antinia*, by reason that it is ouermuch charged with boughes and leaues, and therewith too full of shade. Next vnto it may be ranged the blacke Poplar, euen for the same cause, because it is not leaved nor branched so thick. Many men there be that refuse not the Ash, the Fig tree, yea and the Oliue, so that it stand not ouer thicke with boughs, and make too much shade. As for the setting, planting, and ordering of these trees in general, we haue sufficiently and to the full treated heretofore. But now for this speciall and peculiar vse that they be put vnto, this would bee considered, That Vines which are to be wedded to these trees, must in no wise feeble the edge of the cutting hooke, before they be three yeares old full. After which time, this regard ought to be had, that euery second branch or arme thereof is to be spared, and likewise each other yeare and no oftener they are in this wise to bee pruned: and by that they are six yeres old, it is good time to joine them in marriage vnto their husbands afore said.

In Piemont, Lombardie, and those parts of Italy beyond the riuier Po, they vse for this purpose to plant their grounds with these trees ouer and besides those afore named, to wit, the Cornell, the Opier or Wich-hazell, the Teil or Linden, the wild Ash Ornus, the Carpin Carme or Horn-beanie, and the Oke. About Venice and all that tract, the Willowes serue the turne and none else, by reason that the whole shadeneth so much vpon water. **C**

As touching the Elme, named in the first place, it must be kept plaine and bare, and the great water-boughs vnderneath shread vntill you come to the middest of the tree, or thereabout, and then the rest ought to bee arraunged and digested into good order, whereupon the Vine may climb as it were vpon staires or ladder rounds: and lightly none of these trees vpward be aboue twentie foot high. Now in case it be a high ground vpon an hil, and drie, they are permitted to branch and shut out their armes, within eight foot of the ground. But in plaines and low moist grounds, they begin not to fork before they beare twelue foot. Howbeit, let the place be what it wil, the flat of the tree from whence the boughs begin to diuide, ought to regard the south sun. And the said branches immediately from their project must rise somewhat vpright in maner of fingers, standing forth from the palm of ones hand, among which, the smal sprigs must estsoons be barbed (as it were) & shauen clean off, for feare they do not ouershadow the Vine branches. **D**

As touching the space or distance between one tree & another, the ordinarie proportion is, that affront and behind, in case the ground be erable, it beare fortie foot: but a flank, or on the side, twentie. Marie, if it be not well tilled and husbanded, so much wil serue euery way, to wit, twentie foot and no more. Commonly euery one of these trees maintaineth tenne Vines at the foot therof: and a bad husband he is who hath fewer reared about it than three. But by the way, it is no good husbandrie to suffer a tree thus to be coupled (as it were) in marriage to so many Vines, before that it be of sufficient strength to entertain them: for there is nothing so hurtfull, by reason that the Vines will choke and kill them; so quick they be of their growth, and so ready to ouercharge them. **E**

As for planting of Vine-sets to the root of trees, needful it is to make therefore a ditch three foot deep: and they ought to be distant one from another a ful foot, and so much likewise from the tree. This don, there is no question thereof the smal twigs or shoots what to do with them: neither is there any charge or expence required for digging and deluing: for this is the manner of it, and this peculiar gift haue these tree-rows, That in the same ground where they grow, the sowing of come is nothing hurtfull, nay, it is profitable and good for the Vines. Moreover, this commoditie and easement cometh of their height, that they be able to saue themselves: neither is there any such need, as in other Vineyards, to be at the coast of walls, of mounds, pales, or hedges, ne yet of deep ditches or other fences, to keep off the violence or injuries of beasts. Of all other toiles before rehearsed, there is no more required but to looke vnto onely the getting of quick-sets, or couching sions: all the matter I say lieth herein, and there is no more to do. **F**

But of couching sions and that kind of propagation, there be two deuises. First within paniers or baskets vpon the boughs of the tree, and that is the best way, because it is safest from the danger of cattel. The second is, to bend the Vine, or a branch therof, close to the foot of her

owne tree, or else about the next vnto it: if it stand single and haue no Vine joined vnto it. As much of this branch or Vine thus couched as is about the ground, must be kept with scraping, that is to say, the buds ought euer and anone to be knapt off, that it spring not forth. Within the earth there should be no fewer than foure joints or budding knots buried and entered for to take root; in the head without, two onely are left for to grow. [Where, note by the way, that the Vine which groweth to the foot of a tree, must be trenched in a ditch foure foot long in al, three in breadth, two and an halfe in deapth.] Now, when the sion thus couched, hath lien one yere, the order is to cut it toward the stock to the very pith or marrow, that so by litle and litle it may be inured to fortifie it selfe vpon the own roots, and not to hang and cling alwaies to the mother: as for the other end or head thereof, it would be cut off also so neere the ground, as that there be but two onely buds left. By the third yere it must be quite cut in two, (where before it was but guelled to the pith) and that which remaines of it, laid deeper into the ground, for feare it should sprout forth and beare leaues toward that side where it was cut in twaine. This done, no sooner is Vintage past, but this new quicke-set, root and al, must be taken vp and replanted.

Of late daies deuised was the manner of couching or planting by a trees side a Vine Dragon (for so we vse to call the old branch of a Vine past all seruice, which hath done bearing many a yere, and is now grown to be hard.) And verily, they vse to make choise of the biggest they can find, which when they haue cut from the stocke, they scrape and pil the bark, three foure parts in length, so farre forth as it is to lie within the ground [wherupon they name it in Latine Rafilis:] when it is thus couched low within a furrow, the rest that is about the earth they rear vp against the tree. And it is thought, that there is not so good nor so ready a mean to make a Vine grow and beare than this. If it fall out so, that either the Vine be smal and weak, or the ground it selfe but lean and hungrie, it is an vsuall and ordinarie practise to cut and prune it as neer the ground as possibly may bee, vntill such time as it bee well strengthened in the root, as also, great regard is had, that it be not planted when the deaw standeth vpon it, ne yet when the wind sits full in the North. The old Vine stock it selfe sought to look into the Northeast, prouided alwaies that the yong branches turne Southward. Moreouer, new and tender Vines would not be prouided and cut in half: but better it is to expect and tary vntill such time as they be strong ynough and able to beare the cutting bill: meane while, to gather the yong branches together round in manner of an houp or circle. [Where note by the way, That Vines which are erected vpon trees for the most part beare later by one yere than those in Vineyards that be peached or run on frames.] Somewould not haue them to be cut at all, before they haue raught vp to the top of the tree. At the first time when you come with the pruning hooke, the head must be cut off at six foot from the ground, leauing vnderneath one little top twig, which must be forced to beare by bending it downward in the head: and in the same, when it is thus pruned, there must be left behind three buds and no more. The branches which burgen out from thence, ought the next yere to bee brought vp to the lowest armes of the tree, and there seated: and so from yere to yere, let them climb vp higher to the vpper boughs, leauing alwaies vpon euery loft or scaffold as it were where they rested, one branch of the old hard wood, and another yong imp or twig, for to grow vp and climbe as high as it will. Furthermore, as often as a Vine is pruned afterwards, those branches or boughs thereof in any wise must bee cut away which were bearers the yere before: and in stead of them, the new after they be first cleansed from all the hairy & curled tendrils on euery side shred off. The ordinarie manner of pruning and dressing of vines here about Rome, is to let the tender branches and sprigs enterlace the boughes, inso much, as the whole tree is ouerspread & clad therewith, like as the very same tendrils be also couered all ouer with grapes. But the French fashion is to draw them in a traile along from bough to bough: whereas in Lumbardie and along the caufey Emilia [from Plaifance to Rimino] they vse to train them vpon forkes and poles: for albeit the Atinian Elmes be planted round about, yet the Vine commeth not neere their Greene boughes. Some there be, who for want of sill and good knowledge about vines, hang them by a strong bond vnder the boughs: but this is to wrong, yea to stifte and strangle them outright: whereas indeed a vine, as it ought to be kept down with oisier twigs, so it must not bee tied ouer streight. For which cause, euen they also who otherwise haue store & plenty ynough euen to spare, of willows & oisiers, yet chuse rather to bind vines with some more soft and gentle matter, to wit, with a certain hearb, which the Sicilians in their language

A language called Ampelodesmos [i. Vine-bind.] But throughout all Greece they tie their vines with Rushes, Cyperus, or Gladon, Reeke, and sea-grasse.ouer and besides, the maner is otherwise to vntie the Vine, and for certain daies together to giue it liberty for to wander loosely, and to spred it selfe out of order, yea, and to lie at ease along the ground, which all the yere besides it onely beheld from on high: in which repose it seemeth to take no small contentment and refreshing: for like as draught horses, when they be out of their geeres, and harkies vnadled, like as Oxen when they haue drawn in the yoke, yea, and greyhounds after they haue run in chase, loue to tumble themselves and wallow vpon the earth: euen so the Vine also, hauing bin long tied vp and restrained, liketh wel now to stretch out her lims and loins, and such easement and relaxation doth her much good. Nay, the tree it selfe findes some comfort and ioy therby, in being discharged of that burden which it carried continually as it were vpon the shoulders, and seemeth now to take breath and heart again. And certes, go through the whole course and worke of Nature, there is nothing, but by imitation of day and night, desireth to haue some alternatiue ease and play dayes between. And it is by experience found very hurtfull, and therefore not allowed of, to prune and cut Vines presently vpon the Vintage and grape-gathering, whiles they be still wearie and ouertrauelled with bearing their fruit so lately: ne yet to binde them, thus pruned, in the same place again where they were tied before: for surely vines do feel the very prints and marks which the bonds made, and no doubt are vexed and put to pain therewith, and the worse for them.

The maner of the Gaulles in Lumbardy, in training of Vines from tree to tree, is to take two boughs or branches of both sides, and draw them ouer, in case the stock Vines that beare them be forty foot asunder: but foure, if they are but twenty foot distant. And these meet one with another in the space between, and are interlaced, twisted and tied together. But where they are somewhat weake and feeble, they be strengthened with Oisier twigs or such like rods here and there by the way, vntill they beare out stiffe: and look where they be so short that they wil not reach out, they are with an hook stretched and brought to the next tree that standeth without a Vine coupled thereto.

A Vine branch drawn thus along in a traile, they were wont to cut when it had growne two yeaes: for in such Vine stocks as by reason of age are charged with wood, it is the better way to giue time & leifure for to grow and fortifie the said branch that is to passe from tree to tree, so as the thicknes thereof will giue leaue: yea and otherwise it is good for the old main bough to feed still and thrive in pulp and carnositie, if we purpose that it should remaine and carrie a length with it.

Yet is there one maner besides of planting and maintaining Vines, of a mean or middle nature between couching or interring a branch, by way of propagation, and drawing them thus in a traile from one to another: namely to supplant, that is, lay along vpon the ground the whole stock or main body of a Vine; which done, to cleaue it with wedges, and so to couch in many furrowes or raies, as many parcels thereof, comming all together from one. Now in case each one of these branches or armes proceeding from one body, be of it selfe small, weake and tender, they must be strengthened with long rods like staues bound vnto them round about; neither ought the small sprigs and twigs that spring out of the side, be cut away.

The husbandmen of Novaria rest not contented with a number of these trailed branches, nor with store of boughs and trees to sustaine and beare them, vnlesse they be shored and supported also with posts and ouerthwart raies, about which the yong tendrils may creep & wind. No maruell therefore if their wines be after a sort rough, hard, and vnpleasant: for besides the badnesse of their soile, the maner of their husbandry is so crooked and vntoward.

Our husbandmen moreouer here about vs, neer vnto the city of Rome, commit the like fault, and find the same defect therupon, in the Varracine Vines, that be pruned but once in two yeaes: a piece of husbandry by them practised, not for any good that it doth vnto the vine, but because the wine thereof is so cheap, that oftner pruning would not quit cost, neither doth the reuenue answer the labor and the charges.

In the territorie of Carfcoli (a champion and plain countrey about Rome, the peasants take a better order, and hold a middle and temperat course. For their maner is to prouin and cut away from the Vine those parts onely that are faulty and rotten, when they begin once to drie and to wither, leauing all the rest for to beare Grapes: and thus discharging it of the superfluous burden

burden that it caried, they hold opinion, that it is not good to wound it in diuers places: for by this means (say they) it will be nourished and come on very well. But by their leaue, vnlesse the ground be passing rich and fat, Vines thus ouercharged with wood, will for want of pruning degenerate into the bastard wild wines called Labrusca.

But to returne againe vnto our plots planted with Trees and Vines coupled together: such grounds when they be plowed require a good deep fitch, although the corn therein sown need it not. Also it is not the manner to disburgen or deffoile altogether such trees, and thereby a great deale of toile and labor is sau'd: but when the Vines are a pruning, they would be disbranched at once with them, where the boughs grow thickest; and to make a glade onely thorough, the superfluous branches would be cut away, which otherwise might consume the nutriment of the grape. As for the cuts and wounds remaining after such pruning and debranching, we haue already forbidden, that they should stand either against the North or the South. And I think moreouer it were very well, that they did not regard the West where the Sunne setteth: for such wounds will smart, and be long sore, yea, and hardly heale again, if either extreme cold pinch, or extreme heate parch them.

Furthermore, a Vine hath not the same liberty in a vineyard that it hath vpon a tree: for better means there are, and easier it is to hide the said wounds from the weather flanked as they be within those close sides; than to wryth and wrest them to a mans mind to & fro. In lopping and shredding of trees, when the cut standeth open, there would be no hollow places made like cups, for feare that water should stand therein. Last of all, if a Vine be to climbe Trees that are of any great height, there would be stayes and appuies set to it, wherupon it may take hold, and so by little and little arise and mount vp aloft.

CHAP. XXIII.

¶ The manner of keeping and preserving Grapes. Also the maladies whereto Trees be subiect.

IT is holden for a rule, That the best Vine-plants which run vpon a frame of rails, ought to be pruned in mid-March about the feast of *Minerva*, called Quinquatrus: and if a man would preserve and keep their grapes, it would be done in the wane of the Moone. Also, that such vines as be cut in the change of the Moone, will not be subiect to the iniurie and hurt of any noisom vermin. Although in some other respect men are of opinion, that they should be cut in the night, at the full of the Moone, when the signe is in Leo, Scorpio, Sagittarius, and Taurus: and generally it is thought good to set them when the Moone is at the full, or at leastwise when she is croissant. Moreouer, this is to be noted, that in Italy there need not about ten men for to look vnto a vineyard of an hundred acres.

And now that I haue discoursed at large as touching the manner of planting, grafting, and dressing of Trees, I purpose not here to treat again of Date Trees & Tretrifoly, whereof I haue sufficiently written already in the Treatise of strange and forreine Trees: but forasmuch as my meaning is to omit nothing, I will proceed forward to decipher those matters which concerne principally the nature of Trees, and namely their maladies and imperfections, whereto they also as well as beasts and other liuing creatures, are subiect. And to say a truth, what creature is there vnder heauen freed therefrom? And yet some say that wild and sauage trees are in no such danger: only the hail may hurt them in their budding and blooming time. True it is also, that scorched they may be otherwhiles with heate, and bitten with cold black winds, comming late and out of season: for cold weather surely in due time is kindly and good for them, as hath bin said before. But let me not forget my self. See we not many times the cold frost to kill the very Vines? Yes verily: but this is long of the soile and nothing else; for neuer hapneth this accident but in a cold ground. So as this conclusion holdeth still, That in winter time we alwaies find frost and cold weather to do much good: but we neuer allow of a cold and weake ground. Moreouer, it is neuer seen, that the weakest and smallest trees are indangered by frost, but they are the greatest and tallest that feele the smart. And therefore no maruel if in such, the tops being nipped therewith, seem first to fade and wither; by reason that the natie and radical moisture being bitten and dulled before, was neuer able to reach vp thither.

Now concerning the diseases that haunt Trees: some there bee that are common vnto all; others

others againe, that extend peculiarly, to some certaine kind or other. As for the former sort generally it is, that no trees are exempt from the worme, the blasting, and the joint-ach. Hereof it commeth, that we see them more feeble and weake in one part or member than in another, as if they did participate the maladies and miseries of mankind, so common are the names of diseases vnto them both. For certes, we vse to say indifferently, That trees are headlesse, when they be lopp and topp, as well as men who are beheaded: we tearme their eyes to bee enflamed, sendged, and bloud-storten, when their buds be blasted: & many other infirmities, according to the like proportion. And therupon it is, that we say they be hungerstarued and pined: and contrariwise, that they be full of crudities and raw vndigested humors; namely, when moisture aboundeth in them. Yea, and some of them are said to be grosse and ouerfat, to wit, al such as bear rosin; when by the means of too much greafe (as it were) they begin to putrifie and turn into Torch-wood; yea, and it falleth out, that they die withall, in case the said greafe take once to the roots; even as liuing creatures being ouergrowne with fat. Moreouer, ye shall see a kind of pettilence light amongst one peculiar kind of trees: like as it farth sometimes with men in sundrie states and degrees; whereby one while slaues only die of a plague, another while the Commons, and those either artificians in a citie, or peasants and husbandmen of the country.

Now as touching the Worme, some trees are more subiect vnto it than others: and to say a truth, in manner al, more or lesse; and that, the birds know well ynough, for with their bills they will job vpon the barke, and by the sound trie whether they be worm eaten or no. But what say we to our gluttons and belly gods in these daies, who make reckoning among their dainty dishes, of wormes breeding in trees; and principally of those great fat ones bred in Oakes, which wormes they call Cossi, & are esteemed a most delicat meat? These forsooth they feed in mue, and franke them vp like fat-ware, with good corn-meale. But about al others, Pear trees, Apple trees, and Fig trees, are soonest worme-eaten: and if any trees escape, they be such as are of a bitter wood in tast, and odoriferous in sinell. Touching those wormes that be found in Fig trees, some are engendred of themselves, and of the very wood: others are bred of a bigger vermine called Ceraistes. Howbeit, al of them (which way soeuer they come) are shaped in manner of the said Ceraistes, and make a certaine small noise like the thrill and creaking sound of a little criquet. The Senuise tree likewise is haunted and plagued with little red and hairie wormes, that in the end doe kill it. The Medlar trees also when they be old, are subiect to this maladie.

As for the misliking of trees [called Sideratio] wherby they consume, wither away, & crumble to powder; it is a thing caused only of the weather and influence of some Planet. And therefore in this ranke are to be raunged Haile, Blasting with some vntoward winds, and frosts that bite and nip them to the heart. And verily it falleth out, that in a mild and warme Spring, when plants bee too forward, and put forth their soft buds and tender sprouts ouer-soone, the black wind taketh them on a suddaine, and a certaine rime setteth thereupon, sendging and burning the oilers of the Burgeons, whiles they be full of a milky sap: which accident if it light in blooming time vpon the blossome, is called properly Carbunculus [i.e. Mieldeaw.] As for the Frost at such a time, it is far worse than the blasting aforesaid, for when it falleth vpon any trees or plants, it there resteth and remains still, it congealeth all into an yce, and no puffe of wind there is to remove and dislodge it: for why? such frosts commonly are not but in time of a still, cleer, and calm aire. Touching that manner of Blasting or misliking called Sideratio, as if they were smitten with the maligne aspect of some planet, this danger chanceth peculiarly by some drie and hote winds, which are busie commonly about the rising of the Dog star, at what time wee shall see vong trees and newly grafted, to die outright, especially Figge trees and Vines. The Oliue, ouer and besides the worme (whereto it is subiect as well as the Figge tree) hath another greefe and sorance called in Latin Clavus, Fungus or Patella [i.e. Knur, Pusse, Meazil or Blister] chuse you whether: and nothing is it but a very sendge or burne by the sunne.

Furthermore, Cato saith, That the red Mosse is hurtfull vnto trees. Oftentimes also wee find that as well Oliues as Vines, take harm by ouermuch fertilitie and fruitfulness. As for scab and skurie, what tree is cleare of it? The running mange or tetter, is a mischeefe peculiar vnto the Fig tree: as also, to breed certain Hoddy-dods or shell-Snailes sticking hard thereto and eating it. And yet these maladies are not indifferent and alike in all parts of the tree. For thus you must think, that some diseases are appropriate to one place more than another. For like as men are troubled with the Arthriticall torments, or the Gout, euen so be trees: yea, and after 2 forts

as well as they: for either doth the disease take the way to the feet, that is to say, to the roots, & there breaketh out and sheweth it selfe; or else it runneth to the exterior joynts and fingers, to wit, the final branches and top twigs, which be farthest remote from the main body of the tree. Hereupon then begin they to drie, wither, and waxe blacke: and verily the Greeks haue proper names and termes respectiue to the one infirmity and the other, which we in Latin want. Howbeit we are in some sort able to expresse the Symptomes following therupon; and namely, when we say, first, that a tree is ill at ease, sicke, and in pain euery where: anon, that it falls away, looks ill, poore, and leane, when wee see the fresh green hew gone, and the branches fraile and brittle: last of all, that it is in a waite, consumption, or feuer hecick, and dieth sensibly, to wit, when it receiue no nourishment (or not sufficient) to reach vnto al parts, and furnish them accordingly: and the same Figge tree of al others, is more subiect hereunto; as for the wild, they be exempt wholly from all these inconueniences hitherto named.

Now as touching the scab or scurfe incident vnto trees, it commeth of certain foggie mists and clammy dewes, which light softly and leifurely after the rising of the Brood-hen star Vergilia, for if they be thin and subtile, they drench and wash the trees wel, and do not infect them with the scab: howbeit in case they fall down right, or that there be an ouer great glut of showers and raine, the Fig tree taketh harme another way, namely, by soaking of too much moisture into the root.

Vines, ouer and aboue the Worme and the Blast, haue a disease proper vnto themselves, called Articulation, which is a certain barraineffe of theirs when they leese their spring in the verie joynt. And this may come vpon three causes: the first, when by vnseasonable and ill weather, as frost, heat, haile, or other torrible impressions of the aire, they forgoe their young sprouts: the second (as *Theophrastus* hath well noted) if in pruning of them, the cut stand vprward and open to the weather: the third, when they be hurt by those that haue the dressing of them, for want of skill and taking good heed: for all these wrongs and inconueniences they fee in their joynts or knots. A feuerall kind of blasting or mortification there is besides in vines, after they haue done blooming, which is called Roratio; namely, when either the grapes do fall off, or before they come to their full growth, be baked (as it were) into a thick and hard callositie. It happens also that they be otherwhiles sick, in case after their pruning, their tender oilers or buds be either bitten with the frost, or singed with some blast. The same befallth likewise to them vpon some vntimely or vnseasonable heat: for surely in all things, a certaine measure and moderate temperature doth well, to bring them to their perfection. To say nothing of the wrong that is done vnto them by the vine-masters themselves and husbandmen as they dresse and trim them, namely, when they bind them ouer-streight, as hath been said before, or when the labourer that diggeth about them, chaunceth to do them one shrewd turne or other by some crooked crosse blow; or else when the ploughman at vnawares doth loosen the root, or glance vpon it with the share, and so disbarke the bodie of it: finally, they haue iniurie done vnto them, in case the pruning-hooke bee ouer blunt, and so giue them a bruse. In regard of all these causes, they are lesse able to beare either cold or heat; for euery outward iniurie is readie to pierce their fresh galls, and a skald head is soon broken. But the tenderest and weakest of al others, be the Apple trees, and namely, the hastie kind that bringeth sweet Iennitings. Howbeit some trees there be which vpon such feebleness and hurt done vnto them, become barren onely, and die not; namely, the Pine and Date tree: for if a man fetch off their heads, you shall see them faile in bearing fruit, but this hurt will not kill them quite.

Moreover, it falleth out otherwhiles, that the Apples only or other such fruits, as they hang are diseased, when as the tree aileth nothing; to wit, if in due time they wanted rain, warmth, or winds that were needfull, or contrariwise, if they had too much of euery one: for by such means they either fall from the tree of themselves, or els they are the worse for it, if they proue worth ought at all.

The greatest displeasure that can happen to Vine or Oliue tree, is, when in their very blooming they be pelted with violent showers of raine; for, together with the blossome, down goeth the fruit of them both. From the same cause, proceed the cankerwormes or caterpillars (a most dangerous and hurtfull kind of vermine to trees) which will eat out the Greene bud, knot and all. Others there be that wil deuoure the blossome and leaues of Oliues also, as in *Miletum*: and thus hauing consumed all the Greene leaues, leaue the trees bare, naked, and ill-fauored to the eye

A eye. These wormes doe breed in moist and warme weather, and especially if there be thick and foggie mists. Of the same vermine, there is another engendred, namely, if there ensue vpon the former wet season, hotter gleames of the sunne more than ordinarie, which burne the foresaid wormes, and therefore change them into other vermine. Moreover, there is a fault or imperfection besides, wherto Oliues and Vines especially are subiect, and this they call in Latine *Ara-neus*, [i. the Spider] when cobwebs (as it were) doe enfold and wrap their fruit, keeping them from growing, and so in time killing them. Ouer and besides, there be certaine winds which singe and burne Oliues and grapes principally, yea and all sorts of fruits whatsoeuer. In some yerres also ye shall see all Quits worne-eaten, and especially Apples, Peares, Medlars, and Pomegranats, without any such hurt and offence to the trees that bear them. As for Oliues, the worm sometimes doth them harme, otherwhiles good: for if the worme be engendred and formed before it take the Oliue, it consumes and spoileth the fruit; but in case they breed within the kernel, it causeth the Oliue to thriue the better, by eating the said kernel that drew away and sucked the humor which nourished it. The rain that falleth after the rising of the starre *Arcturus*, hindereth the generation of wormes, and preferueth fruits from being worne-eaten: and yet if the wind sit Southward in that time when it so raineth, such raine will breed worms in oliues especially, called *Drupa*; which beginning but then to ripen, are most readie to fall from the tree. And verily those trees that grow in waterie places or neer riuers, are more subiect to haue worne-eaten fruit, which although it fall not so soone, yet it is as loathsome euery way.

Ouer and besides, there is a certaine kind of flie resembling the Gnat, which annoieth some trees and their fruits, and namely, Mast and Figs: and it seemeth that this flie is engendred of a certaine sweet humour that lyeth vnder their barks. Thus much as touching all diseases to speake of, that trouble trees.

As for the impressions of the Aire at certaine seasons, as also of other accidents occasioned by the climat, they are not properly to bee called Maladies, because they kill trees sodainly: as namely, when a tree is blasted outright, or all at once doth wither and drie away: like as when some puffe of an vntoward wind peculiar vnto any region, doth smite them: such as in *Apulia* they call * *Atabulus*, and in *Euboea* is named *Olympias*: For if this wind chaunce to blow in mid-winter, it biteth, burneth, and drieth vp trees with such cold blasts, as afterwards no heat of the Sunne is able to recouer againe. In this sort likewise, al trees growing in vallies or standing along riuers sides, bee endangered: and aboue all others, Vines, Oliues and Figge trees. This death that they thus take, is soone after discovered and seene in the budding time when trees begin to put forth, how soeuer it be later ere the Oliue shew it. Howbeit, a good signe it is in them all of their recovery, when they lose their leaues: for you shall see the leaues tarie on in many of them, and when you think they are past the worst, sodainly die. Otherwhiles also you shall haue the leaues to fade and seeme drie, yet afterwards the same trees to reuiue againe, and become Greene. Furthermore, in the Northerly regions, as in *Pontus* and *Phrygia*, some trees there are that be ordinarily frozen to death; namely, when the frost and yce continueth after mid-winter fortie daies. And not onely there, but also in other countries, if immediatly after that trees haue put forth their fruit, there follow a hard frost, they wil die vpon it, although the frost last not many daies.

In a second ranke of causes that may kill trees, are to be ranged the injuries and wrongs that come by mans hand, Pitch, oyle, and greafe, are very enemies and hurtfull to them al, but especially to young trees. Again, if trees be barked round about, they will die all, vnlesse it be the Corke tree; for it will thriue and prosper the better, if it be in that wise discharged of the outward barke; for growing as it doth ouer thicke, it claspeth and clingeth to the tree so hard, that it choketh and strangeth it again. Neither doth the tree *Adrachne* find any hurt or offence by disbarking, vnlesse the very wood be cut also together with it. As for cherie trees, *Lindens*, and Vines, it is ordinarie with them to cast ther barke in some sort, and take no harme thereby; but it is not the vital and liuely inner barke indeed which is next vnto the bodie, but that onely which by comming of another underneath fresh and young, is driuen forth and thrust out.

Some trees there be, which naturally haue their barke full of chaps and rifts, as the Planes for example. As for the *Line* or *Linden* tree, if it chance to leese the barke, it will come in manner whole and entire againe. In such therefore the manner is, by way of cure to close vp againe with clay and dung, the naked and bare place; and so to bring it to a cicatrize: and, I assure you,

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* quasi arbor
pudens, scales
miserum, aut
pestem inferens

this practise sometimes speeds well, and doth the deed; provided alwaies, that the naked place were not surpris'd before the cure, with extremity either of cold or heat. Certaine it is, that by this means both kinds of the Oke, as wel the Robur as the Quercus, liue the longer, and die nothing so soone as otherwise they would. And herein the time of the year ought to be considered, when a tree is thus pilled and disbarked: for in case that a man pill the barke of the Firre or Pine tree, during those months wherein the sunne passeth thorough the signes of Taurus or Gemini, which is the very season of their budding, there is no way but one with them, for presently they die: but if this wrong should befall them in winter, they would abide it the better and longer liue, than being so misused either in Aprill or May. The same is the case of the mast-Holme, the wild Robur also, and the common Oke. Howbeit, take this note by the way, that if the void place where the tree hath bene barked round about, be but narrow, so as the brims of the barke remaining be not farre asunder, the trees aforesaid will take no harme at all thereby. Many in the tenderer sort, and such as a man may say are but of a weake complexion, and growing besides in a leane and hungry ground, if the barke be taken away but of one side and no more, it is enough to kill them.

The like may be said of the topping or beheading the Cypresse, the Pitch tree, and the Cedar: for let these haue their heads either cut off with an axe, or burnt by fire, they will die, there is no remedie. As much also is to be said, when beasts doe brouse and eat them. As for the Oliue tree, if a Goat chance but to lick thereof, it will thereupon proue barraine and beare no more Oliues; so saith *Varro*, as we haue noted heretofore. But as some trees vpon the like injury done vnto them, will die, so others againe will be but the worse for it, and such are the Almond trees: for where before they did beare sweet Almonds, they will euer after bring bitter. Moreover, you shall haue some trees, that wil thrise & do the better after this hard dealing, & namely a kind of pearre tree called Phocis, in the Island Chios: for you haue heard by me already, which trees they be that lopping and shredding is good for.

Most trees, and in manner all (except the Vine, Apple tree, and Pomegranate tree) will die, if their stocke or bodie be clouen: and some be so tender, that vpon euery little wound or race that is giuen them, yee shall see them to die: howbeit, the Figge tree and generally all such trees as breed Rosin, desie all such wrongs and injuries, and will abide any wound or bruse whatsoeuer.

That trees should die when their roots are cut away, it is no maruell: and yet many there bee of them, that wil liue and prosper well neuerthelesse, in case they be not all cut off, nor the greatest master roots, ne yet any of the heart or vitall roots among the rest.

Moreover, it is often scene, that trees kill one another when they grow too thicke; and that either by ouershadowing, or else by robbing one another of their food and nourishment. The Iuice also, that with clipping and clasping bindeth trees too hard, hastneth their death. Misleto likewise doth them no good; no more than Cytisus, or the hearbe Auro, which the Greekes name Alimus, growing about them. The nature of some plants is, not to kill and destroy trees out of hand, but to hurt and offend them only, either with their smell, or else with the mixture and intermingling of their owne iuice with their sap. Thus the Radish and the Lawrell doe harme to the Vine if they grow neare vnto it: for surely the Vine is thought to haue the sense of smelling, and wonderfully to sent any odours: and therefore it is obserued in her by experience, That if shee be neare vnto Radish or Lawrell, shee will turne away and withdraw her selfe backward from them, as if shee could not abide their strong breath, but vtterly abhorred it as her very enemy. And vpon the obseruation of this secret in Nature, *Androcles* the Physitian deuised a medicine against drunkenesse, and prescribed his patients to eat Radish if they would not be overcome with wine. Neither can the Vine away with Coleworts or the Cabbage, nay it hateth generally all worts or pot-herbs: it abhorreth also the Hazell and Filberd tree; in such sort, as a man shal sensibly perceiue it to looke heauily and milke, if those plants aforesaid grow not farther off from it. And now to conclude and knit vp this discourse, would you kill a Vine out of hand? lay to the root thereof nitre or salt-petre, and alumne, drench it with hote sea-water: or doe but apply vnto it Bean cods, or the shales or husks of the pulse Ervile, and you shall soone see the operation and effect of a most ranke and deadly poison.

CHAP.

CHAP. XXV.

¶ Of many and sundry prodigies or strange tokens and accidents about trees. Also of an Oliue plot which in times past was transported all and whole, from one side of an high port way, to another.

IN this Treatise of the faults and imperfections incident to Trees, me thinks I should dowel to say somewhat of the supernatural occurrences in them obserued: for we haue known some of them to grow vp and prosper without any leaues at all. And as there haue bin Vines and Pomegranats seen to beare fruit, springing immediately from the trunk, and not from branch or boughs: so there haue bin vines charged with grapes, and not clad with leaues: and Oliues likewise had their berries hanging vpon them whole and sound, notwithstanding all their leaues were shed and gon.

Moreover, strange wonders and miracles haue hapned about trees by meere chance and fortune: for there was an Oliue once, which being burnt to the very stump, reuiued & came again: and in Beotia, certain Fig Trees, notwithstanding they were eaten and gnawn most piteously with Locusts, yet budded anew, and put forth a fresh spring. Also it hath bin marked, that trees haue changed their colour from black to white. And yet this is not alwayes a monstrous thing beyond naturall reason, and specially in such as come of seed, as wee may obserue in the Aspe, which eftsoues turneth to be a Poplar. Some are of opinion, That the Seruise Tree if it bee transplanted, and come into a hotter ground than is agreeable to the nature thereof, will leaue bearing, and be barren. But it is taken for no lesse than a monster out of kind, that sweet Apples and such like fruits should proue sowre, or sowre fruit turne to be sweet; as also that a wilde Fig Tree should become tame, or contrariwise. And it is counted for an vnluckie sign, if any Tree change from the better to the worse; to wit, if a gentle garden Oliue degenerate into the wilde and sauage: if a Vine that was wont to beare white grapes, haue now black vpon it; and so likewise if a Fig Tree which vsed to haue white Figs, chaunce afterwards to beare black. And here by the way I cannot forget the strange accident that befell in Laodicea, where vpon the arriual of King *Xerxes*, a Plane tree was turned into an Oliue. But if any man be desirous to know more of these and such like miracles, for as much as I loue not to runne on still and make no end, I refer him ouer to *Aristander* a Greek writer, who hath compiled a whole volume, and stuffed it full of such like wonders: let him haue recourse also to *C. Epidius*, a Countryman of ours, whose Commentaries are full of such stuffe: where he shall find also, that trees sometimes spake.

A little before the ciuil war brake out between *Julius Caesar* and *Pompey* the Great, there was reported an ominous and fearfull sight presaging no good, from out of the territory of Cumes, namely, That a great Tree there sunke down into the earth so deep, that a very litle of the top boughs was to be seen. Hereupon were the propheticall books of *Sibylla* perused, wherein it was found, that this prodigie portended some great carnage of men; and that the nearer that this slaughter and execution should be to Rome, the greater should the blood shed be.

A prodigious signe and wonder it is reputed also, when trees seem to grow in places where they were not wont to be, and which are not agreeable to their natures; as namely on the chapters of pillars, the heads of statues, or vpon altars: like as to see one tree of a diuers and contrary kinde growing vpon the top of another; as it befell about the city *Cyzicum* hard before the strict siege that was laid vnto it [by *Mithridates*] both by sea and land, where a Fig tree was seen to grow vpon a Lawrell. Likewise at *Tralleis*, about the time of the foresaid ciuill war, a Date tree grew out of the base or foot of a Colunne that *Caesar* Dictator caused there to be erected. Semblably at Rome also, twice during the war between the Romans and *K. Persus*, there was a Date tree known to grow vpon the lanterne or top of the Capitoll temple, foreshewing those victories and triumphs which afterward ensued, to the great honor of the people of Rome. And when this was by stormes and tempests ouerthrowne and laid along, there sprung vp of it selfe in the very same place a Fig tree, at what time as *M. Messala* and *Caius Cassius* the two Centors, held their Quinquennall solemn sacrifices for the assailing and purging of the city of Rome. From which time *Piso* (a renowned Historiographer and Writer of good credit) hath noted, that the Romans were giuen ouer to voluptuousnesse and sensuality, and that euer since all cha-

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* Or as some
rend, the head
of Iupiter
within the Ca-
pitoll.

stittie and honest life hath bin exiled. But aboute all the prodigies that were euer seen or heard, there is one that passeth, and the same hapned in our age, about the very time that *Nero* the emperor came to his vnhappy end and fall: for in the Marrucine territorie there was an olue garden belonging to *Vestius Marcellus* a right worshipfull knight of Rome, which of it selfe remooued all and whole as it stood, ouer the broad highway, to a place where lay tillage and earable ground: and the corn lands by way of exchange crossed ouer the said causey againe, and were found in lieu of the Olue plot or hortyard afore said.

CHAP. XXVI.

¶ *The remedies for the maladies and diseases of Trees.*

Now that I haue declared the diseases of Trees, meet it is that I should set down the cure and remedies thereto. Where this one thing would be first noted, That of Remedies, some be common to all trees, others appropriate to certain. Common be these following, To bare and cleanse the roots, to hil and bank them again; that is to say, to giue aire vnto the roots, & let the wind into them; and contrariwise to couer them, & keep both wind & weather from them: to water them, or to deriue & diuert water from them: to refresh their roots with the fat liquor of dung: to discharge them of their burden by pruning their superfluous branches. *Item*, to giue their humors issue, and as it were by way of phlebotomie to let them blood, and to skice and scrape their bark round about, in maner of scarification. To take downe their strength and keep them vnder that they be not too lusty & proud. Also, if the cold hath caught their buds or burgeons, & thereby caused them to look burnt, rough, and vnpleasant, to slick, polish, & smoothe them again with the pumy stone. These verily be the diuers helps to cure trees: howbeit, vfed they must be with great discretion, for that which is very good for one, is not so good for another: and some trees require this course, others that, to be taken with them. As for example, the Cypres tree cannot abide either to be dunged or watered, it hateth all digging and deluing about it, it may not away with cutting and pruning, it is the worse for all good physick, nay, all remedies to others are mischiefs to it, and in one word, go about to medicine it you kill it. All Vines, and Pomegranat trees especially, loue a life riuer sides, & desire to be watered, for thereby will they thrive and prosper. The Fig tree also it selfe is nourished and fed in waterie grounds: but the fruit that it beareth is the poorer by that means. Almond trees if they be plied with digging, will either not bloome at all, or else shed their floures before due time. Neither must any yong plants or trees newly grafted, be digged about their roots, before they haue gathered sufficient strength and begin to beare fruit. Most trees are willing enough to be disburdened of their superfluous and ouer-rank branches, like as we men can spare our nails to be pared, and bush of hair to be cut, when they be ouergrowne. As for old trees, they would be cut down hard to the ground, for finally they rise again of some shoot springing from the root, and yet not all of them. Regard therefore must be had, that none be so vfed but such (as we haue noted before) as are able of nature to abide it. For trees to be watered at the roots in the heate of summer, it is good, but in winter it is as bad. In the fall of the leaf it may be wholsom, it may also be hurtfull, and therefore the nature of the soile would be considered: for the grape-gatherer in Spaine meeteth with a good vintage, notwithstanding the Vines stand in a marish and fennie ground; howbeit in most parts of the world besides, it is thought good husbandry, to draine away from the roots the very rain water that falls from aboute in Autumne. About the rising of the Dog-star, trees desire most of all to be wel watered; and yet they would not haue too much thereof euen in that time, for in case their roots be ouer-drenched and drowned therewith, they will catch harm. Herein also the age of trees is to be respected, which in this case prescribeth what is meet and sufficient: for yong trees be lesse thirsty than others: also Custome is a great matter. For such as haue bene vfed vnto watering must not change their old wont, but they require most of all others to be vfed so still. Contrariwise, Those Trees which grow vpon dry grounds naturally, desire no more moisture than that which is needful. In the territory about Sulmo in Italy, and namely within the Liberties of Fabianum, the Vines which doe beare the harder and sower Grapes, must of necessitie be watered. And no manuaile, for the verie lands and Corne-fields vse to haue water let in vnto them. And here a wonderfull thing is to be obserued; This water cheriseth the Corne, but killeth all the hurtfull Graffe among: and the

A the riuer overflowing the lands, is as good as a weeding. In the same countrey the maner is in midwinter to open a sluice or draw vp their floodgates, for to ouerflow their vine roots with the riuer: and so much the rather, if either it be an hard frost, or snow lie vpon the ground: And why so? because the pinching cold should not burne them: and this they call there by the name of *Tepidare*, [i. to giue them a kindly warmth as in a stouue:] see the memorable nature of this only riuer, to be warme in winter, and yet the same in summer is so cold, that hardly a man can endure his hand in it.

CHAP. XXVII.

¶ *Of scarification or scarifying trees: also the maner of dunging them.*

Touching the remedies for blasting as well by heat as cold, I will treat in the booke next following. Meane while I cannot omit one manner of cure by way of Scarification. For when the bark is poore and lean, by reason of some disease or milke, so as it clogs together, pressing and binding the quick wood ouermuch, whereby the tree is as it were hide-bound, they vse to slit the same along with a very sharpe cutting hooke, guiding and gaping the edge thereof with both hands, that it goe not ouer-deep: and so by these incisions they doe open it, and as it were losen and enlarge the skin. Now, when this feat is wrought, the onely signe that it is wel don and good for the tree, is this, if the incisions in tract of time appeare wide, and the void place incarnate again and fill vp with a kind of callous substance, compounded of the sap, and wood together growing betweene. Whereby it appeareth, that in many cases the cure of mens maladies & the diseases of trees is very like: for that euen their bones also vse to be trepanized and bored through as well as ours. Also for to make sweet almonds of bitter, first the tree must be digged round about, and then boared thorough with an auger toward the root or butt end, whereby the waterish humor that runneth downward, may issue forth and passe away. Moreouer, if a man would discharge Elmes of their superfluous moisture, they must be pierced with a wimble, a little aboute the ground, as far as to the very heart or pith, if either they be old, or be perceiued to receiue ouermuch nutriment. In like maner the same excessive humor is let out of Fig trees by meanes of certaine light slits or gathes made in the barke, aslant or byas, in case it seeme to swell and be ouer-streight, and by this deuise they preuent the falling of their fruit.

D Generally, what trees soeuer beare Apples, or such like soft fruit without, if they chauce at any time to proue barren, that is to say, to put forth leafe only without any fruit, the vse is, first to make a clift in the root; then, to put a stone therein, that the edges meet not and rejoin againe; and so they become fruitfull. The same is practised in Almond trees also, but instead of the stone there must be a wedge of Oken wood driuen in. As for Pyrries and Medlar trees, those wedges must be made of Pine Torch-wood. Moreouer, if either vines or fig trees, be ouer-ranke of wood, it is very good to cut and skice the roots round about, and when they bee thus serued, to couer with ashes the said incisions: but then they must bee close couered with ashes and earth aloft. If ye would haue trees beare Figs at the later end of the yere, pluck off the first green figs so soon as they be somewhat bigger than Beans: for vnder them there will other come vp in the place, and be later ere they wax ripe. The same fig trees when they begin to spring leafe and look green, if the top-twigs of euery bough be cut off, become the stronger & more fruitfull by it. For as touching the ripening of Figges by Caprification, true it is, that there be certain flies like gnats engender in Greene figs, which are the occasion thereof, for when they are flown out, there are no graines or seeds found within: whereby it is euident, that they be turned into those flies. And when they do fly forth, so hasty they are to be gone, that many of them as they brake out, leaue either a foot or a wing behind them. Besides, another kind there is of gnats, which they call Centtine, for sloth and shrewdnesse like in al the world to Drone-bees, so mischieuous they be to the good flies or gnats indeed, that cause the Figs to ripen: for, when they kill, and die themselues when they haue done. Moreouer, there be certaine wormes like moths that ordinarily do much hurt to the graines or seeds within figs, and eat them quite: The only remedie against this vermine, it is to take a twig or imp of the Italian Lentisk tree, and to set or couch it with the wrong or top end downward, in the very same trench where the fig tree was planted, for to haue fig trees beare most plentifully, take ruddle or red-earth tempered wel with the lees or grounds of oile, after that the same is mixed with dung, poure it to the roots of the

trees when they begin to put forth leaues. Among wild Fig trees, the best be the black & those that grow in stonie grounds: for their Figges are fullest of cornes or graines within. And as for caprifigation, it would be practised after rain. And take this for a generall rule, That ye beware in any hand in curing of trees, least yee vse a mischeefe for a remedie, a thing that commonly happeneth by ouer many medicines, or the same not applied in due season: for as it is very good for trees, to cut and lop off their boughs where they grow too thicke: so to be hacking and mangling of them euery yeare, hurteth them as much. As for the vine, it requireth pruning once a yeare: but the Myrtle trees, Pomegranate, and Oliue trees, euery two yeares; because they will quickly spring againe a d shoot forth branches thicke. Other trees would not be lopped so often. Neither is it good to cut or prune any whatsoeuer it be, at the fall of the leafe. Nay, they are not so much as to be scraped, but in the pruning time, that is, in the Spring. All wounding of trees goes to the very heart, and hurt the quick, vnlesse it be of those parts that are superfluous. As great consideration there would be had in the manner of mucking them. No doubt, they loue dung well: but carefull heed would be taken first, that none be laid to the roots in the hottest season of the yeare. Item, That it be not Greene, but thoroughly rotten: lastly, that it be not ouer ranke nor stronger than is needfull, Swines dung burnes the root of vines, vnlesse it be five yeares old, or the vines stand in some place where water is at commaundement for to coole the excessive heat thereof. Also the filth of Tanners ooze and Curriers scrapings doe the like, if they be not well delaid with water. Likewise it must not be laid too thicke. The ordinarie proportion is thought to be for euery ten foot square, three Modij of dung. But herein no certaintie can be set downe: for the nature of the soile must rule all. With Swines and Pigeons dung, they vse to soulder the cuts and wounds that are giuen to trees. In case the Pomegranats grow to be tart and soure, the manner is to dig about the root and lay it bare, and then to put Hogs dung thereto: for that yeare the Pomgranats will be full of a wine iuice; and the next yeare following proue sweet. Some good husbandmen there be, that think it meet and requisit foure times a yeare to water their roots with mans vjine and there water together, and vpon euery one they bestow a whole Amphore. Or else to bedeaw and sprinkle the top branches of the Pomegranat trees with witte, wherein Laster hath bene steeped. When the pomegranat doth cleaue & open vpon the tree, it is good to wreath the steale therof. If Figs doe the like, there would be oile lees cast vpon them. Other trees when they are amisse or doe mislike, ought to be drenched with wine lees and Lupines if they be set about their roots, will helpe them. The water also or decoction wherein Lupines were foddren, poured about the roots of Apple trees or such like, doth them much good. If it happen to thunder about the feast Vulcanalia, Figs will fall from the tree. The remedie thereof is to strow the plots before with Barley straw. Would you haue hastie Cherries? Lay lime to the roots of the tree, it will cause them to ripen their fruit speedily. Of al fruits these hastie Cherries would be plucked and gathered as they ripen, to the end that those which be left behind, may thriue and grow big and faire.

CHAP. XXVIII.

¶ Many and sundrie medicines seruing for trees, to wit, remedies against venomous vermine and Pismires, likewise against all hurtfull beasts.

Some trees there be which are the better for wrong and injurie done vnto them: yea, and if they be pinched or bitten, they shoot vp the rather, as Date trees and the Lentisks, for euen the very salt water nourisheth them. And true it is, that ashes hath the like nature and vertue that salt, howbeit, more mild and gentle. Hereupon it comes also, that Fig trees vse to be strewed therewith, yea, and to be wet with the iuice of Rue, to the end, that neither their fruit should proue worm-eaten, nor their roots putrifie and rot. Moreover, if vines be too full of moisture and apt to bleed ouermuch, it is an ordinary thing to pour salt water to their roots. Also, in case their grapes be apt to fall, folk vse to take ashes and besprinkle them with vinegre, and so to besmeare the roots therewith: or els with red Orpiment, in case the grapes be giuen to putrification. Say that vines be barren and will not bear grapes, their roots ought to be wel drenched and dawbed with sharp vinegre and ashes incorporat together. But what if a vine bring not her fruit to full maturity, before it begin to wax drie and to wither? the superfluous wood ought to be cut away about the root, and the cuts together with the small strings or beard of the root to be

A be wet and soked in sharp vinegre, and stale chamber-lee, and then they should be well couered and stopped with a kind of mortar made therewith, and often digged about. As for Oliues, if they make shew of smal increase, their roots must be bared and laid open to the cold in winter; for by this manner of chastisement they will amend and do far better.

In all these remedies, proceed we must according to the course of the yere: for sometime the season requireth, that the meanes should be sooner vsed, and otherwhiles later. Some plants there be that fire is good for, and namely, canes and reeds: for if they be burnt, they will come vp againe the thicker and more smooth. As for Cato, hee hath certain compound medicines for trees, distinct by sundry measures by him prescribed: for he hath ordained to the roots of the greater trees an * Amphore, but of the lesse an * Vrna only, of Oile dregs, with an equall quantity of water: all which being tempered together, he would haue to be poured by little & little to the roots, but they ought before to be digged about and laid bare. And for the Oliue, he addeth moreover, that the roots should haue a bed of litter or straw made before, and then vsed accordingly. In like manner also would the fig tree be serued: but especially at the roots of it there should be raised a bank of old earth; for by that means it wil come to passe, that the green figs will not fall, they will beare more plenteously, and the fruit be more smooth and pleasant. To preuent in like manner, that the worne * Convolvulus bred not in a vine, hee appointed two gallons of oile dregs or lees, to be boiled first to the thicke consistence of hony, and then afterwards to take a third part of the slime Bitumen, and a fourth part of brimstone, and seethall together again in the open aire; for within dores there would be some danger of setting the house a fire. With this mixture, if a vine be well annointed about the ioints, and vnder their hollow arm-pits, he assureth vs, that there will no such worne breed therein. Some content themselves to perfume vines onely with the smoke of this composition, so as it be done on the winde-side, that it may carry the fume directly to them; and this should be continued for three daies together. Many are of opinion, that wine being mingled with like quantity of water (because alone of it selfe it is hurtfull) is as good for this purpose as the oile dregs abouesaid, which Cato hath prescribed. Another kind of vermin or worne there is, that gnaweth the tender buds or burgeons of the vine, and the same is called Volvox: to preserve vines from this harmefull creature, men are wont to take their vine-hooks when they be newly ground and sharpened, then to scoure them with a Beauers skin, and with them to prune the vines: or else after they be pruned, to annoint them with bears blood. Moreover, Ants or Pismires make foule work otherwhile among trees. If you would driue them away, daub the stock or butt end with red Sinopre and Tar tempered together. Or do but hang vp any fish neere by, and all the Pismires wil leaue their former haunt, and gather about it. Others make no more ado, but stampe Lupines with oile, and therewith annoint the roots. Many there are, who kill both them and Mouldwarps with oile dregs. Also, against Palmer-worms or Caterpillars, and to keepe Apples from rotting, they giue order for to annoint the top twigs and branch ends of trees with the gal of a green Lizard. But more particularly against the said caterpillars, they would haue a woman whilst her monthly sickness is vpon her, to go round about euery tree by it selfe, barefooted and barelegged, vnbraed and vnaced, and her haire hanging about her cares. Moreover, to preserve trees from wilde and noisome beasts, that none of them come neare to bruiise and marre their green spring, they doe appoint to bespreint their leaues with Greene Cow or Oxe shearne, and water together, betweene some showers, that the rain may wash away the malice and hurtfull quality of the medicine. A wonder to see how inuentiue men are to deuise remedies for euery mischiefe, for many you shal haue, who be verily persuaded, that there are certain charms & enchantments to driue away the haile. But for mine own part, I thinke it meere mockery to set downe the very words, although Cato hath done it before me. Who also speaketh of another spell for dislocations or members out of ioint (an accident happening to trees) which he would haue to be ioined close within the clift of canes. The same writer hath permitted men to cut down sacred groues, trees also dedicated for religion and sequestred from profane vse (after a solemne sacrifice to the gods first performed:) the reason and manner whereof he hath put downe in a certaine treatise, which hee compiled of purpose as touching that argument.

* Amphora, or Quatrant, was a measure Romane of liquor, containing 16 Congij which is about 16 wine gallons.
* Vrna, is halfe Amphora, to wit, 8 Congij, or thereabouts.
* Vine fire, or the Diuels gold-tinge.



THE EIGHTEENTH BOOKE OF THE HISTORIE OF NATVRE,

WRITTEN BY C. PLINIUS

SECVNDVS.

CHAP. I.

¶ Of the exceeding loue and affection of our ancestors in old time to Agriculture and Husbandrie. Also, of their singular paines and diligence about Gardens.

Now followeth the treatise of corn, of Gardens, and Floures, and generally of all things else, that by the goodnesse of Nature the Earth bringeth forth bountifully, besides Trees and Shrubs. The speculation whereof verily is infinit, if a man do but consider the number and variety of Herbes and Floures, together with their odors and colors; the diuersity also of their iuices, their seuerall vertues and properties, whether it be to cure men of their maladies, or to giue them pleasure and contentment to their senses. But before that I enter into this discourse, very willing I am to take in hand the cause of Earth (the common mother of vs all) and to assist her against all slanderous imputations, notwithstanding I haue in the beginning of this my worke pleaded once already in her defence. For when we looke into the matter within her contained, we are set on fire inwardly to find fault with her for breeding and bearing noisome things, charging vpon her our own faults, and imputing to her that, for which we of right ought to be blamed. Set case she hath brought forth poison and venom, Who hath searchad them out but man? As for the fouls of the aire and wild beasts, it is sufficient that they touch them not, nay they know how to beware and auoid them. For say that the Elephants doe file their teeth sharp against hard trees, say that the Rhinoceroses whet their horns against the rockes, and the wild Bores sharpen their edge tuskes against both stocke and stone: say that all creatures know well enough how to prepare and frubbish their weapons to do mischief, which of them all yet infect them with poison, but man alone? we haue the cast to envenome and poison arrowes; we can tell how to put something to our darts of yron and Steele, more hurtfull and mischieuous than they be. It is ordinary with vs to poison riuers also; yea & the very Elements whereof the world doth stand, are by vs infected: for euen the aire it selfe, wherein and whereby all things should liue, we corrupt to their mischief and destruction. Neither can we truly say or think, that other creatures besides vs are ignorant of these poisons; for we haue already shewed, that they are not to seeke either what defencatiues to provide against they should fight with serpents, or what remedies to find for their cure after they haue fought and are hurt. Moreover, setting man aside, there is no creature furnished or armed with any other venom, but their own. We cannot chuse therefore but confesse our great fault and deadly malice, in that we rest not contented with naturall poisons, but betake our selues to many mixtures and compositions artificiall, made euen with our owne hands. But what say you to this? Are not some men themselves meere poisons by nature; for these slanderers and backbiters in the world, what doe they else but lance poison out of their black tongues, like hideous serpents? what doe these enuious persons, but with their malicious and poisonfull breath sidge and burne all before them that they can reach or meet with, finding fault with euery thing whatsoeuer? Are they not well and fitly compared to these cursed fouls flying in the dark, which albeit they sequester themselves from

A from birds of the day, yet they bewray their spight and enuy euen to the night and the quiet repose thereof, by their heauie grones (the only voice that they vtter) disquieting and troubling those that be at rest: & finally, all one they be with those vnluckie creatures, which if they happen either to meet or crosse the way vpon a man, preface alwaies some ill toward, opposing themselves (as it were) to all goodnesse, and hindering whatsoeuer is profitable for this life. Neither do these monstrous and abominable sprites know any other reward of this their deadly breath, their cursed and detestable malice, but to hate and abhor all things. Howbeit, herein may wee acknowledge and see the wonderfull maiestie of dame Nature: for like as she hath shewed her selfe more fruitfull and liberall in bringing forth profitable and holefome plants, in greater plenty than hurtfull and noisome; so surely hath she furnished the world better with good men and vertuous for the weale publick. In which regard and consideration, we also taking no small joy and contentment (leauing these troublesome spirits to themselves for to broile and frye in their owne greace) will go on forward and proceed to declare the rest of Natures workes; and with the better resolution, for that wee seeke more pleasure and contentment in the paines and trauell that we take, than expect any fame or bruit of men afterwards. For why? we are in hand to speake of the countrey and countrie commodities, such as in old time like as they were most necessary for this life, so they were accounted and honoured most highly.

CHAP. II.

¶ Of the first guirland or chaplet made of herbes and floures at Rome.

The first order that K. *Romulus* instituted in Rome city newly built, was the guild or fraternitie of certaine Priests or Wardens ouer corn fields, which were in number twelue. And for to do the greater honour to this company, he caused himselfe to be called the twelfth brother among them: and *Acca Laurentia*, the nourse or foster-mother of this Prince, bestowed vpon him a garland of corn eares, twisted and tied together with a white ribband, as the most sacred badge and ensigne of this new Priesthood, which he and his brethren should weare with great reuerence and deuotion: and this was the very first chaplet known at Rome. Now the honor of this ornament was perpetuall, and continued for terme of life; so as a man once inuested therein, could not be degraded and deprived thereof, though hee were banished or taken prisoner; it accompanied him euer to his dying day. Then, and in those daies, euery man within the whole body of the people of Rome, contented himselfe with two acres of land, and King *Romulus* assigned to none of his subiects a greater proportion: whereas now ye shall haue those that erewhile were but slaues and seruants vnder the emperor *Nero* (despising as not sufficient, green enclosures and gardens of that compasse) must haue fish-pooles also bigger than so: and well it were if they would stay there and go no further, for shortly we shall see some one or other of them, neuer rest vntill he haue kitchins also more than two acres wide. And thus much for king *Romulus*.

King *Numa* his successor, ordained to worship the gods with an oblation of corne, yea and to offer prayers and supplications vnto them by no other means, than cakes made of salt and meal: yea and as *Hemina* mine author saith, for to induce the people of Rome the better vnto it, he allowed them to parch their corne in their sacrifices; for that corne thus parched, was supposed to be a more wholsome food: by which meanes, this one thing insued in the end, that no corne was counted pure and good, nor fit to be vsed in diuine seruice, but that which was thus baked or parched. He also instituted the feast *Fornacalia*; to wit, certaine holy daies for the parching and baking of corne: as also another as religiously obserued, called *Terminalia*; namely, for the bounds and limits of lands: for these and such like gods, as then, they worshipped most: as also the goddesse *Seia*, so called *as erendo*: [i. of sowing corne and setting plants:] and *Segesta*, which name they gaue her *as getibus*, [i. of corn fields:] whose images we at this day do see in the grand Cirque or Shew-place at Rome. A * third goddesse there is among them, whom to name and invoke within house, they might not with safe conscience. Lastly, so religious and ceremonious they were in old time, that they would not so much as taste of new corne or wine, before the Priests had taken a fey of the first fruits.

* *Teriam*, to wit, *Terminia*, for preferring of trees planted, and corne sowne: or as some reade (*Teritium*) meaning *Terminus*.

CHAP.

¶ *Of Iugerum, and Actus. Of the antient Lawes ordained for Cattell in old time. How often and at what time Corne and victuals were exceeding cheape at Rome. What noble and famous persons addicted themselves wholly to Husbandrie and Tillage.*

AN Acre or Arpen of ground, called in Latine Iugerum, was as much as might be eared vp or ploughed in one day with a yoke of Oxen. And Actus in Latine is a Land, or so much just as two Oxen are driuen and occupied in, whiles they plough in one tract without any rest. This contained by the old time, 120 foot in length: and being doubled in length, made the Acre or Iugerum abovesaid.

In antient time of the old Romans, the greatest Present that could be giuen to captains and souldiers who had borne themselves valiantly in the seruice of their countrey, was as much ground as they could have eared or broken vp in one day. And it was thought a great reward to receiue at the hands of the people of Rome halfe a pint (or a pint at the vtmost) of corn. Moreover, in so great request was corn and Husbandry, that the first and chiefe houses in Rome, took their syrnames from thence: and namely, the *Pilumni*, who deuised first the pestill to bray corne withall in their mills and backhouses: also, the family of the *Pisenes*, who tooke their name, a *pisendo*, [i. of stamping or pounding corne in a mortar.] The *Faby* in like manner, the *Lentuli*, and the *Cicerones*, each one according to the feuerall pulse that they skilled best to set or sow. Moreover, to the house of the *Iunij*, they gaue the syrname of *Bubulcus*, by occasion of one of their ancestors, who knew passing well how to vse and order oxen.ouer & besides all this, that you may know what regard was had of corn, among other sacred and holy ceremonies, there was nothing reputed more religious than the bond of Consecration, in knitting vp of mariages, & assurance making of the chiefe priests: yea, the manner of the new wedded brides was to carry openly before them a wheaten cake. In times past the Magistrates called Censors, iudged it a trespassse worthy of great rebuke, to be an ill husband; that is to say, to be careless and negligent in tilling the ground. And as *Cato* reporteth, if men called one by the name of a good husbandman, they were thought to haue praised & commended him in the highest degree: hereupon also it came, that rich and substantiall men were termed in Latine, *Locupletes*, as one would say, *Loci-pleni*, [i. wel landed.] And as for the very word *Pecunia* in Latine, which signifieth money, it took the name of *Pecus*, (i. cattell). And euen at this day (as appeareth in the Registers of the Censors, and the accounts of the oity Chamber) all their rents, reuenues, and customes growing vnto the people of Rome, are called *Pascua*; for that a long time the whole domaine of Rome, stood vpon pasturage and nothing els. The penalties and fines also, which offenders were put to pay, were raised of nothing else but of Kine, Oxen, and Sheep: where, by the way, I cannot conceale from you the fauorable regard that the antient lawes and ordinances of Rome had; whereby it was expressly forbidden, That no Iudge who had power to enioine or impose any paine and amercement, should name the fine of an Oxe, vnlesse he had passed that of a Sheep first. The solemne games and plaies also in the honour of Kine and oxen, they who frequented them, called *Bubetij*. Moreover, king *Seruius* at the first when hee made brazen coine, stamped the peeces with the portraiture of Sheepe, Kine, and Oxen. By the lawes of the twelue Tables, all persons whatsoeuer aboue foureteen yeares of age, were forbidden vnder paine of death, either by stealth, to feed their cattell in the night time vpon any corn-field of another mans, ploughed and sown; or to cut the same downe by syth or sickle at such a time, and in that manner. By the same laws also ordained it was, That whosoever was attaint or conuicted thereupon, should be hanged by the head and strangled for satisfaction of the goddessse *Ceres*: and in one word, to be more grievously punished than in case of man-slaughter. But if the offender were vnder that age before-said, the same law provided, that hee should be whipped at the discretion of the Pretor or Lord chiefe Iustice for the time being: or, if this punishment were remitted by the partie who sustained the damage, then hee should satisfie vnto him for the trespassse as a slave, and pay double for the losse, according as honest and indifferent men valued it. Furthermore, in antient time, the distinction of States and degrees in the city of Rome (both for wealth and worship) was according to their lands, and not otherwise. In so much, as those citizens were reputed for chiefe and principall, who were possessed of Land and liuing in the Countrey: and these made the State, called the Rusticke Tribes, in Rome: whereas contrariwise the other estate, reputed the

A the meaner in degree, was named the Vrbane Tribes; consisting of Artisans and such like as were not landed persons: into which, if a man were transferred from any of the rest, it was thought a great shame and disgrace, as if he were reproched for idleness & negligence in husbandry. And hereupon these foure Tribes alone took name of those foure principall parts or quarters of the city wherein they were seated, to wit, Suburrana, Palatina, Collina, and Esquilina. ouer and besides, vpon faires and market daies, the Rustick Tribes vsually visited the city: vpon which daies therefore no publick assemblies of the people were holden, to call the Commons away from their market affaires. Also the manner in those daies was to take their sleepe and repose in good straw and litter. Yea, and when speech was of glory and renowne, men would call it by no other term but *Adorea*, of *Ador*, a kind of fine red wheat. Where, by the way, I haue

B in great admiration the antique words of those times, and it doth me good to think how significant they were. For thus we read in the sacred Pontificall Commentaries of the high priests, *For the Augurie or solemne sacrifice called * Canarium, let there be certain daies appointed, to wit, before the corn shew care out of the hofe, yea, and before th at it come into it.* But to return againe to the praise of Husbandry. When the world was thus addicted and giuen to Agriculture, Italy was not only well provided and sufficiently furnished of corne, without any help from out provinces; but also all kind of grain and victuals were in those daies so exceeding cheape, as it is incredible: for *Manius Martius* a Plebeian Edile of Rome, was the first man that serued the people wheat at one Assle the Modius: and after him *Minutius Augurinus*, the eleuenth Tribune of the commons (euen he who indited that mutinous and seditious citizen *Sp. Melius*) brought down the price of wheat for 3 market daies to an Assle the Modius. The people therefore of Rome, in regard of this good deed of his, erected a statue for him without the gate Trigemina; and that with such affection and deuotion, that every man contributed somewhat thereto by way of beneuolence. *Trebius* also in the time of his Edileship, caused wheat to be sold vnto the people at the same rate, to wit, one Assle a Modius. For which cause, there were 2 statues also in memorial of him set vp, both in the Capitoll and also in Palatium: and himselfe when he was departed this life, had this honor done vnto him by the people; at his exequies, as to be carried on their shoulders to his funerall fire. It is reported moreover, That in the very same yeare wherein the great goddessse *Cybele* (called also the mother of the gods) was brought to Rome, there was a more plentifull harvest that Summer, and corn was at a lower price than had bin known in ten yeares before. Likewise, *M. Varro* hath left in writing, That when *L. Metellus* made shew of so many Elephants in his triumph at Rome, a Modius of good red wheat, was worth no more than one Assle; also a gallon of wine cost no more. And as for drie figges, thirty pound weight carried no higher price: and a man might haue bought a pound of Oile olue, and 12 pound of flesh at the very same reckoning. And yet all this plenty and cheapnesse proceeded not from the great domaines and large possessions of those priuate persons that incroched vpon their neighbors, and hemmed them within narrow compasse. For by the law published by *Stolo Licinius*, provided it was, that no Roman citizen should hold in priuat aboue fise hundred acres. The rigor of which law or statute was extended and practised vpon the Law-maker himselfe, and by vertue thereof he was condemned: who, for to possesse aboue that proportion, and to defraud the meaning of the said Act, purchased more lands in the name of his Son. Loewhat might be the proportion and measure of possessions allowed euen then, when as the State and Common-wealth of Rome was in the prime and began to flourish. And as for the Oration verily of *Manius Curius* after such triumphs of his, and when he had subdued and brought vnder the obeisance of the Roman Empire and laid to their dominion so many forein nations; what it was, euery man knoweth, wherein he deliuered this speech, That he was not to be counted a good man, but a dangerous citizen, who could not content himselfe with a close of seuen acres of ground. And to say a truth, after that the kings were banished out of Rome, and their regiment abolished, this was the very proportion of land assigned to a Roman Commoner. If this be so, What might be the cause of so great plenty & abundance aforesaid in those daies: Certes, this & nothing els, great L.L. and generals of the field (as it should seem) tilled themselves their ground with their own hands: & the Earth again for her part, taking no small pleasure (as it were) to be eared and broken vp with ploughes Laureat, and ploughmen Triumphant, strained her selfe to yeeld increase to the vttermost. Like it is also, that these braue men and worthy personages were as curious in sowing a ground with corne, as in ordinance of a battell in array: as diligent (I say) in disposing and ordering

ring of their lands, as in pitching of a field: and commonly every thing that commeth vnder good hands, the more neat and cleane that the vsage thereof is, and the greater paines that is taken about it, the better it thriueth and prospereth afterwards. What shall we say more? was not [C. *Attilius*] *Serranus* (when the honorable dignity of Consulship was presented vnto him, with commission to conduct the Roman army) found sowing his own field and planting trees, whereupon he took that surname *Serranus*? As for *Quintius Cincinnatus*, a purveyor or messenger of the Senat brought vnto him the letters patents of his Dictatorship, at what time as he was in proper person ploughing a piece of ground of his owne, containing foure acres and no more, which are now called *Prata Quintiana*, [i. *Quintius* his medowes] lying within the Vatican: and (as it is reported) not onely bare-headed was hee and open breasted, but also all naked and full of dust. The foresaid officer or sergeant taking him in this maner, Do on your cloths sir (quoth he) and couer your body, that I may deliuer vnto you the charge that I haue from the Senate and people of Rome. Where, note by the way, that such Purveyors and Sergeants in those daies were named *Viatores*; for that eftsoones they were sent to fetch both Senatours and Generall captaines out of the fields where they were at worke: but now, see how the times be changed! They that doe this businesse in the field, what are they but bond-slaues fettered, condemned malefactors manacled, and in one word, noted persons, and such as are branded and marked in their visage with an hot yron? Howbeit the Earth, whom wee call our Mother, and whom wee would seem to worship, is not so deafe and fencelesse, but the knoweth well enough how shee is by them deprived of that honour which was done in old time vnto her: in so much, as wee may well weete, that against her will shee yeeldeth fruit as shee doth; how soeuer wee would haue it thought, by these glorious titles giuen vnto her, that shee is nothing displeased therewith, namely, to be labored and wrought by such vile and base hirelings. But we forsooth do maruell, that the labor of these contemptible bondslaues and abiect villains doth not render the like profit, as that trauell in former times of great captains and LL. Generalls. And in very truth, euen among other forrein nations, it was counted a princelike profession indeed, to be able for to giue rules and directions about Husbandry: for so we may see, that both kings haue studied this argument, as namely, *Hiero*, *Philometor*, *Attalus*, and *Archelaus*: and also martiall captaines; to wit, *Xenophon*, and *Mago* the Carthaginian. As for *Mago* verily, our Senate did him that honour after Carthage was woon, that in sacking it and giuing away among diuers LL. of Affricke, the Libraries there found; they thought good to referue only 28 volumes of his, and penned by him as touching Agriculture, and io haue them translated into the Latin tongue (notwithstanding that *M. Cato* had already beforetime put out in writing and set forth certaine rules & precepts therof) giuing order for this translation, to those that were well seene in the Punicke or Carthaginian language: in which businesse, *D. Syllanus* a Romane gentleman of a right worshipfull house, went beyond all others. As for great schollers and men of profound and deep learning, a number there were besides that trauelled in this matter, whom wee haue named already in the forefront; and eftsoones shall mention in the discourse of this volume. In which range we must nominate not vnthankfully among the meanest writers, *M. Varro*, who being fourescore yeares old and one, thought it not amisse to compile a speciall booke and treatise of Husbandry.

CHAP. III.

¶ The manner of Husbandry in ancient time.

Late it was ere the Romans began to set their minds vpon Vines and Vineyards: for at first they tilled only corne fields for very necessitie, euen as much as might suffice to serue the city. The order and manner whereof, I will set in hand to treat of; not after a vulgar and common sort, but according to my vsuall manner hitherto more soundly: as hauing sought out with all care and diligence, not onely the ancient practise in times past, but the inuentions also of late daies; & withall searched into the causes and reasons of every thing, and found them out. My purpose is besides, to speake in this treatise of the fixed Starrs; their rising and setting, M their apparition and occultation, together with their influences, as they are vndoubtedly obserued and seen here vpon earth. And this, my meaning is to do after a plain and familiar sort, forasmuch as they, who hitherto wrote of this argument, haue handled the same so subtilly, and penned

A penned it with so high a stile, as they may seeme to any man for to haue written books for Oratours to read, rather than to the capacity of plaine husbandmen for to practise. First and foremost therefore, I will for the most part deale by Oracles, that is to say, sententious Sawes, for to determine this question in hand: concerning which, there are as many to be found in number, and those as true in effect, as in any other part and profession of this our life whatsoeuer. And least any man should thinke it strange, that I call these rules of Husbandrie, Oracles; who would take them for lesse considering how they proceed from Time, a god most certaine, and are deliuered and approoued by Experience, the truest prophet of all others. And beginne I will with *Cato* first.

CHAP. V.

B ¶ The praise and commendation of Husbandmen: what things are to be required in the purchasing or taking to ferme of horse and land.

The children (saith *Cato*) that are begotten by husbandmen, proue most valiant, the hardest souldiers, and such as thinke least harme of all others. In buying of land, take heed you be not too hot and eager vpon the purchase. In the husbanding of ground, spare for no paine and trauell; but in the purchasing thereof be you nothing forward: a thing ouer-bought, hath euer more repentance, and had I wist, attending vpon it. They that are about a purchase, ought about all, to see how the ground is watered, what waies and auenues be about it, and what neighbors be neare vnto it. Out of every one of these points, matters of great importance and deepe conclusions may be picked, and those most certaine and infallible. *Cato* addeth moreover and saith, That there would be good regard had of the people conuining, and other grounds bounding thereupon, whether they be well liking, faire, and trim to see vnto? For these be his words, It is a good signe (quoth he) that the ferme is well seated and in a commodious quarter, if all about looke well. *Attilius Regulus* (hee who during the first Punicke warre was twice Consul of Rome) was wont to say, That a man should not purchase an vnwholesome piece of land, were it neuer so rich and fruitful, nor make choice of a barren soile, were it neuer so healthie. Now as touching the healthfulness of a place, a man may not alwaies conclude thereof by the color and fresh hue of the inhabitants: for many times it falleth out, that those who be vsed to pestilent places, hold out well and haue their health; yea and by their looks bewray no harme that they take. Moreover, some quarters and coasts there be, which at some times of the yeare stand found and healthy enough; but I will count none holisome, but such as be healthfull all the yere long. An ill piece of land is that, which putteth the lord thereof to pain, and with which he is forced to wrestle for to haue his health. *Cato* would haue this point especially to be considered, that the soile of a ferme (scitnat as hath bin said) be good of it selfe, and fertile: also, that neere vnto it there be store of laborers: and that it bee not farr from a good and strong towne: moreover, that it hath sufficient meanes for transporting of the commodities which it yeeldeth, either by vessels vpon water, or otherwise by waies vpon the land. Furthermore, that the manour house be well built, and the land about it as well husbanded. Howbeit, herein I see many men to erre much, and greatly to be deceived: for they hold opinion, that the negligence and ill husbandry of the former lord, is good for him that shall purchase land and come after him. But I say, there is nothing more dangerous and disadvantageous to the buyer, than land so left wast and out of heart: and therefore *Cato* giueth good counsell, to purchase land of a good husband, and not rashly and hand over head to despise and set light by the skill and knowledge of another. Who saith moreover, That as well land as men (which are of great charge and expence) how gainfull soeuer they may seeme to be, yeeld not much profit in the end to the master declarer, when all counts be cast and reckonings made. He therefore judgeth, that the Vine yeeldeth the best reuenue, of all commodities belonging to a ferme: and good reason he hath so to say, because about all things he taketh order to cut off expence as much as may be. Next to it, he reckoneth Hort-yards, such especially as haue water at command: and good cause why, provided alwaies that they lie vnder a good towne side. [In the third place he rangeth the Olive plets, and after them Olive reues:] then he counteth of medows, which our ancestors called *Parata*, as a man would say, Ready and provided. The same *Cato* being asked, What was the most assured profit rising out of land made this answer, To feed Cattel well: being asked againe, What was the next? *Cato* (quoth hee) to feed in a meane. By which answers he would seeme to conclude, That the

most certain and sure reuenue was that, which would cost least. Howbeit, this is not so general a rule, but it may alter according to the diuersitie of places, & sundry occasions occurrent. Herunto also is to be referred another speech of his, That a good husbandman ought to be a seller, [and not a buyer:] as also, That a man should make speed in his youth, and not delay to plant and stocke his ground; but not to build thereupon, before it be well and thoroughly stored that way: and euen then also, he should not be forward thereto, but take leisure ere he be a builder: for it is the best thing in the world (according to the common prouerbe) To make vse and reap profit of other mens follies: provided alwaies, that a mans land be not ouer-built, lest the experience of keeping all in good repaire, be chargeable and burdensome. Now when there is a sufficient and competent house builded thereupon, a good husband will vse to repaire often thereunto, and take pleasure so to do: and verily a true saying it is, That the lords eie is far better for the land, than his heele.

C H A P. VI.

¶ How to chuse a convenient place for to build a manour house in the country. Also certain rules obserued in ancient time, as touching Husbandrie and tilling ground.

IN building vpon a mans land, this mean and moderation is commended, That the house be answerable in proportion to the ground: for as it is a bad sight to see a large domain and circuit of ground without a sufficient graunge or home-stal to it; so it is as great a folly to ouer-build the same, & to make a faire house where there is not land enough lying to it. Like as there were two men at one time liuing, who faulted diuersly in this behalfe; to wit, *L. Lucullus* and *Q. Scauola*, for the one was possessed of faire lands without competent building thereto, whereas *Lucullus* contrariwise built a goodly house in the country, with little or no liuing adjoyning to it: in which regard, checked he was by the Censors, for sweeping more floures than he ploughed lands. Now in building, there would be art and cunning shewed: for euen of late daies *C. Marius* (who had bin seuen times Confull of Rome) was the last man that built an house within the territory of the cape Misenum, and he seated it so, as if he had pitched & fortified a camp right skilfully; in such sort, that when *Sylla* (named *Felix* [i. Happy]) saw his manner of building, he gaue out and said, That all the rest in comparifon of him, were blind beetles, and knew neither how to build nor to encamp. Well then, a house in the country would be set neither neere vnto a fenny and doimant water, ne yet ouer-against the course and stream of a running riuier; and yet what faith *Homer* besides to this purpose? The aire and mists (quoth he, and that right truly) arising from a great riuier betimes in a morning before day-light, cannot chuse but be euer cold and vnholosome. How then? may if the country or climat be hot, an house must stand into the North; but in case the quarter be cold, it ought to affront the South: if the tract be temperate between both, it should lie open vpon the East point, where the Sun riseth at the *Æquinoxes*.

As touching the goodness of the soile, and namely what signes and marks there be of it; although I may seem to haue sufficiently spoken already, in the discourse which I had of the best kind of ground, yet I am content to subscribe to other tokens thereof deliuered by other men, and especially by *Cato* in these words following: *When you see* (quoth hee) *growing vpon any land,* [store of *Walwort*, *Skeg* trees, *Brambles*, the little wild *Bulbous* *Crow-toes*, [called other wise our Ladies *Cowslips*] *Chauer-grasse* or *Trifule*, *Melilot*, *Oke*, wilde *Pyrries*, and *Crab-trees*: know ye, that these doe shew a ground good for *Wheat*, and such like white-corne. So doth also the blacke mould and that of a fleshe colour, testifie no lesse. Where there is store of chalke or plaister, the ground is not so fit for corne; for all kinde of chalke doth heat ouermuch, vnlesse the same be very leane. The like doth stand also, if it be not passing fine and small. And the effects abovesaid are much more seen in the plaines and champaine vallies, than vpon the hills and mountaines. Our ancestors in old time thought it a principall point of Husbandrie, not to haue ouermuch ground about one graunge: for they supposed more profit grew by sowing lesse, and tilling it better: of which mind I perceiue *Virgil* was. And to say a truth, confesse we must needs, That these large enclosures and great domains held by priuat persons, haue long since bin the ruine of *Italie*, and of late daies haue vndone the provinces also thereto belonging. Six Land-lords there were and no more, that possessed the one moitie of all *Africke*, at what time as the Emperour *Nero* defeated and

* *Laudato in-
gentia vray,
Exiguum coli-
ta*

A and put them to death. Where, by the way, I may not defraud *Cn. Pompeius* of the due glory answerable to that greatnesse of his, who neuer in all his life would purchase any ground that bordered vpon his owne land. *Mago* thought it no reason, but a very vngentle and vnkind part for the buying of land, to sell a mansion house; and in his conceit, it preiudiced much the weale-publick. And verily this was the principall point that he recommended in the entrance of his treatise and rules set downe for Husbandrie, so as a man might perceiue very euidently, that hee required continuall residence vpon the land. Next to these principles aboue named, great regard would be had in chusing of good & skilful bayliffs of the husbandry, concerning whom *Cato* hath giuen many rules. For mine own part, it shal suffice to say thus much only, that the lord ought to loue his bayliffe very well, & set him next to his heart: but himself should not let him know so much. Moreover, I hold it the worst thing that is, to set slaues & condemned persons in their gynes & chains, about tilling and husbanding of a ferme: neither do I like of any thing don by such forlorne and hopelesse persons; for lightly nothing thrives vnder their hand. I would put down one saying more of our ancient forefathers, but that haply it may seeme a fond & rash speech, yea and altogether incredible, & that is this, *Nothing is lesse profitable, & expedient, than to labor a ground exceeding much, and to ouer-till it.* *L. Rarius Rufus*, a man of very bafe and low parentage descended, & yet aduanced to the Consular dignity for his prowesse in feats of arms; was otherwise very thrifty and sparing, after the maner of the old world; inso much as partly by his niggardise and partly through the liberality of *Augustus Caesar*, he had gathered good together amounting to the sum of an hundred millions of Sesterces: all which masse of money, **C** what with purchasing land to land in the Picene country, and what with bestowing such a deale of husbandry vpon it, more ywis of a vain glory and ostentation, than for any profit that he reaped thereby, he laid forth and spent euery whit of that stock; inso much as hardly he could finde any man that would take vpon him to be his executor, or to accept simply of the inheritance. What shall we say then? or what good commeth of such houses or lands so chargeable, as that they are like to cost a man his life, and that by famine? I hold therefore, that in all things a mean is best, and bringeth greatest profit in the end. To till and husband ground well, is necessary; to ouer-do the same and to exceed, turneth more to the damage than the profit of the lord, vnlesse it were done by his own children, or to maintain the charge of keeping such hinds as otherwise must be found if they sat still and did nothing: for setting that cause aside, it falleth out oftentimes, that the gathering and inning of some harvest (if a man count all the pains employed and the mony of the purse) is nothing beneficial to the master. In like maner, Oliues would not alwaies be tended and looked vnto ouermuch: neither do some grounds require much diligence, but are the worse for such attendance: as may be seen (by report) in *Sicily*; which is the cause that new commers thither for to be tenants, and to occupy those lands, are many times deceived and put besides their reckoning.

After what manner then shall we proceed in the husbandry of our land to most benefit and behoofe? Learn a rule out of the Oracle or sententious riddle, which goeth in this forme, *Malis bonis* [i. Cheapest, Best.] But herein, me thinks, good reason it is, that our old great grandfathers should be defended and excused for holding these strange and obscure paradoxes; they (I say) who by such rules and precepts, tooke great care and paines to instruct vs how to liue. Would you know then what they meant by this word *Malis*? surely they vnderstood, those that were cheapest and stood them in least. The chiefe point of all their prouidence and foresight, was to goe the nearest way to worke, and to be at the smallest cost: and no maruell; for who were they that gaue out these thrifite precepts? euen those, who reproched a victorious General (and one who triumphed ouer the enemy) for hauing a cupboard of siluer plate weighing but ten pound: those (I say) who if their bayliffes of husbandrie chanced to die, whereby their lands in the countrey stood void, would make suit to be gone themselves thither, and to return to their own fermes; leaving behind them the glory of all their victories by them atchieued: and to conclude, euen those who whiles they were imploied in the conduct of armies, had their grounds **F** looked vnto and tilled at the charges of the common-weale, and had no other for their bayliffes than the noble Senators of Rome. From their mouths came these other oracles and wise sentences following: An ill husband is he, who is forced to buy that, which his ferme might afford him. As bad is that housholder & master of a family, who doth that in the day which might be don by night, vnlesse vnseasonable weather driue him to it: worse than either of these is he, who

doth that vpon work-daies which should haue bin done on play daies or idle holidiaes: but the worst of all other is he, who when the weather is fair, will chuse to work rather within close house than abroad in the open field: & here I cannot hold and rule my selfe, but I must needs alledge one example out of ancient histories, whereby it may be vnderstood, How it was an ordinary matter to commensate actions and to maintaine pleas in open court before the body of the people in the case of Husbandry: as also in what sort those good Husbandmen of old timewere wont to defend their owne cause when they were brought into question. And this was the case. There was one *C. Furius Crepinus*, late a bond-slave, and newly enfranchised, who after that hee was set at liberty, purchased a very little piece of ground, out of which he gathered much more commodity than all his neighbors about him out of their great and large possessions: whereupon he grew to be greatly enuied and hated; inso much, as they charged him with indiret means, as if he had vsed forcery, and by charmes and witch-craft drawne into his owne ground that increase of fruits, which should otherwise haue growne in his neighbors fields. Thus vpon complaint and information giuen, he was presented and indited, by *Spurius Albinus*, an *Edile Curule* for the time being: and a day was set him down peremptorily for his personal appearance to answer the matter. He therefore fearing the worst, and doubting that he should be cast to pay some grievous fine; at what time as the Tribes were ready to giue their voices, either to acquit or condemne him, brought into the common place his plough, with other instruments and furniture belonging to husbandry: he presented likewise in the open face of the court, his owne daughter, a lusty strong lassie and big of bone; yea, and (as *Piso* telleth the tale) well fed, and as well clad: he shewed there (I say) his tooles and plough yrons of the best making, and kept in as good order; maine and heauy coulters, strong and tough spades, massie and weighty plough-shares, and withall his draught Oxen, full and faire. Now, when his course came to plead his owne cause before the people, and to answer for himselfe, thus he began and said: My masters (quoth he) you that are citizens of Rome, behold, these are the forceries, charmes, and all the enchantments that I vse (pointing to his daughter, his oxen & furniture abouenamed:) I might besides (quoth he) alledge mine owne traueil and toyle that I take, the early rising and late sitting vp so ordinary with me, the carefull watching that I vsually abide, and the painefull sweats which I daily indure; but I am not able to represent these to your view, nor to bring them hither with me into this assembly. The people no sooner hard this plea of his, but with one voice they all acquit him and declared him vnguiltly, without any contradiction. By which example verily, a man may soone see, that good husbandrie goeth not all by much expence; but it is pains taking and careful diligence that doth the deed. And hereupon came the old sayd saw, so rise in euerie mans mouth, that the only thing to make ground most fertile and fruitfull, is the Masters eie. As for all other rules and precepts of Agriculture, respectiue to this or that peculiar point of husbandry, I will deliuer them in their proper places accordingly. And in the meane time I will not omit such as be more generall, as they shal come into my mind and remembrance. First and formost, there offereth it selfe to me one about the rest, whereof *Cato* is the Author, and which of all others I hold to be most profitable and founding to ciuilitie; to wit, that in all our doings we aime at this, To haue the loue and good will of our neighbors: and that for many and sufficient reasons by him alledged, which I suppose no man will make any doubt of. *Imprimis*, hee giueth a good caueat, That our seruitors and people about vs be not surewd, but well ordered, and that none of our family be ill disposed to offer any wrong. *Item*, All good husbands agree in this, that nothing would be done too late and when the time is ouerhipt. And againe, That euery worke should haue the due and conuenient season: to the same effect there is a third admonition, namely, That when the opportunity is once past, in vaine we seek to recall and recover it. As touching a rotten and putrified ground, we haue at large shewed already how much *Cato* doth abhor and curse it. And yet he ceaseth not to forewarne vs of it, and besides, to giue vs these rules following. What work soeuer may be performed by a poore Asse, is thought to cost little or nothing, and to be done very cheape. Ferne or Brake will die at the root in two yeares, if you wil not suffer it to branch and grow aboue ground: and this shall you hinder most effectually, in case you knap off the head of the first spring with a wand or walking staffe: for the liquid iuice dropping downe from them, doth kill the root. It is commonly said also, that if they be pulled vp about the summer Sun-stead, they will not come againe but die: as also, if they be topt, or their heads whipt off with a reed: or if they be eared vp with the plough, so as there be a reed fastned to the share.

A share. Semblably, for to kill reeds, they giue order to plough them vp, with some Fern likewise laid vpon the share. A rushe ground must be broken vp and turned ouer & ouer with the broad spade: but if it be stony, it would be digged with a mattock or two tined fork. Rough grounds and giuen to beare shrubs, if a man would stork, the best way is to burne them vp by the roots. If the place lie low, and be ouermoist, the onely meane to make it sound and drie, is to draine away the water by trenching. In case a ground doe stand vpon chalke or plaister, the ditches or trenches therin should be left wide open: but if the soile be more loose & not so fast, they must be strengthened and kept vp with quick-set hedges, for feare of falling: or else they ought to be made in such sort, as both the sides thereof be well bedded and couched, bearing out a belly a slope, and not digged plum downe-right. Some would be closed vp aboue and made very strait and narrow, for to run directly into others that are more wide and large: also, if occasion doe so require, the bottome of their channell would be paved with pebble, or laied with good grauell. As for the mouth and end thereof (to wit, for entrance and issue) they ought both of them to be fortified and vnderfet with two stones at either side, and a third laied crosse ouer them. Last of all, if a ground run to wood and be ouergrowne therewith, *Democritus* hath taught vs the means how to kill the same in this manner, Take Lupine floures, let them be steeped one whole day in the iuice of Hemlock, and therewith besprinkle and drench the roots of the shrubs that ouer-run the place, and they will die.

CHAP. VII.

¶ Sundry sorts of corne, and their severall natures.

C Now that we haue thus shewed the way how to prepare a field for to beare corne, it remaineth to declare the nature of corne. And to speake generally of all graine, there are two principall kinds thereof; to wit, first Fourment, containing vnder it wheat and Barley, and such like: secondly, Pulse, comprising Beans, Pease, Chiches, &c. The difference obserued both in the one sort and the other, is so euident and plaine, that needlesse it is for me to vse any words thereof. And as for the former kind called Fourment, it is diuided also into sundry sorts, according to the severall seasons wherein they be sowne. First there is the Winter corn, which being sowed about the setting of the star Virgilia, i. in Nouember, lieth all winter long in the ground and there is nourished, as for example, Wheat, Rie, and barley. Secondly, Summer corne, which is put into the earth in Summer about the rising of the foresaid star Virgilia, i. The Brood-hen, to wit, in May; namely, Miller, Panick, Horminum, and Irio (two kinds of grain.) But note that I speak here of the manner vsed in Italy. For otherwise in Greece and Asia, they sow all indifferently at the retreat or occultation of Virgilia: and to come againe to our Italy, some grain there is which is sown there, both in Winter and Summer: as also, you shall haue other corne sowed in a third season; to wit, in the Spring. Some there be who take for Spring-corn, Miller, Panick, Lentils, eich Pease, and the grain whereof * Fourmenty is made. But Wheat, Barley, Beans, Nawes, Turneps, and Rapes, they hold for Sementina, i. to be sowed at the proper and timely season of seed, in Autumne. In that kind of corne which comprehendeth Wheat, there is to be reckoned that grain which serueth for prouender and forrage, and is sown for beasts, & namely, that which they call dradge or ballimong. Likewise, in the other kind, to wit, of Pulse, the Vetches be comprised: but that which is good indifferently both for man and beast, is the Lupine. All sorts of Pulse called in Latine Legumina, vnlesse it be the Bean, haue but one root apiece, and such be as hard as wood, and full of shoots, and those diuided into forked branches: and the roots of the eich Pease run deepest into the ground. But all other corne vnder the name of Frument, haue many small fillers or strings appendant to the roots & otherwise branch not: as for Barley, whichereth and begins to shew within 7 daies after it is first sowne. All sorts of Pulse appeare aboue ground by the fourth day or the fifth at the vtmost. And yet Beans ordinarily do lie in the ground 15 or 20 daies. Howsoeuer in Egypt all Pulse commeth vp by the third day. In Barley one end of the seed runneth to root downward, and the other into blade, and that * bloometh first. Now, if you would know which end serueth for the one and the other; certaine it is, that the bigger and thicker part of the grain yeeldeth root, and the smaller the greene blade. In all other seeds there is no such diuersitie, for from one and the same end breaketh out both root and greene blade. All kind of corn carying spike or eare, called Frumenta, shew nothing but the green blade during winter: howbeit, no sooner commeth the spring, but they begin to grow vp

Bbb 3

into

* No maruell being sowed before winter.

into straw, and to spindle vppward pointwise, I meane all that be of the winter kind. But Millet and Panick run vp into an hollow item full of knots and ioynts: and Sefama by it self into a kex or hollow stem in maner of fenell and such like. The fruit or seed of all graine that is sowne or set, is contained within eares, as we see in (bearded) wheat and barley, and the same is defended as it were with a palisade of eales, disposed square in foure ranks; or is inclosed within long cods and husks, as the Pulse kind, or els lieth in little cups, as Sefame and Poppie. Millet and Panick only put forth their fruit grape-wise and openly, without any partitions and defences, so as their seed is exposed to the little birds of the aire: for no otherwise are they defended, than within small skins and thin husks. And as for Panick, it taketh the name of certain panicles or chats hanging from the top thereof, whereby the head bendeth and leaneth downward, as if it were weake and wearie of the burden. The stem or stalk thereof groweth smaller and smaller, and pointed vppward: in so much as by little and little it runneth vp in maner of a little sprig, or sion, and there you shall see a number of seeds or grains clustered together thicke, in so much as they are sometimes bunched with an head a good foot long. As touching the Millet, the head thereof bearing seed round about is bent likewise and curbed, beset also with fringes, as it were, of hairy fillets. But to return to Panick againe, there be sundry sorts thereof: for some of it is found with a tuft or bunch, from which depend certain small clustered chats or panicles, & the same also hath two knaps or heads, and this is called Mammofum, as one would say, the Panick with bigs or dugs. Moreouer, you shall haue Panick seed of sundry colours, white, blacke, and red, yea and purple. Of Mill or Millet there be diuers sorts of bread made in many places; but of panick it is not so common: howbeit there is no grain more ponderous and weighty than it, or which in the seething or baking swelleth and riseth more; for, out of one Modius or pecke thereof there is ordinarily made 60 pound of dough for bread. Moreouer, take but 3 sextares or quarts of it being steeped, and it will yeeld a measure called Modius, of thicke gruel or batter, called in Latine Puls. It is not fully ten yeres since there was a kind of * Millet brought out of India into Italy, and the same was of colour black, the seed or grain in quantitie big and faire, and for stem like vnto a reed. It riseth vp in height seven foot: the stalks are mighty and good, some call them Lobæ or Phobæ. Of all sorts of corne it is most fruitfull, and yeeldeth greatest increase: for of one grain a man shall haue 3 sextars or quarts again. But it loueth, yea & ought to be sown in a moist soile.

* Turkish Millet.

Moreouer, some kinds of spiked corn begin to spindle and gather eare at the third ioynt, others at the fourth: but there it lieth as yet hidden and inclosed. Now as touching these jointed wheat beareth usually foure, beere Barly six, and the common sprit Barly eight, which is well to be considered: for no corn vseth to spier before it be fully knotted or iointed in maner abovesaid. And so soon as the said spier sheweth some hope of an eare, within 4 or five daies after at the most, they begin to bloum: and in as many dayes space, or little more, they will haue done and shed their floures. And yet I must needs say, that all sorts of barley are a seven night at the vtmost in so doing. *Varro* saith, that in foure times 9 daies this kind of corn cometh to perfection: but it ought to stay nine moneths before it be ripe for to be reaped and mowne downe. As for Beanes, after they be set or cast into the ground, first they put forth leafe, and afterward stalk, that shooteth vp euen, without any partition of ioynts or knots between. All other pulse besides the Bean, haue a more folliid and woody substance in the straw. Of which, the Chich pease, the Ervile, and Lentils doe spread forth in branches. And some of them runne so low that they creep along the ground, vnlesse they be born vp and supported with some props, as for example Pease, which help if they misse they proue the worse for it. Of all manner of Pulse, the Bean alone and Lupine beare but one single stalke apiece: the rest doe branch into very small sprigs or tendrils. Howbeit none of them but their stalke or straw is fistulous and hollow in maner of reeds. Some pulse put out leaues presently from the root: others again from the top or head only: wheat and Barly both the one and the other: and what corn soeuer standeth vpon a stalk, beareth one leafe in the head or top thereof. But the leaues of Barly are rough, whereas in other corn they be smooth. Contrariwise, Beanes, Chiches, and Pease haue many leaues. In spiked corn the leafe resembleth that which groweth to reeds: in beans they be round, and so likewise in the most kinds of puls, howbeit in pease and Ervile we see they be somewhat longer. The leaues of Fafels or Kidney beanes are ribbed and full of veines: of Sefama and * Irio they be red and resemble blood. The Lupines only and the Poppies do shed their leaues. All pulse

* Turkish corne.

- A pulse is long in the bloom, and namely Ervile and the Chich pease: but Beanes continue longest, euen for the space of 40 daies together: howbeit euery single stalk beareth not bloom so long: but thus it is, as one hath done and giuen ouer, another beginneth a fresh. Neither bloumeth the whole field at once, as spiked corn doth. Also, all kinds of Pulse doe cod at sundrie times, and not vpon the same day: beginning first at the bottome, and so likewise the floure riseth vp higher by little and little. All come growing in spike or eare, so soone as it hath done blooming, waxeth big and strong, and cometh to maturitie within forty daies at the farthest: so doth Beanes also: but the Chich pease receiueh her full perfection in very few daies: for from the time that it was first sowed, it groweth to be ripe in forty daies. Millet, Panick, Sefame, and all Summer corn, haue their full ripenesse forty daies after their blooming. But herein there is great diuersitie, according to the clyme and the soile: in which respects corne ripeneth sooner or later. For in *Ægypt* Barley is readie to be reaped in the sixt moneth after it was sowne, and Wheat in seuen: but in the region of *Hellas* in *Greece*, the Barley tarieth seuen moneths; and in *Peloponnesus* or *Morea*, eight. As for wheat and such like hard corne, longer it is ere it be ripe and ready for the fycle. All Corne that groweth aloft vpon a stalke or straw, beareth the graines arranged spikewise, and as if they were plaited and braided like a border of haire. In Bean stalks and other such like pulse, the cods grow in alternatiue course, some on the right side, others on the left, in order. Wheat and such like spiked corne withstand the winter cold better than Pulse: but these yeeld a stronger food, and fill the belly sooner. Wheat, Rie, and such like grain are well wrapped within many tunicles. Barley for the most part lieth bare and naked: so doth *Arinca* [i. a kind of Rice or Amel corn] and Oats especially. The straw of wheat and Rie is commonly taller than that of Barly. But the eiles of Barley are more rough and prickie than those of the other. Pol-wheat both red and white, yea and Barley also, is threshed and driuen out of the husk vpon a floore, and being thus threshed clean and pure, it is either ground or sowne againe without any parching or drying in a furnace. Contrariwise, the Beare corne of Bearded wheat, Far, Millet, and Panick, cannot possibly be made clean, vnlesse they be first sendged and so dried. These sorts of graine therefore vse to be sowed raw and rude with their very husks: like as the Beare corn or bearded Far men are wont to keep still inclosed within the husk against seed time, and neuer parch or dry it at the fire. Of all the sorts of grain before rehearsed, Barley is the lightest; for a Modius or pecke thereof seldome weigheth about 15 pounds, whereas the like measure of Beanes posseth 22. The bearded corne Far is yet more ponderous than it; and Wheat more than all the rest. In *Ægypt* they vse to make certain frumentie meat or naked grotes of a kind of Rice or white Amel-corn, called *Olyra*, which is among them holden for the third sort of Spike-corne. In *Gaul* likewise they haue a kinde of frumentie corne or gurts by themselves, named in their language *Brance*, and with vs in Italy and about *Rome*, *Sandalum*: this grain is of all others most neat and faire, and this singular propertie it hath besides different from the rest. That ordinarily in euery measure called Modius, it yeeldeth more bread by foure pound weight than any other corne husked and dressed in maner aforesaid. *Varro* reporteth, That the people of *Rome* for 300 yeres together vfed no other meat than the grotes made of common Wheat. And as touching Wheat, there be many sorts thereof, distinguished by the names of the Regions and countries where they be found growing. Howbeit for my part I thinke verily, that there is no wheat in the world comparable to ours, here in Italy, for it surpasseth all others both in whitenesse and also in weight: by which two marks especially, as it is knowne from the rest, so it is reputed for the very best. And if you take the wheat growing in the mountain countries of Italy, the best haply of forreign regions may match it, and that is the wheat of *Beotia*: the principall of all others next to it, is that which grows in *Sicily*; and then that of *Africk* may be ranged in the last place: in a third rank is to be reckoned the *Thracian* and *Syrian* Wheat, and after them the *Ægyptian*, in regard of the weight that it carrieth. Now these degrees of weight we gather by the proportion assigned to champion and wrestlers, whose allowance was much like to the liurie giuen to laboring horses, and as much in manner would their paunches both require and receiue: for according as they could eate of the one sort more measures than of the other, * so arose these distinct degrees in the weight a horse said. The Greeks make great account of the Wheat growing by *Pontus*, and highly commend it: but this neuer came into Italy, neither know wee what it is. The same Grecians preferred before all other grain, these three sorts, to wit, *Dracontias*, *Strangias*, and *Selinusium*; esteeming

* For whereas of the Athenian Whcar, five demy Sextars, (i. two quarts and a halfe) were but sufficient, three would serue and content them of the Beotian (i. a quart & half: wherby it was collected, how much weightier this was than that.

ming the goodnesse of the corn by the thicknesse andignes of the straw, and attributing these three kinds by that signe and argument, to the goodnesse and riches of the soile: and therefore they prescribed to sow this corn in a fat and battle ground. But the lightest in weight and poorest in substance, because it required much nutriment, they appointed to be sowed in moist places. Of this opinion and iudgment were the ancient Greeks, during the reign of *Alexander the Great*, at what time as Greece was in the floure and height of her glory, as hauing the monarchie and soueraigntie ouer the whole world. Howbeit, before his death 145 yeares or thereabout, *Sophocles* the Poet in a Tragedie entituled *Triptolemus*, praised the Italian wheat about all other: for in effect thus he saith word for word;

Et fortunatam Italiam frumento canere candido.

And Italy, a land (I say) so happy and so blest,

Where stand the fields all hoare and gray with white Wheat of the best.

And in very truth our Italian wheat at this day carieth the name alone in that regard, I wonder therefore so much the more at the modern Greeks of late time, who made no mention at all of this our wheat. Now at this present, of all those kinds of outlandish wheat which are transported by sea into Italy, the lightest is that which commeth out of France and Chersonesus, [i.e. the streits of Callipolis] for a Modius or peck thereof containeth not about 20 pound weight, weigh the very graine it selfe as it groweth, vncleaned, huske and all. The Sardinian wheat is more weighty than it by halfe a pound in a Modius. And that of Alexandria exceedeth the French halfe a pound and * one third part, in euery measure before named. And this is the very poise also of the Sicilian wheat. The Beotian is yet a full pound heauier: and that of Africk as much, and * three fourth parts of a pound more. In Lombardy & that tract of Italy beyond the riuer Po, I know full well that a Modius of their wheat weighed 25 pounds; and about Clusium 26. But be the corne whatsoeuer it will, this is the ordinarie proportion by the course of Nature, that being made into down-right household bread for soldiers, and to serue the campe, it ought to weigh as much as it did in corne, and one third part ouer and aboue. As also this is a rule, That the best Wheat is that which to cuerie Modius will take and drink vp a gallon of water ere it be made dough. And yet some kindes of Wheat there be that will yeeld the full weight aforesaid in bread, and neuer count the water going thereto, & namely that which commeth out of the Balear Islands, for a Modius of that wheat yeeldeth in bread 30 pound weight: yet otherwhiles it falleth out in some kindes of wheat (being blended two sorts together, as namely that of Cyprus and Alexandria, whereof neither exceed little or nothing more than 20 pound weight to the Modius) that the bread made thereof will arise to the ordinarie proportion: for the Cyprian wheat is not bright, but brown and dusky, and therefore makes a blacke kind of bread; in which regard the Alexandrian wheat, which is faire and white, is mixed with it, and so both together do yeeld in bread 25 pound weight. The wheat of Thebes addeth a surplusage thereto of one pound.

As for the maner of working and kneading dough, I like not their fashions who take sea water for that purpose, as most do that inhabit the sea coasts, thinking thereby to saue the charge of salt; for I hold this very hurtfull and dangerous. Neither doe I thinke, that vpon any other cause mens bodies are made more subiect to maladies, than by this means. In France & Spain, when the Bruers haue sleept their wheat or frument in water, and masht it for their * drink of diuers sorts, as heretofore hath bin shewed; they take the * skum or froth that gathereth aloft by the working of the wort, and vse the same in stead of leuen for to make their bread, which is the reason that their bread is lighter and more houued vp than any other.

Moreover, there is great difference in wheat by reason of the straw or stalk that bears it: for the thicke or that it is and more full, the better is the corne taken to be. The Thracian wheat is inclosed and well clad (as it were) with many tunicles and coats; thoroughly provided by that means (and good cause why) to resist the excessive cold of that climate, which gaue the Thracians iust occasion also to cast about and deuise to haue a kind of wheat that remaineth vpon the ground not about three moneths, by reason that the snow ouerspreadeth the face of the earth all the yeare: besides: and verily this kinde of corne is come into other parts of the world, and lightly within three moneths after it is sowed, you shall haue it readie to bee reaped. A pra-

* 2.4 ounces.

* 2.9 ounces.

* Zythum &
surmi.
* Yest or barm

A *As* well knowne all the Alpes ouer, and in other cold and winterly regions, where (by report of the inhabitants) this kind of corne doth wondrous well, and none prospereth better or groweth more ranke than it. Ouer and besides, there is another kind of wheat that putteth vp from euery root one stalk and no more in any place whatsoeuer: the manner is to sow it in no ground but that which is light, and it neuer misseth. Also about the Thracian gulf, there is wheat that within 40 daies after the sowing, will be ripe, and therupon it is called the Two-month wheat. And would you heare a wonder? there is no wheat more weighty than it, and besides it yeelds no branne at all. In Sicilie and Achaia both, there is great vse thereof, and namely among the mountainers of those two countries. Much seeking also there is after that corne in the Isle Euboea, about Carystus. See how much *Columella* was deceived, who thought that there was not to be found so much as any kind of three months wheat: whereas it is plaine, that such hath bene of old and time out of mind. The Greeks also haue a proper name for it, and call it *Trimenon*. Furthermore, it is reported, that in the countrey *Bactriana*, there is some corne of that bignes, that euery graine is full as much as one of the eares of ours.

But to returne againe to our husbandry; of all spiked corne, Barley is sowed first: but I purpose to set down the very iust time and season apropiat to each kind, according to the seuerall nature of euery sort, which my meaning also is to declare. Mean while I cannot omit, that there is among the Indians, barley both sowne and also wild, whereof they make the best bread that they haue. As for vs Italians (to say a truth) we set most store by rice, whereof (being husked and cleaned) we make grotes, like for all the world to those which other men besides doe make of barley husked. The leaues verily that this graine Rice doth beare, be pulpos and fleshy, resembling Porret or Leeks, but that they be broader: the stem groweth a cubit high, the floure is of purple colour, and the root round like a jem or pearle.

Barley [husked] was the most ancient meat in old time, as may appeare by the ordinarie custome of the Athenians (according to the testimonie of *Menander*) as also by the addition or surname giuen to sword-fencers, who vpon their allowance or pension giuen them in barley, were called *Hordearii*, [i.e. Barley-men.] The ordinarie drie grout or meale also *Polenta*, which the Greeks so highly commend, was made of nothing els but of barley: and the preparing thereof was after sundrie waies. The manner that the Greeks vsed, was first to steepe the barley in water, and giue it one nights drying, the morrow after they parched or fried it, and then ground it in a mill. Others there be, who (when it is well fried and parched hard) besprinkle it once againe with a little water, and then dry it before it be ground. There are some again, who take the ears of barley when they are green, beat & drie the corn out, and while it is fresh and new, cleanse it pure, which don, they infuse it in water, and while it is wet, bray it in a mortar: then, they wash it well in oser paniens, and so let the water run from it, and being dried in the sun, they pound or stamp it againe, and being thoroughly husked and cleaned, grind it into meale as is aforesaid. Now when it is thus prepared one way or other, to twenty pound of this barley they put of Line seed three pound, of Coriander seed halfe a pound, of salt about two * ounces and two drams: and after they haue parched them all well, they blend them together and grind them in a quern. They that would haue this meale to keep long, put vp into new earthen vessels altogether both floure and bran. But in Italy they neuer vse to steep or soke it in water, but presently parch it, and grind it smal into a fine meale, putting thereto the former ingredients, and the graine of Miller besides.

As for bread of Barley, so much vsed of our forefathers in old time, the posterity that liued after, found to be naught and condemned it: in such sort, as they allowed it for prouender only to feed their beasts and cattel with. But in stead thereof came vp the vse of * husked barley to be sodden for grewell; so highly commended as a most nutritiue and strong meat; and withal, passing wholesome for mans bodie: in so much as *Hippocrates* (who for skill and knowledge was the prince of all Physicians) hath written one whole booke in the praises onely of it. Now the best *Prisana* or husked barley, is that which commeth from *Vtica*. As for that which wee haue from *Egypt*, it is made of the flat barley which groweth vpon the eare in two ranks or sides only. *Thurannius* saith, That in the realms of *Granade*, *Andalusia*, and *Africk*, the barley whereof the said *Prisane* is made, is smooth and naked in the eare without eiles or beard at all. He also is of opinion, that Rice and the graine *Olyra*, are all one. The manner of preparing husked barley and making *Prisana* is so commonly knowne, that I need not to say a word thereof.

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* Act. 1. 11. 11. 11.

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As for Tragus, it is a kind of Ptiſane, made of Wheat, after the ſame order that the former of Barley. Howbeit, there is none of it to be found but in Egypt and Campaine. Touching Starch-floure called Amylum, it may be made of all kinds of wheat, and of the fine corne Siligo. Winter wheat, but the principall is that which they make of the three-month or ſummer wheat. We are beholden to the Iſland Chios for the inuention of Starch: and euen at this day, the very beſt is that which commeth from thence: called it is in Greeke Amylum, becauſe it neuer came into the mill, nor was ground vpon ſtones. The next to it in goodneſſe, is made of a certaine Summer Wheat that is nothing ponderous and weightie. The way to make it, is to ſteep the wheat within certaine cooperie veſſels, made of wood, in freſh water ſo much as will couer it wel. But it would not be forgotten, that the water muſt be changed ſixe times in a day: and if it were ſo ſerued alſo in the night, it would be the better, to that end, that beeing thus ſoaked and ſoftened, it might be well mixed and incorporated, yea, and reſolued (as it were) into a kind of paſt, before that it become ſoure and bitter. This beeing done, it muſt be laid to drie either vpon linnen cloths, or elſe in twiggen paniers, that the liquor which is therein may draine away: afterwards vpon tiles, beſmeared ouer with ſome leauen, it is poured forth to take the Sunne, to drie and harden againſt it. After the Chian Starch, that of Candie is moſt eſteemed and liked of: and laſtly, that which commeth out of Egypt. The good Starch ougth to be light, ſmooth, and euen, and withall, freſh made: for thoſe properties hath *Cato* ſet downe already.

To returne againe vnto our Barley: the meale thereof is of great uſe here with vs in Phyſick. And that which more is, a ſtraunge effect it worketh in Horſes, Aſſes, and ſuch like labouring beaſts: for take Barley when it is dried and hardened at the fire, grind it to meale, reduce it into a paſte, and make thereof gobbets: let theſe be put downe by a mans hand into their bellie, after the manner of cramming Pullen, and you ſhall ſoone ſee, that this food and manner of feeding, ſhall make the beaſts more ſtrong and luſtie, and their fleſh more faſt and compact.

As for Barley eares, ſome there be which haue but two rankes or rewes: others againe haue more, euen to the number of ſixe. In the very graine alſo there is much difference: for there be many of them longer than other, lighter, ſhorter, rounder, whiter, blacker, and laſt of all, inclining to a reddiſh or purple color. This is the worſt of all others for to make drie Grout or Polenta: and as for the white, it is beſt for that purpoſe, but will not abide any tempeſtuous or hard weather. And to ſay a truth, of all corne, Barley is the ſoſteſt and tenderſt, and will leaſt endure any hardneſſe: It would not be ſowed, but in a drie and fine ground, laid light, and brought into temper: howbeit, good it muſt be, and well in heart. The chaſſe and pugs that come of Barley, is ſuppoſed to be as good as the beſt: but for ſtraw it hath no fellow, eſpecially to make litter of. Moreover, in this regard, Barley of all other graine, is leaſt ſubject vnto blaſting, for lightly it is cut downe before Wheat is mieldewed. And therefore it is, That the wiſer ſort of huſbandmen in the countrey, ſow no more Wheat than will ſerue for the prouiſion of their houſe only. Furthermore, they ſay, that Barley is ſowed with the rake, namely, when the mould lightly couereth it: and therefore it commeth vp ſooneſt, and bringeth moſt encrease and plentie. That which is gathered at Carthage in Spaine, within the moneth of Aprill, is ſowed the very ſame moneth in Celtiberia, ſo as in one yeare it yeeldeth two crops. It is no ſooner ripe, but they make greater haſt to cut it downe, and to inne it, than any other corne: for the ſtraw is very brittle, and the huſke which contains the grain is as thin and ſmall. To conclude, it is thought to yeeld the better groats if it be taken whiles it is ſomewhat green, rather than if it ſhould haue the full ripeneſſe.

CHAP. VIII.

¶ That all kinds of Wheat or Fourmenty corne grow not indifferently in euery place. Alſo, of other ſorts of corne in the Leuant or Eaſt countries.

You ſhall not find in all places the ſame kinds of Wheat: and where you meet with the very ſame, yet they bear not one name, but haue ſundry appellations. The red bearded wheat named in Latin Far, and which in old time they called Adoreum; the winter wheat Siligo, and the

A the ordinarie white Fourmenty wheat Triticum, are the commonest of all others. And indeed theſe grow all in moſt countries. As for Arinca it loueth Gaule beſt, and that is the native and proper country for it. Howbeit there is plenty thereof in Italy alſo. As for Zea, Olyra, and Typhē, there be ſundry ſorts of wheat and Rie peculiar and appropriate to Egypt, Syria, Silicia, Aſia, and Greece. The Egyptians make of their wheat a kind of floure or ſifted meale, but nothing comparable to the Italian. They that vie Zea or Spelt haue not the fine red Wheat Far. And yet we are ſtored therewith in Italy, and moſt of all in Campain, where it is called by the generall name of Seed: which name no doubt was giuen vnto it for excellencie and ſingularitie, as ſhall be ſhewed anon more at large. This is the very grain for which *Homer* the poet called the earth, *βύβλις ἔρπη*, i. yeelding the corn Zea: and not becauſe the giueth life to all liuing creatures, as ſome would haue to be meant by that Epithete. Thereof is made alſo a kinde of ſtarch, but groſſer than the former, whereof we ſpake before: for no difference is there elſe. Of all kinds of wheat, Far (which is taken for the red bearded wheat) is moſt hardy, and beſt reſiſteth winter cold: it will wel abide the coldeſt ſoile that is, and that which is leaſt labored and tilled: it may endure alſo hot and dry places: it yeelded the firſt food and meat to our antient forefathers in Latium; as may appear by this good argument, that publique preſents and rewards by way of remuneration were giuen of Far, which they called Adorca, as hath beene ſaid before. Moreover, that the Romans for a long time liued of a kinde of batter or gruell made of meale ſo, and not of bread, is very euident by old records and Chronicles: for euen at this day ſuch thick gruels or pottage be called Pulmentaria in Latine. And *Ennius* a moſt antient poet, when he would expreſſe the famine of a city that had endured long ſiege, reporteth, that the parents took by force from their children their ſops, notwithstanding they cried pittcouſly for very hunger. Moreover, euen in our time wherein we liue, the ſacred and ceremonious feaſts by vs obſerued in memorial of our birth daies and natiuitie, ſtandeth much vpon ſurmenty, gruel, fritters, and pan-cakes. It ſeemeth alſo, that our gruels and ſuch like pottage were as much vknown to Greeks, as their Polenta or dried groats were ſtrange to vs here in Italy. There is no corn more hungry and greedy of nourishment than Seed [wheat,] or that draweth more vertue and fat out of the earth for nutriment, touching the winter grain, called in Latine Siligo, I may be bold to ſay, it is the daintieſt and moſt delicate wheat that is, for whitenesse, mildneſſe, and lightneſſe. It agreeth wel with moſt countries, ſuch as Italy is, and that part of Gaul called Comata, i. Lumbardy. Beyond theſe is alſo in Sauoy only, and the territorie of the Meninians, it will endure and hold the owne ſeason well. Many in other parts of that countrey, within two yeares it turneth into the common wheat. The only remedy therefore is, to chuſe forth the heauieſt and weightieſt cornes, and them to ſow.

CHAP. IX.

¶ Of Paſtry, of Grinding, and of Meale.

The beſt manchet bread for to ſerue the table, is made of the winter white Wheat Siligo, and the moſt excellent works of paſtrie likewise are wrought thereof. And yet in Italie it paſſeth all the reſt, in caſe that of Campain be blended with another ſort which doth grow about Piſa: for the Wheat of Campain is redder, but this of Piſa whiter: and more weighty it is, if it come from a chalky ground, or haue chalk mingled among. Moreover, this is the ordinary proportion, that of the very pure corn of Campain wheat, which they cal guelded, i. wel huſked and clenſed, a meaſure named Modius ſhould yeeld four Sextars or quarts of fine meale: but of the vulgar and common grain, which is not ſo guelded, 5 sextars, and halfe a Modius beſides of bolted flour: and for a courſer houſhold bred, which they call the ſecond bread, 4 sextars of meale, and as many of brans. Alſo of the Piſane wheat, one Modius ſhould yeeld ſixe sextars of good meale, and the reſt equall to the former. As for the Cluſine and Aretine wheat, in euery Modius it answereth again ſix sextars of meale, that is to ſay, one more than the reſt: otherwiſe they be all alike. Now if you liſt to range and boult it for cork flower to make bread, ye ſhall haue of manchet 16 pound, of courſe houſhold bread three, and halfe a Modius of brans. But this proportion doth not alwaies hold, for it alſo according to the good or bad grinding vpon the mill: for that which is ground dry rendereth againe more meale: but if it be wet or beſprinkled with ſalt water, it maketh the fairer meale, and fuller of fine flower: and

then shall ye haue more go away in brans. As for the word Farina in Latine, *i. meale*, it is deriued of Far, which in old time was the best & finest red wheat, as may appeare by the very name that it carieth. Finally, a Modius of meale comming of the French Siligo, called Blancheen, or Ble-blanch, maketh in bread 22 pound weight: but of our Italian, 3 or 4 pound more in bread pan-baked: for what corn focuer it be, there must be allowance of two pound vantage ouer and about, for ouen-baked bread.

CHAP. X.

Of the meale called Similago: of the white flower Siligo. Of other sorts of Meale: and of the manner of baking.

The best meale of that kind, which they call in Latine Similago, is made of the common wheat. If the corne come out of Africk, it yeeldeth ordinarily for euery Modius, half so much in ordinarie meale, and five sextars besides of flower called Pollen: [for that is the Latine tearme which they vse in the finest of the common wheat Triticum, proportionable to that which in the other winter wheat Siligo, they call Flos. And great vse herof there is in copper-smiths forges, and in work-houses where paper is made.] Ouer and besides, of courser grodgeons for brown bread foure sextars, and as much of brans. More ouer, the ordinarie proportion goeth thus, that of one Modius of the fine meale Similago, there should be made 122 loues of bread: & that a Modius of the pure flower of Siligo should yeeld 117. As touching the price, thus it goeth commonly in the market one yere with another, when corn is at a reasonable and indifferent rate: A Modius of down-right meale is worth * 40 Asses: but if the meale be sifted and ranged from the grosse brans vntill it be Similago, it will cost eight Asses more: and if it be boulded yet finer to the nature of the fine flower Siligo, the ouer-deale in the price wil be double. Another distinction or difference there was known of this proportion, when a Modius comming of wheat of Similago, was seen to answer 17 pound in bread: and as much of Wheat flower called Pollen, thirtie pound and foure ounces: besides, for second household bread, two pound and a halfe; and of the coursest or brownest as many, and fix Sextars ouer and about of brans.

* 1. 2 lb. 6 d.

But to return to our winter white wheat called Siligo, it neuer ripens kindly & all together, as other corn doth: and for that it is so tender and ticklish, as that no corn wil lesse abide delay and tarry on worse, great heed must be taken thereof; for so soone as any is ripe, presently the feed sheds and falls out of the eare. Howbeit, lesse danger is it subiect vnto whiles it standeth in the field, than other kinds of wheat, for it beareth alwaies an vpright spike or eare: neither wil it hold and retain that mildew which blasteth corn so much, and turneth it into black powder. As for that kind of corn which they call Arinca, it maketh the sweetest bread: the grain it selfe is more fast & full than the fine red wheat Far, it carieth a bigger eare, and is besides more ponderous and weighty. Seldom is it seen, that a Modius of this grain maketh full 16 pound. In Greece they haue much ado with it, to thresh it cleane and salter it from the huls and eiles. For which cause Homer saith, that they were wont to giue it as prouender to horses, and such labouring garrons; and the very same it is which he calleth Olyra. Howbeit this corn in Egypt goeth out easily vnder the flail, is better to grind, and withal yeeldeth better, and is more fruitfull. The Red-wheat called Far is polled wheat [in Egypt] and carieth no beard or eiles about it. So is the white winter Wheat Siligo, saue onely that which is named Laconica. To these may be adioyned other kinds also, to wit, * Bromos, the poll wheat Siligo, (differing from all the other of that name) and Tragos: strangers all brought from the Levant or East parts, and resembling Rice euery one. Type likewise is of the same kind, whereof in Italy and this part of the world is made that husked corne which goeth among vs for Rice, for it turneth into it. The Greeks haue a kind of wheat called Zea or Spelt: & it is commonly said, that both it and Typhae (considering that they vse to degenerate and prone bastard) will turne to their kinde again, and become wheat, if they be husked before a man sow them: howbeit this change will not be seen presently, nor before the third yere. As touching our common wheat, there is no grain more fruitfull than it: this gift hath Nature endued it withal, because the meant thereby to nourish mankind most; for one Modius thereof sowne, if the soile be good and agreeable thereto (such as hath about Bizacium, the champion country of Africke) will yeeld an hundred

Some take it for a kinde of Bulley, or rather Oats.

A hundred and fiftie fold againe. The procurator generall of that prouince vnder Augustus Caesar sent from thence vnto him one plant thereof (a wondrous thing and incredible to be reported) which had little vnder 400 straws springing from one grain & meeting all in one and the same root, as it appeareth vpon records by the letters sent, testifying no lesse. Likewise to the Emperour Nero he sent 340 straws out of the same country, rising all from one onely corne. But to goe no farther than to Sicilie, within the territorie about Leontium, there haue bene certaine fields knowne, wherein one graine putteth forth no fewer than a hundred stalks with eares vpon them: and not there onely, but also in many other parts of that Island. And this is ordinarie throughout all the kingdome of Granade, and Andalusia in Spaine. But about all, the land of Egypt may make boast in rendring such interest to the husbandmen. Moreouer, of all those kinds of wheat which are so plentiful, there is principal account made of that which branches, as also of another which men call Centigrammum, *i. the wheat that beareth 100 graines.*

To leaue this kind of graine, and to come to Pulse: there hath been found in Italie, and goe no farther, one beane stalle laden with an hundred beanes. Touching Summer corne, to wit, Sesama, Miller, and Panicke, we haue already spoken. As for Sesama, it commeth from the Indians, whereof they make a certaine kind of oile. The color of this graine is white. Like vnto it there is another grain called Erythimum, which is rise in Asia & Greece: and I would say it were the very same, that with vs in Latine is named Irio, but that it is more oileous and fatty; and indeed to be counted a medicinable or Physicall plant, rather than a kind of corne. Of the same nature, is that which the Greekes call Hormium: it resembleth Cumin, and is vsually sowed with Sesama: howbeit no beast will eat thereof while it is Greene, no more than they do of Irio aforesaid.

To come now to the manner of husking and cleansing of corne: the feat is not so easily done in all, as in some; for in Tuscan, they take the eares of their red wheat called Far, when they be parched and dried at the fire, they pound or bray them with a pestill headed at the nether end with yron, or els fistulous and hollow within, yet bound about with a hoop or ring of yron, and the same withinforth toothed in manner of a star, so as if they be not heedfull in the stamping, the yron-work at the pestill end will either cut the cornes in two, or els bruise and break them clean. In Italy (for the most part) they vse a reed or plain pestill, not headed with yron, to huske and dresse their corn, or els certain wheelles that are turned and driuen apace with water, which **D** going very swift doe also grind the said corne. But since we are fallen into this treatise concerning husking and grinding of corn, it shall not be amisse for to set down the opinion and resolution of Mago in this behalfe: First, for common wheat he giueth order, that it be well steeped and foked in good store of water; afterwards, to be rid from the huls and eiles that it hath, in a mortar: which done, it ought to be dried in the sunne, and followed a second time with a pestill. In like maner (saith he) should barley be vsed: howbeit, two Sextars or quarts of water will be sufficient to besprinkle and wet twentie Sextars of barley. As for Lentils, he would haue them first parched and dried, and then lightly punned or stamped together with brans, or els to put vnto twentie Sextars thereof, a fragment or peece of a broken semeld brick, and half a Modius or peck of sand. Ervile would be cleansed or husked as Lentils be: but Sesama, after it hath bin infused or foked in hot water, he saith, ought to be laid abroad a sunning; then to be rubbed hard together, and afterwards to be put into cold water and therewith couered, so as the huls or chaffes do flore and swim aloft: which done, to be laid forth a second time in the sun vpon linnen clothes, for to drie. Now if all this be not don one thing after another and dispatched with the more speed and hast, it wil loose vinev or catch a mouldineffe, and besides lose the bright native hew, and looke wan and of a leaden colour. Now, say that corn be cleansed and husked, some one way and some another, it is ground afterwards in diuers sorts. If the eares be bolted by themselves alone for goldsmiths worke, the chaffe comming thereof is called in Latine, Acus; but if it be threshed and beaten vpon a paved floor, eare, straw, and al together (as in most parts of the world they vse to doe, for to fodder cattell and to giue in prouender to horses, then it is **F** teamed Pal: but the refuse or chaffe remaining after that Panick or Sesama be clenfed, they call in Latine Appluda, how foueuer in other countries it be otherwise named.

To speake more particularly of Miller, there is great store thereof in Campaine, and there they set much by it, for of it they make a kind of white greuel or pottage: also the bread thereof is passing sauerie and sweet. The Tartarians also & nations in Sarmatia, feed most of this water

Ccc

gruel

gruell made with Millet: as also with the crude and raw meale thereof vnfodden and vn Timer G
tempered with mares milke, or els with horse-bloud that runneth out of their master leg-vains,
by way of incision made for the purpose with the phleame. As for the Æthiopians, they know
no other come but Millet and Barley. Panicke is eaten in some parts of Gaule, and principally
in Aquitaine or Guien: in Piemont also, and all about the Po, it is a great feeding, so there bee
beanes among; for without beans they canot skill how to dresse any thing for their daily food.
The regions that confine vpon the Euxin sea or Pontus, haue no daintier meat than that which
is made of Panick. To conclude, all Summer corn abouenamed, delight more to grow in moist
and watery grounds, than to be wet with showres and raine from aboue. And yet I must needs
say, that Millet and Panick care least for water or moisture, when they begin to put forth their
blade. Last of all, there is no good husbandman but will forbid to sow Millet and Panick either H
in vineyards, or among trees that beare fruit; being perswaded, that the sowing thereof doth eat
out the heart of the ground.

CHAP. XI.

¶ Of Leuains: the manner of making bread: sundrie kinds of bread: about what time
Bakers were first knowne at Rome: of Sicues and Serces, of Rangers and Bul-
scrs. Last of all, of the Frumentie called Alica.

THE meale of Millet is singular good for Leuains, if it be wrought and incorporat in new
wine, for so it may be kept a whole yeare. The like is made of the better brans of wheat, so I
they be small, fat, and not to neer raunged; and the same be kneaded in new white wine of
three daies old, and then dried in the sunne. Hereof is made a dough or past, and the same is re-
duced into certain round cakes or Trofches to serue for the making of bread, for these must be
foked and dissolued in hot water with the floure of the corn Zea, and therein be sodden, which
don, they vse to mingle it with the meale and floure to make past of, which they hold to be the
best way of making bread. The Greeks haue set down this proportion, allowing to euery pecke
or Modius of Meale, 8 ounces of leuaine; and this they thinke to be sufficient. Now these kinds
of leuains verily canot be made, but only in time of vintage. But if a man would make leuaines
at any other time, he may take of barley meal tempered with water so much as it may be brought
into a past; and when there be certain lumps or cakes herof made, weighing two pound apeece, K
they must be baked either vpon the hearth vnder hot embres, or els in an earthen pan ouer the
coles, vntill such time as they looke brown and red withal. Afterwards they be put vp close co-
uered in pots or such like vessels, & there remain vntill they wax fower. Now when a man would
vse leuain, herof he taketh what he will, and dissolueth it as is afore said. In old time when they
made barley bread, they vsed no other leuain for it but only the meale of Eruille or Cich pease;
and ordinarie it was, to take two pound thereof for * two peckes and an halfe of meale: but now
adaies the order of our huswiues is, to make leuaines of the very same meale which is kneaded
and wrought into dough, before salt be put therto, which they seeth to the consistence of a pulp
or thicke batter, and so let it lie vntill it become fower. And yet commonly they doe not boile
their leuains but only referue some of the past or dough, wherof they make their bread the day L
before. As touching the nature of Leuain, certain it is that it proceeded of fourenesse, like as it
is generally held, that they be stronger of bodie who feed of leuained bread: for in old time it
was verily thought, that of the weightiest and heauiest kind of wheat, there was made the hole-
somest bread.

Concerning the sundrie sorts of bread that is made, it seemeth a needlesse peece of work to
set them down euery one in particular: for sometimes bread taketh the name of the meats and
viands that be eaten therewith: as for example, Oister-bread, so called for that it was good with
oisters: otherwhiles it beares the name of some daintie cates, as Artologanus, [i. pancake, fritter,
or fine cake bread.] As for the bread called Speusticus, [i. Hastie] it is so called, because it was
made in haist. The manner also of the baking giueth denomination to some bread, as to Furna-
ceus panis, which was made in a furnace; to Artopitius, made in a baking-pan called Artopra: M
as also to that which was baked in an ouen. Not long since also there was a new deuice of mak-
ing bread brought out of Parthia, which because the past is drawne through water (and yet a
spungious, light, and hollow substance it carries) they call water-bread, and giue it the denomi-
nation

A nation of Parthiecke bread. But howsoeuer it be, the best bread is of the finest wheat floure, that
hath passed through a smal tamis bulter. Some countries there be, that knead their dough with
milke or eggs; others also put butter thereto: but those be such nations as are not troubled with
wars, since that they can haue while to set their minds on sundry sorts of pastry. The Picenes in
times past inuented away by themselves of making bread, with the very matter or substance of
the frumentie Alica; and surely that deuise holdeth stil and is much vsed. The manner thereof
is this: They take the said frumentie past and steep it in water nine daies, on the tenth day they
work or knead it with the iuice of Raifons, to the fashion of the Parthick cake driuen thin and
broad, after this they put it into earthen pots, set them in ouens for to frie & bake, that the said
pots may there breake in funder: and beeing thus hard baked, it is not to be eaten vnlesse it be
B foked in some lipuor, which ordinarily is milke, or mead especially.

There were no Bakers known at Rome for the space of 580 yeres after the foundation of the
citie, vntill the Persian warre. Before that time euery Roman citizen had his owne bread baked
at home, and womens work commonly it was, like as at this day it is in most countries: for this
appeareth by Plautus, who in his Comedie entituled Aulularia, maketh mention of * Artopia, ^{Ego hanc Ar-}
a baking pan [which men haue usually in their houses:] and hereupon is growne much dispute ^{topiam: ex pro-}
and controuersie betwene learned men about this Question. Whether that verse were of that ^{ximouen-}
Poets making or no? for certain it is (according to the opinion of A. Atticus Capito) that at such ^{dampus.}
mens bounds as kept great houses and delicate fare, there was no other bread eaten but such as
C Cookes were wont to make them, after the manner of simnels: for Pistores were those only then
called, who husked and cleafed the bearded red wheat named in Latin Far; and others Bakers
than they, were there none. Neither had the Romane citizens in ordinarie, any Cookes as their
household seruants, but hired them out of the market whensoever they had any meat to dresse.

Diuers sorts of sicues and bulters there be. The Sarce made of horse haire, was a deuise of
the Frenchmen: the tamis raunzer for course bread, as also the fine floure bulter for mancher,
(made both of linnen cloth) the Spaniards inuented. In Ægypt they made them of Papyr reed
and rushes. But now that we are entred so far into this matter as touching come, I thinke it not
amisse before I proceed any farther, to speake (with the first) of the frumentie called Alica, and
the manner thereof being (as it is) so excellent and wholesome to be eaten; and which, no doubt,
throughout all Italy, beares the name for the very best of all come whatsoeuer. No question, but
D there is made thereof in Ægypt; howbeit nothing to the other. In Italy, many places there be
where it is to be had, as namely in the territories of Verona and Pife: but that of Campain ca-
rieth the price and praise aboue all the rest: a champion or plaine countrey this is, for the space
of forty miles lying as a vale vnder the hills and mountaines, subiect to watery clouds and tem-
pestuous winds. The soile of this whole tract (to speake directly of the nature thereof and defer
no longer) is light and dustie, if a man respect the vpper coat thereof, but vnderneath it drinks
in much moisture, whereunto apt it is by reason of certain fistulous porosities therein, like a pu-
mish stone: in which regard, the mountaines commanding these plaines (ill neighbors other-
whiles) do it much good and mend the soile very well; for many a found showre, which ordina-
rie falleth from the hills) passeth and runneth through it, as it were a colander; by means wher-
E of, the ground standeth not drenched and foked with water, but is thereby more pliable & easie
to be tilled. Now this soile hauing thus receiued store of water, doth not yeeld it vp again boi-
ling out at any springs, but keepeth and cherisheth it still within, as it were the radical and nu-
tritiue humor, concocting the same to a very good temperature. All the yere long a man shall
see it sown and standing with corn, one or other; for the same ground beares one crop of Panick,
and two of the red wheat Farrit: neuer refresheth but beareth somewhat: for say that some lands lye
fallow between-while, and are not sowed with corn; they yeeld roses in the spring of themselves
naturally, and those far sweeter than the garden roses: so fruitful is it and canot abide to be idle
and do nothing. Hereupon arose the prouerb of this land of Campaine, That greater store is there
to be found of sweet posumes and odoriferous ointments, than of simple oyle in other countries whatsoeuer.
F And looke how much this tract of Campaine surpasseth all other lands in goodnesse and fer-
tility, so much excelleth one quarter thereof called in Latin Laboria; and by the Greeks Phle-
graum) all the rest, and goeth beyond it selfe. This plain afore said named Laboria, is confined
on both sides with the great caufis or high waies raised by the Consuls and thereupon called
Consulares; the one goeth from Putcoli, the other from Cumes, and lead both to Capua.

But to come againe vnto our Frumentie Alica, made it is of the graine Zea, which before we rearm'd by the generall name of Seed. This corne for to make Frumenty, is to be pound in a wooden mortar, when it should be cleafed from the huske: for if a man beat in one of stone, the hardnesse thereof would bruiſe and breake it. The best way of cleaſing and husking it, is with a pestill, such as bondslaves and prisoners do vse to stamp withall, and to work by task for their punishment: in the forepart thereof it hath a circle of yron, made in fashion of a round Box: wherewith after the corne is drawn naked out of the husk, the very same instrument serueth again to stamp and bruiſe the white marrow and floure thereof within. And thus by this means there be three sorts of Alica or Fourmentie aforesaid. The finest, which is the best: the meane, which is the second: and the greatest or grossest, which the Greekes call Apharema.

When all this is done, yet haue they not that whitenesse of their owne, for which cause they are so much esteemd; as namely, those that are come nowadays from Alexandria, which are taken to be the best and to excell all other. And therefore there is chalk (a wonderfull thing to be spoken) mingled afterwards and incorporate therewith, and so by that means the Frumenty becomes white and tender withall. Now this chaffe or plastre is found between Puteoli and Naples, in a little hill which thereupon is called Leuco-gaon, [i. white earth.] And in truth when Augustus Caesar, late Emperor of Rome, erected a colonie at Capua, and peopled it with Roman citizens, he assigned vnto the Neapolitanes (by vertue of a decree, now extant) an yerely rent or pension of twentie thousand deniers to be paid out of his owne treasure, in regard of the chalk which came from the hill aforesaid, being within their territorie and siegnorie. He rendereth also a reason inducing him thus to do, because the inhabitants of Capua, alleaged, that they could not make good Alica or Frumenty without that mineral of chaffe. In the same hill there is also found a Brimstone mine, and out of the veines thereof, fountaines springing, called Oraxi, the water whereof is singular good to cleer the eies, to cure and heale green wounds, and to fasten the teeth that are loose in ones head.

As touching a bastard kind of Frumenty, it is made verily for the most part of a Speltor Zea in Affrick, which there doth degenerat and grow out of kind. The ears that it carieth, are broader and blacker than the other, and the straw is but short. They vse to cleaſe and huske it by stamping or braying it together with sand, and for all that deuise, much ado they haue to fetch off the huls and huskes wherein the graine lieth enclosed: now when it is thus cleaſed and naked, it is not past halfe as much in measure as it was before. Which done, there is a fourth part of plastre strewed & mingled among; and when al is together, they sift it down through a meal sieue. That which remaineth behind and passeth not through, is the grossest part thereof, and is called in Latine Exceptitia. That which was thus searced, is driuen againe through a narrower and finer sieue, and those groats that tarie in the ranger, the call Secundaria. In like manner doe they a third time, searcing it through so fine a sieue, that nothing can passe but the very small sand and poulder: and this last kind of Frumenty gurts they name Cibraria. Another way there is besides in all places practised, to sophisticat, and counterfeite the right Frumenty groats indeed: They chuse out of our common Wheat, the fairest, fullest, and whitest grains, which beeing half foddren in an earthen pot, they lay out afterwards in the Sun, till they be as drie as they were at first: which don, they lightly sprinkle some water ouer, & then bruiſe them in a quearn mill. Fairer Frumentie groats be made of Zea than of Wheat, and called it is Granum or Granatum, although in Alica that be counted a fault. To conclude, they that wil not vse chalk, do blanch and make their Frumentie white by seething milke with it, and mingling all together.

CHAP. XII.

¶ Of Pulse.

It followeth now to write of the nature of Pulse, among which, Beanes do challenge the first ranke and principall place: for thereof men haue assaied to make bread. The meale of Beanes is called in Latine Lomentum. There is not a Pulse weigheth more than it, and Beane meale makes every thing heavier wherin it is. Now adaies they vse to sel it for prouender to feed horses. And indeed Beanes are dressed and vsed many waies, not only to serue all kind of four-footed beasts, but also for man especially. For in most countries it is mingled with Frumentie corn: and namely with Pannicke most of all, whole and entire as it is: but the more delicate and daintie

A daintie way is to break and bruiſe it first. Moreo uer, by ancient rites and religious ceremonies, at the solemn sacrifice called Fabraria, the maner was to offer vnto certain gods and goddesſes Beane cakes. This was taken for a strong food, being eaten with a thick gresle or portage; howbeit, men thought that it dulled a mans senses and vnderstanding, yea, and caused troubleſome dreames in the night. In regard of which inconueniences, Pythagoras expressely forbade to eat Beanes: but as some haue thought and taught, it was because folke imagined, that the soules of such as were departed, had residence therein: which is the reason also, that they be ordinarily vsed and eaten at the funerals and obsequies of the dead. Varro also affirmeth, That the great Priest or Sacrificer called the Flamine, abstains from Beanes both in those respects aforesaid, as also for that there are to be seen in the floure thereof certain letters or characters that shew heauines and signs of death. Further, there was obserued in old time a religious ceremonie in Beanes: for when they had sown their grounds, their maner was, of all other corne to bring back with them out of the fields some Beanes: for good luck sake, preſaging thereby, that their comewould returne home again vnto them; and these Beanes thereupon were called in Latine Refruiæ, or Reſeruiæ. Likewise in all port-sales it was thought, that if Beanes were entermingled with the goods offered to be sold, they would be luckie and gainfull to the seller. This is cerataine, that of all the fruits of the earth, this only will be full and found when the Moone is croissant, notwithstanding it were gnawne and halfe eaten with some thing before. Set them ouer the fire in a pan with sea water or any other that is saltish, they will neuer be thoroughly foddren. They are set or sowne before the retrait of the Starre Vergilia, [i. the Brood-hen] the first of al other Pulse, because they might take root betimes and preuent the Winter. And yet

B * Virgil would haue them to be put into the ground in the Spring: like as the manner is in Piemont and Lombardie, all about the riuer Po.

But the greater part of good Husbandmen are of this opinion, That the stalle or straw of Beanes sowne early or set betimes, are better than the very fruit it selfe, which hath had but three months being in the ground. For the cods and stalks only of Beanes are passing good fodder and forage for cartell. Beanes when they are blooming, and in their floure desire most of al to be refreshed with good store of rain: but after they haue don floueing, they care for little: the sowing of this Pulse in any ground, is as good as a mucking vnto it, for it enriches it mightily. And therefore towards Macedonie and about Theſſalie, the manner is when Beanes begin to blossom, for to turne them into the ground with the plough. Beanes come vp and grow in most places, of their owne accord without sowing; and namely, in certaine Islands lying within the Northern ocean, which our countrymen therupon haue named Fabariae. Semblably, they grow wild commonly throughout Mauritania, but exceeding hard and tough they be, and such as possibly cannot be foddren tender. There are likewise in Ægypt to be found Beanes, with a stalk beset full of prickles or thornes: which is the cause that Crocodiles wil not come neer them, for feare of hurting their eyes. The stemme of these Beanes is foure cubites in height, but exceeding thicke and big withall: tender it is notwithstanding, and soft, running vp euen and smooth without any knots or joints at al, it caries a head in the top like Chesboule or Poppy, of a rose red color: wherein are contained not about 30 Beanes at the most. The leaues be large: the fruit it selfe (or the Bean) is bitter in tast, and the sinel not pleasant: howbeit the root is a most dainty meat, which the inhabitants do eat as wel raw as foddren; and like it is to reed & cane roots. These grow in Syria and Cylicia, as also about the lake Torone, within Chalcis.

As touching other Pulse, Lentils be sown in Nouember, and so are Pease, but in Greece only. Lentils loue a light ground better than a fat & heauie: they like also drie and faire weather. Two kinds thereof be found in Ægypt: the one more round and blacke than the other, the rest be fashioned as common Lentils. According to the manifold vse and diuers effects of Lentils, there haue fundrie names and denominations bene borrowed from them: for I find in writers, that the eering of Lentils maketh men to be mild and patient, whereupon they be called Lenti and Lenes. As for Pease, it ought to be sown in warm places lying well vpon the Sunne: for of all things it cannot abide the cold. Which is the cause, that in Italie and in other countries where the clime is tough and hard, they are not sowne vsually but in the Spring, and folke chuse a gentle, light, and loose ground.

To come now to the Cich pease, the nature of it is to be nitrous and saltish, and therefore it burneth the ground where it grows. Neither must it be sowne, vntill it be well steeped and

*Vera fabia (Pis-
tis, Georg.
lib. 1.

Much like to
the prouerbe
here in Eng-
land, March
Ore straw is
better than
April Ores.

foked in water the day before: many sorts there be of these cich-pease, different in bignes, form, colour, and tast: for there are both blacke and white, and those in fashion shaped like to a Rams head, and therupon they are so called. There is a second kind named Columbinum, or by others Venerium. These are white, round, light, lesse than the former Rams-head ciches, which men do eat ceremoniously with great religion, when they meane to watch thoroughly all night long. There is a little cich pease also, called Cicercula, made cornered and otherwise vneuen, like vnto a Pease. But the best ciches and most pleasant are those that come neereft in resemblance to the Ervile: and generally the red kind and the black are more firm and fast than the white: cich pease grow within round cods, whereas other Pulse he contained in long and flat, according to the forme and figure of the seed which they hold: Pease by themselves haue a long round cod in forme of a Cylinder.

The Pulse called Phaseoli, [i. Kidney Beans] vse to be eaten cod and al together. These may be set or sowne in what ground you list, from the Ides of October to the Calends of Nouember. Finally, all kinds of Pulse, so soone as they begin to ripen, are to be gathered or plucked hastily: for stay neuer so little, they leape out of their cods, and shed, and being once fallen, they lie hidden in the ground, like as the Lupine also.

CHAP. XIII.

¶ Of Rapes or Neneues of Amiternum Turneps.

Now let vs proceed and passe to other matters: and yet in this discourse, it were meet to write somewhat as touching Rapes or Nauews. The Latin writers, our countrey men, haue slightly passed by and touched them only by the way. The Greeks haue treated of them somewhat more diligently, and yet among pot-herbes and worts growing in gardens; whereas indeed according to good order they would be spoken of immediatly after Corne, or Beanes at least wise, considering there is not a plant of more or better vse than is the Rape or Nauew. First and formost, they grow not only for beasts of the earth and the Fowles of the aire, but also for men. For all kinds of Pullen about a Farme-house in the countrey, doe feed vpon the seed thereof as much as of any thing else, especially if they be boiled first in water. As for four-footed beasts, they eat the leaues thereof with great delight, and wax fat therewith. Last of al, men also take as great pleasure and delight in eating the leaues and heads of Rapes or Nauews in their season, as they do of young Coly-flories, Cabbages, or any tender crops of hearbs whatsoever; yea, when they are faded, flaggie, and dead in the Barn, they are esteemed better, than being fresh and green. As for Rapes or Nauews, they will keep long and last al Winter, both within the ground where they grew: and being well wintered, they will continue afterwards out of the earth lying abroad euen almost till new come: so as they yeeld men great comfort to withstand hunger and famine. In Piemont, Lombardie, & those countreies beyond the Po, the people make the most account of gaine by gathering Rapes, next to wine vintage and corne haruest. It is not choise and daintie, of the ground where it will grow: for lightly it wil prosper where nothing els can be sowed. In foggy mists, hard frosts, and other cold weather, it thrives passing wel, and grows to a wonderfull bignes. I haue seene one of their roots weigh aboue fortie pounds. As touching the handling and dressing of them for our table, there be many waies and deuises to commend and set them out. Preferred they may be till new come, specially condite with sharp and biting Senuic or Mustard seed. Moreover, our Cooks know how to giue them six other colours besides their owne which is pure and naturall; they haue the cast to set euen a purple hew vpon them. And to say a truth, there is no kind of viands besides that, being thus painted & colored, hath the like grace. The Greeke writers haue diuided them by the sexe, and therby made two principal kinds thereof, to wit, the male and the female. Nay, more than that, out of one and the same seed, according as it is sowed, they can make male or female, whether they please. For if they sow thicke, and chuse thereto a hard and churlish ground, it will proue of the male kind. Also, the smaller that the seed is, the better it is esteemed. But of al Rapes male or female, three especiall sorts there be & no more. For some roots spread flat and broad, others are knit round like a ball; the third sort that runs downe into the ground with a long root in manner of a Radish, they call the wild Rape or Nauew: this bears a rough leafe and full of angles or corners; the juice that it yeelds is sharp, hot, and biting, which being gathered in haruest time & referred, mudi-

A mundiseth the eyes, and clearcth the sight, especially being tempered with brest-milke. If the weather be cold, they are thought not only to thrive in bigesse of the root, but also to proue the sweeter, whereas contrariwise in a warm season they run vp all to stalke and leafe. The best simply are those that grow in the Nursine territory. For they are sold by the weight: and euery pound is worth a Roman Sesterce, yea, and otherwhiles twaine, if there be any scarcity of them. Next to these in goodnes be those that come out of Algidum. I hus much of Rapes & Nauews.

As for the Turneps of Amiternum, they be in a manner of the same nature that the Rapes aforesaid, & cold they loue as well. Sown they are before the Calends of March; & foure quarts of their seed will take vp a whole acre of ground. The best Husbandmen, and such as are more exquisite in their practise of Agriculture, giue order, That the ground for Turneps should haue five tilthes, whereas Rapes or Nauews are content with foure: but both the one and the other had need of a soile well enriched with dung or compost. By their sayings also, Rapes will prosper the better and come vp thicker, if they be sowed in their hils, chaffe and all together. Moreover, they would haue the seeds-man to be naked when he sowes them, and in sowing to protest, that this which he doth is for himselfe and his neighbors, and wishall to pray as he goeth. The proper season for the seednesse of them both, is between the feasts of the two gods; to wit, Neptune and Vulcan.

To conclude, there is a subtil and curious obseruation that many go by and do hold, namely this, To marke how many daies old the Moon was, when the first snow fel the winter next before; for if a man do sow Rapes or Turneps, within the foresaid compasse of that time, the moon being for many daies old, they will come to be wondrous great, and increase exceedingly. Men vse to sow them also in the Spring: but then they make choise of moist and hot grounds.

CHAP. XIII.

¶ Of Lupines.

After Rapes and Turneps, the Lupines haue greatest vse, and serue to be raunged next: for that they indifferently serue both men and also all foure footed beasts that be housed, either whole or clouen. Now for that the stalke is very shittle in mowing, and therefore flyeth from the edge of the syth, the onely remedie therefore (that the mower may catch it) is to D goe to worke presently after a good shower. And verily there is not a plant growing vpon the earth (I meane of such as are sowne of seed) more admirable than the Lupine, in regard of the great amity and sympathie betweene the earth and it. Looke how the Sun keepeth his course in our Horizon aboue, so doth it turne and go withall; in so much as the Husbandmen of the countrey go by no other clocke to know how the day passeth, in close and cloudie weather, than this obseruation. Moreover, it hath three seasons of blowing: it loueth the earth well, but yet willingly it would not be coered ouer with mould: for this is the onely seed that is sowne vpon ground without any ploughing or digging: it would grow to chuse, in a most grauelly, drie, and sandy soile; and in no case can it abide any tending or husbandry about it: so affected is it to the earth, that cast it vpon any rough ground, among bushes, leaues, briars and brambles, it will chit and spurt neuertheless, & neuer in til it take root within the earth. If Lupines be sowed either in vineyards or vpon corne lands, they enrich the same and make the ground better, as we haue before written: and so little need haue they of dung, that they stand in stead of the very best. To say a truth, there is no graine lesse chargeable to be sowne, than it; nay there is none collecth nought at all, but it; for it needeth not so much as to be brought into the field: and why? it soweth it selfe presently in the same field where it grew: and smedding as it doth of the own accord, a man neuer needs to cast and throw it vpon the land, as other corne. It is first sowne, and last gathered: and lightly both these seasons fall out in the moneth of September, for if the Seednes preuent not the winter, so as it may haue good root before it commeth, it will be in danger of the cold. Ouer and besides, if it chance to lie bare and vncoered aboue-ground, left carelessly without any keeping, and that no raine come vpon it presently for to drie it into the ground, it is safe enough and catcheth no harme; for so bitter it is, that no lining creature will touch it: and yet for the most part the Husbandmen bestow a light furrow vpon it, and so couer it verie shallow. If the ground be fast and heauie, it loueth that it lest which standeth vpon a red clay. And for the maintaining and enriching of this kind of soile, it must be turned vp or eured after

after the third flouring; but in case it be grauelly or sandy, it wil serue to do it after the second. Chalkie grounds onely and myrie it hateth, and therein it wil not grow. As bitter as otherwise it is, yet if it be steeped and foked in hot water, it is mans meat also. Moreouer, one Modius, or pecke of Lupines is sufficient for to satisfie and feed an Oxe or a cow at a time; and this kind of prouender will make beasts strong and healthfull. Moreouer, the meale of Lupines applied to the bellies of yong children that haue the wormes, is a singular remedy. For the good keeping of Lupines, all men agree that they should be laid vp in some chimney or smokie place especially; for if they lie in a moist room, there be certain little worms that wil nibble off and eat the tip or nauill that it hath, and by that meanes marre it for euer sprouting againe. Finally, if Lupines be eaten downe by beasts, while they be greene in the lease, the ground where they grew must presently be ploughed vp.

CHAP. XV.

¶ Of Vetches and Eruille.

Vetches also do manure and fat the ground where they be sowed; neither be they chargeable or stand the husbandman in much: they be sown with one tilth; otherwise there needs no harrowing nor weeding: there is required no mucking; onely they would be couered with mould and the clods broken; for sowing of vetches, there be three sundry times, first, about the setting of the star Arcturus, that by the moneth of December it may get a good head for to be eaten with beasts; and it is generally holden, that being sowne in this season, it will bring the best seed; for say it be eaten downe then, it will carry the burden neuertheless: the second Seednesse is in Ianuarie: the last in March; and being then put into the ground, it will run vp most to blade, and yeeld the best forrage for cattell. Of all seeds that are cast into the earth, it loueth drought most: it can brooke also shade places well enough. The chaffe that commeth of the seed thereof, is excellent good; and better than any other, in case it were ripen when it was gathered. It robbeth vines of their nourishment, if it be sowed neere those trees wherto vines are wedded; in so much as a man may see euidently how they languish.

As touching Eruille, it asketh no great hand or trauell about it: yet thus much more attendance it requirith than Vetches, for that it must be weeded and grubbed about the roots. Besides, this kind of Pulse is of great vse in Physick; for *Augustus Caesar* was cured of a disease that he had, and recovered his health by the means of Eruille, as himselfe reporteth in some of his letters now extant. Moreouer, fise Modij or pecks of Eruille town, is sufficient to maintain and find a yoke of oxen. As for that which is sowne in March, it is hurtfull forage (men say) for kine and oxen: as also that which is sowne in Autumne, maketh beasts heauie and stuffed in the head: but that which is put into the ground in the beginning of the Spring is harmlesse.

CHAP. XVI.

¶ Of Fanigreeke: of Ric: of Dredge: of the prouender corne or Bolimong Ocymum: of Spanish Trefoile or horned Clauer-grasse, called in Latine Medica: of the Shrub Trifoile, named Cytisus.

For the sowing of Silicia or Siliqua, otherwise called Fanigreeke, there needs no more but to scarrifie or scrape it lightly vp with a furrow not aboue foure fingers breadth deepe; for the lesse cost and husbandry that is bestowed about it, and the worse that it is vsed, the better it prospereth and yeeldeth greater increase: a strange thing to be spoken and seldom verified, that Negligence should be any waies profitable; and yet herein it proueth true. That which is called Secale and Farrago in Latine, (i. Ric) needeth no more adoe but to be harrowed & the clods well broken. There is a kinde of Secale or Ric, which the people called Taurines dwelling vnder the Alpes doe call Asia: it is simply worst of all other, and good for nothing but onely to driue away hunger: plentifull enough this corne is and yeeldeth good increase, but the straw is slender: blacke it is and of an vnpleasant colour, howbeit exceeding weightie and ponderous: they vse to mingle the red wheat Far therewith, and make thereof a Mascelline, to allay the bitternesse thereof; and yet for all that, the bread which it maketh is most vnfauor to the mouth and ill for the stomack. It wil come vp in any ground whatsoeuer, and bring forth a hundred fold

ordina-

A ordinarily; neither doth it eat the ground out of heart, but rather maketh it more battle, and serueth in stead of compost or mucke.

As for that kind of dredge or sarrage which commeth of the refuse and light corne purged from the red wheat Far, it ought to be sowne very thickew, with Vetches otherwhiles mingled among. In Africke, the same mixture is made of Barley. All these are good onely for prouender and beasts forage: as also a bastard kind of Vetches called *Cracca, which pigeons loue so well, that if they be led once therewith, they will neuer leaue the place where they tasted it, nor flie far from thence. In time past our ancestors had a kind of fodder or prouender, which *Cate* called Ocymum, wherewith they vsed to stay the gurrie in kine and oxen. This forrage was made of *beane stalks cut downe greene as it stood before it was ioined and coddled. But *Sura Mantius* taketh this dredge to be another thing, saying, that in old time they vsed to put vnto ten Modij of beanes, two of Vetches, and as many of Eruille, and sower wont to blend al together and sow them in an acre of ground at the fall of the lease; and (saith he) it would be the better balimong if there were some Greek Ores mingled withall, such as neuer shed the seed out of the haw: this manner of dredge was called usually Ocymum, and was wont to be sowne for a kind of forrage to serue kine and Oxen. *Varro* saith, that it tooke that name because it commeth vp so speedily as being deriued from the Greeke word *οἰσιν*, which significth, Quicke, or Swift.

As for the grasse or herbe Medica (a kind of Clauer or Trefoile) the Greekes held it in old time for a meere stranger, as being brought into Greece from Media during the Persian warres, which king *Darius* leued against Greece: howbeit, an excellent Simple it is, and worthie to be written of in the first place. And to begin withall, this singular property it hath, That with once sowing, it continueth aboue thirty yeares without any need of renewing. Like it is to Clauer or three leaved grasse, both in lease and stalke, but that the stemme is parted by knots and ioints. Moreouer, as it riseth higher and runneth vp in the stalke, the leaues grow narrower: of this herb alone and of Cytisus, *Amphilochus* compiled one whole book; howbeit, he wrote of them both confusedly. The ground wherein it is to be sowed, after it is well rid of stones and clenfed, must be broken vp and well tilled in the fall of the lease. Soone after it needeth to haue another fallow and be harrowed withall, and then couered with hardles: this would be done two or three times (fise daies between) and therewith it ought to be thoroughly dunged. This herb requirith a sound dry ground, and yet such as is full of succulent moisture within, or else where water is neere at hand to command. The ground being thus prepared, ought to be sowed in the moneth of May following, for otherwise the frost would take it and marre all. Moreouer, requisite it is, that it be sowed very thick, so as euery place be taken vp therewith, thereby to exclude all other weeds and giue them no roome there to grow. To this effect therefore euery acre will take 20 Modij or pecks of seed. But take heed withall, that it be not burnt so soon as it is put into the ground, & therefore immediatly it must be couered with mould. If the soile be moist and giuen to bear other grasse, the seed is soon ouergrown and choked, and then al wil run to grasse, & turn to be a meadow: which grasse or coich when you see begin to ouerrun the ground, it must be all weeded out presently an inch deepe within the ground, and by hand rather than any weeding-hooke or thistle spade. Now, when this hearbe Medica or Clauer grasse begins once to floure cut it downe: and so often as it floureth againe, downe with it. Thus you may haue six mathes in one yere or four at the least. You must neuer let it spindie and beare seed: for better is it to take it thus in the growth, while it is but young and greene grasse, for three yeares together: and the forrage or fodder is most profitfull. Sowne (I say) it must be in the Spring, and weeded for the first three yeares. The green sward afterwards ought to be pared away with hookes and spades close to the ground: for by this meanes you shall be sure, that all other weeds will die, and this hearbe take no harme by it, for that by this time it is deeply rooted. If the weeds do get head and overcome it, the onely remedie is by the plough, to turne vp the ground ouer and ouer so many times, vntill all other roots be killed. Moreouer, heed must be taken, that of this herbage or fodder, beasts do not eat their fil; for feare you be driuen of necessitie to let them bloud, and take downe their rankenesse. The greener that it is, the more profit commeth thereof, for it drieth branch after branch, vntill at length it will crumble like dust or powder, and then is it good for nothing.

As touching Cytisus, [i. the Shrub Trifoile] which is a singular kind of pasturage, & passes al the rest, I haue written at ful in my discourse of shrubs. For now at this present I am to prosecute

* Or rather
Arachis* Sissebante
Varro saith
Citr-b-nt,
which is clean
contrario.
* Enhalis frigete
antiquam ge-
nerat.

cure and goe through the treatise of other sorts of corne and their nature, if I had once written somewhat in one part thereof as touching the accidents and imperfections that happen among them.

CHAP. XVII.

¶ The faults incident to corne, and their remedies. Also what corne is respectiue to this or that soile, for to be sown therein.

The first and principall defect obserued in bread-corne, and Wheat especially, is when it doth degenerate and turne into Otes: and not only it, but Barley also doth the like. Semblably, Otes otherwhiles serue the turne in stead of bread-corne: as wee may see in some countries of Almaine, where they do vsually sow it, and commonly they haue no other pottage there, than Oatmeale gruell [which they call Abremouz.] The foresaid defect and imperfection is occasioned chiefly by the moist soile or ouerwet weather. Another cause there followeth also thereupon, proceeding from the feeblenesse and weaknesse of the seed; namely, when it lieth long fobbing in the ground, before it come vp: and hereto may be referred the faultines of the seed otherwise, namely, if it were worm-eaten or otherwise rotten at the time of sowing: and verily, no sooner appeareth it aboue ground, but the foresaid change or bastardie may be seene, whereby it doth appeare, that the cause is in the root.

A second defect or imperfection there is also incident to corn, which hath some neer resemblance to the Otes aforesaid, namely, when the graine being formed and newly come to the iust proportion of bignesse (howbeit, not yet full and ripe) before that it is firm and hard, is smitten with a noisome blast, and so, like an abortiue fruit, decaieth and windereth away within the eare in such sort, as there is no substance left therein, but appeareth void and emptie. Now these aduerse and malignant winds hurt all spiked corne, as well Wheat as Barley, at three seuerall times, to wit, in their floure; presently vpon their blooming, and last of all, when they begin to ripen; for then, namely when they are vpon the point of maturitie, those blasts consume the grain, and bring it to nothing, which before was full: whereas at the two former seasons they hinder it altogether from knitting and growing. The hot gleames moreouer of the Sun, betweene often clouding, do much harme to corne.

Furthermore, there be certaine little wormes breeding in the root, that do eat it: which happeneth by occasion of much raine falling immediatly after the seednesse, especially, when some sudden heat and drowth ensueth therupon, which bindeth the earth aboue and so encloseth the moisture conceiued within, the very cause & nourice of putrifaction. Ye shall haue other such like vermin engender likewise in the very grain of the corn, namely, when the ear doth glow within, and is chafed with sultry hot rains.ouer and besides, there be certain [green] flies like small Beerles, called Cantharides, which do gnaw and eat the corne. But al these, and such like worms or flies die presently, when the corn (which was their food) is gone. Moreouer, Oile, Pitch, and Tarre, al manner of greace also, be contrarie to seed-corne especially; and therefore take heed that at you sow none such as hath caught oile, pitch, or greace. As for showers of raine, good they are for corne, so long only as it is in the green blade: when corne is blooming, be it either wheat or barley, or such like) raine is hurtfull. Mary Pulse takes no harme thereby, vnlesse it be the Cich-peafe.

All kinds of wheat and other bread corne, when they be toward ripenesse, catch hurt by showers, but Barley more than any. Besides all this, there is a certaine white hearbe or weed resembling Panicke, growing among corne, and ouerspreading whole fields; which not onely hindereth corne, but also killeth all the cattell that feedeth thereupon. For as touching ray or darnel, burs, thistles, and brambles, I may hold and reckon them, not so much for faults and imperfections of corn, as rather the plagues and infections proceeding from the very earth. And for blasting, which commeth of some distemperature of the aire (a mischief common as well to corn, as vines) it is as hurtful as any other malady whatsoever. This vnhappy blast falleth most often in places subject to mists and dewes, and namely, hollow vallies and low grounds lying vnder the winde: for contrariwise, windie quarters, and such as are mounted high, are not subiect to this inconuenience. Also we may number among the faults incident to corne, their rankenesse; namely, when the blade is so ouergrowne, and the stalke so charged and loden with a heauie head that the corn standeth not vpriight, but is lodged & lieth along. Moreouer, when there falls a great

A a great glut of rain, in so much as the ground stands with water, there befallerth vnto all corn and pulse, yea, and whatsoeuer is sowne, a certaine disease called in Latine Vrica; in so much, as the very Cich-peafe taketh hurt thereby, for by reason that the rain washed from them that salt quality which was naturall thereunto, it becometh sweeter than it should be, and loseth the kind tast. There is a weed that claspeth and tieth about Ciches and Eruiles, whereby it chokereth and killeth them both: and thereupon it is called Orobanthum, i. Choke Eruiile. After the same manner dealeth * Ray or Darnel by wheat; wild Otes likewise, named by some Agilops, with barley; as also the weed Securidaca, i. Ax-fitch, which the Greeks also (for the resemblance that it hath to an axe head) call Pelicinin, * with Lentils. These weeds (I say) kill corne by winding about it. Another herb there is, growing neere to the city Philippi, which killeth Beans: if the ground be fat and good, they name the said weed Ateramnion; but if it be found in a hungry and leane soile, and namely, when being wet, some vnhappy wind bloweth vpon it, they call it Teramnion. As for the graine of Raie or Darnel, it is very small, and lieth inclosed with a sharpe-pointed husk. The bread which hath any of this seed in it, soone causeth dizinesse and swimming of the head. And (by report) in Asia and Greece the matters of the common Bains and Stuphes, when they would keep away the great resort of multitude thither, haue a deuise to cast Darnell seeds vpon burning coles, for this perfume will quickly set them farther off. Moreouer, if the Winter proue to be wet and waterish, ye shall haue in the Pulse called Eruiile, a little vermin ingendred there called Phalangin, and it is of the kind of these spiders. Likewise vpon Vetches there will breed naked dew-snails, yea, & otherwhile those little ones with shells or houses on their backs, which creeping from the ground, will gnaw & eat them, that it is a wonder to see what foul work they will make. Thus much concerning all the remedies and inconueniences (to speak of) incident to corne. It remaineth now to treat of the remedies.

As touching the cure of those harms that come by hurtful weeds to the corn in blade, it consisteth principally in two things: namely, either in the vse of the weeding knife or hooke, when they be newly come vp, or els in strewing ashes when the corn is a sowing. But as for those dangers that touch the seed or grain in the eare and eod, as also that settle about the root, they must be preuented by good forecast, euen before it be thrown into the ground. It is generally thought that if seed-corn lie steeped beforehand in Wine, it will be better able afterwards to resist all diseases whatsoever. Virgil giueth order to infuse or soke the Beanes that must be sown, in nitre and oile lees or dregs; and he assureth vs, that they will prosper mightily besides, and become exceeding great. But others are of opinion, that if for 3 daies before they be cast into the earth they lie in vrine & there water mingled together, they will, being thus prepared come on apace, and thrive passing well. It is said moreouer, That if Beans be thrice raked and rid from weedes, one Modius of them being whole and solid, will yeeld a Modius again after it is husked & broken. As for other seed-corn, it will escape the danger of the worme, if either it lie before among Cypresse leaues bruised, or be sowed in and about the change of the Moon, namely, when she is not to be seen about the earth in our hemisphere. Many there be who practise other remedies: & namely for the Millet, they would haue a toad to be caried round about the field before that it be harrowed: which done, to be put close within an earthen pot, and so buried in the middest of the said field: and by this meanes forsooth, neither Sparrows will lie vpon the corn, nor any worm hurt it. Mary, in any case this same toad must be digged out of the ground againe before the field be mowed, els will the Millet proue bitter in tast. The like experiment they say is of a Moldwarps shoulder, for if any corn be sowed or touched therewith before, it will come vp the better and bring more increase. Democritus had a deuise by himselfe for all seed & corn whatsoever, namely, to temper & soke the same corn in the iuice of the herb houselecke or Sen-green, growing vpon houses either tiled or shindled, which in Greeke is called Aizoon, and in Latine Sedum or Digitellum; for this medicine will serue for all maladies. The common practise of our husbandmen is this: in case through the ouersweet sap or iuice in Greene corne, wormes take to the roots: for to sprinkle them with simple oile lees pure and cleane without any salt, & afterwards to rake it in. Also, when the corn begins to ioint and gather into knots, then to cleanse the ground, and put off no longer, for feare lest the weeds do get head & ouergrow. This I am sure vpon mine owne knowledge, that there is an herbe (but what proper name it hath I wote not) which if it be interred in the foure corners of a field that is sown with Millet, it will drive away Stares and Sparrows, which otherwise would by whole flights and flocks lie thereupon and do much

much harme; nay I will speake a greater word and which may seeme wonderfull, There is not a G
bird of the aire one or other, that dare enter or approach such a field. Field-mice and Rats are
skared away and will not touch corne, which before the sowing was either bestrewed with the
ashes of weasels or cats, or els drenched with the liquor and decoction of water wherein they
were boiled; howbeit this inconuenience insueth hereupon. That bread made of such corn will
haue a sinach, and sent strongly of such cats and Weasels: and therefore it is supposed a more
expedient and safer way to medicine our seed corne with oxgall, for to preferue it from the
said Mice and Rats. But what remedy against the blast and mildew, the greatest plague that can
befall vpon corn? Mary prick downe certaine Lawrell boughes here and there among the stand-
ing corne, all the said mists and mildewes will leaue the corne and passe to the Bay leaues, and
there settle. What shall we do then to corne when it is ouer-rank? Eat it me downe with sheep H
and spare not, whiles it is young and in the blade onely, before (1 day) it be knotted: and neuer
feare harm by the sheeps teeth as neere as they go to the ground: for let it be thus eaten many
times, the corn will be the better, yea and the head will take no harme thereby but prooue the
fairer. If such rank corne be once cut down with the syth, & no more, certain it is that the grain
in the eare will be the longer to see to, howbeit void and without any flour within it; for sowing
such seed again, & it wil neuer grow nor come vp. And yet about Babylon, the maner is to mow
it twise first, and the third time to put in sheep to it for to eat it down; otherwise the corn would
neuer spindle, but blade still, and run all to leafe. But being thus cut and cut again, and eaten in
the end, ye shall haue it to increase and multiply 50 for one, * so fertile is the soile: and if the
owner be a good husband besides, and vse the ground accordingly, he shall reap thrice as much, I
euen a 150 fold. And what carefull diligence is that which is here required? Surely neither
much, nor difficult: only he must be sure to keep the ground well with watering for a long time
together, to the end that it may be discharged of the ouermuch fat within it, which by this
means will be washed all away, and the ranknesse delaied. Yet as rich and fertile as this soile is,
the two riuers Euphrates and Tigris (which vse to ouerflow and water the country) bring no sli-
my mud with them, as Nilus doth in Egypt, wherby the ground is made so fat as it is: neither is
the nature of the earth there, giuen to breed herbs that it should need any weeding: and yet so
plenteous and fruitfull it is, that it soweth it selfe against the next yere, for the corne that shed-
deth in the reaping and mowing, being troden vnder foot into the ground, is as good as a sow-
ing, and riseth of it selfe without any further labor.

* Felicitas soli

Seeing then there is so great difference in the soile, I am put in minde thereby to fit euery
ground with seed respectiue, according to the nature and goodnesse thereof. This therefore is
the opinion of *Cato*, that in a grosse and fat soile, there would be wheat and such like hard corne
sown; and if the same be subiect also to mists and dewes, there may be sown therein raddish, mil-
let, and Panick, must be sowne first in a cold and waterish ground; and afterwards for change in
a hot soile. *Item*, the red bearded wheat *Far* or *Adoreum*, requireth a chalkie and sandy ground,
and namely if it be well watered. *Item*, the common wheat loueth a drie soile, exposed to the
Sun, and not giuen much to breed superfluous weeds. *Item*, Beanes will doe well in a found and
fast soile. As for Vetches, they care not how little they be sowed in a moist piece of ground, and
such as is apt to run to grasse. Moreover, for the fine winter wheat *Siligo*, whereof the best man-
chet is made, and also for the common frumenty wheat, there would be chosen an open & high
ground, lying pleasantly vpon the Sunne, that it might haue the heat thereof to parch it as long
and as much as is possible. As for Lentils, they doe like a good rough and shrubbie soile, full of
red earth, so as it be not apt quickly to gather a green-ford. * Barly would gladly grow vpon a re-
stie ground new broken vp, or else such as be in heart to beare euery yere. And as for Summer
(barley) of three moneths, it would be sowne in a ground where it could not haue an earely or
timely Seednes, & which is so fat and rich, as it may afford to beare crop, yere by yere: finally,
to speak to the purpose indeed, this also is *Catoes* witty resolution in one word for all: if the soile
be light and lean, seed it with such grain or forage seed, as require no great nourishment, as for
example, with *Cytisus*; and excepting the *Cich-pease*, with all pulse that are vsed to be plucked
out of the earth, and not mowed downe: and thereupon indeed are these pulse called in Latine
Legumina, because they are plucked and gathered in that sort: but in case the ground be good
and fat, sow such things as require fuller food and nutriment; and namely, all garden worts and
pot-herbes; wheat, both the common and the fine; and Linfeed. Then, according to this rule, a
leane

* *in rebus
vitiis s. exult.
Plutarch.*

A leane and hungry soile will well agree with barly, for the root is contented with lesse nutriture:
wheras contrariwise we allow both lighter, and also more massie and richer ground for our ordi-
nary wheat. In a low and wet piece of ground, it is good to sow the red wheat *Adoreum*, rather
than the common wheat *Triticum*: but both it and barley will sort well with a soile of a mid-
dle temperature. The hills yeeld a firm, fast, and strong kind of wheat, but the grain is but smal.
And to conclude, the best kinds of wheat, to wit, *Far* and *Siligo*, challenge for their lot to bee
seated in a chalky soile, and therewith alwaies wet and soaked in water.

CHAP. XVIII.

B Offspring prodigies and wonders obserued in corne: the knowledge and skill of earing
and tilling the ground: also diuers sorts of plough-shares.

A I be it haue in the title of this chapter purposed to write of prodigies seen in corne, yet
to my knowledge, there neuer happened but once the like wonder and portentious sight
to this which I shall tell, and which befell in the time that *P. Aelius* and *Cn. Cornelius* were
Consuls of Rome, that very yere wherein *Annibal* with his whole armie was defeated and van-
quished: for then (by report) there was corne grew vpon trees.
But forasmuch as I haue discoursed at large of the sundry kinds as well of corn as of ground,
I will proceed now forward and come to the manner of ploughing the earth, after I haue first
set downe before all things els, how easie the husbandrie is in Egypt: for there the riuier Nilus
seruing in stead of a good plough man, beginneth to swell and ouerflow (as we haue before rehear-
sed) at the first new Moone after the Summer Sunstead. Hee beginneth faire and softly, and so
increaseth more and more by little and little; but all the while that the Sun passeth vnder the
signe Leo, hee higheth apace vntill hee be risen to his full height: being entered once into Virgo,
his fury slaketh, then decreaseth he as fast, vntill hee be fallen againe into his wonted channell,
which ordinarily happeneth by the time that the Sun is in Libra. Now this is obserued, That if
he rise not plumb about 12 cubits high, the people are sure to haue a famine of corn that yere:
the like also do they make account of, in case hee passe the gage of sixteen cubits: for the higher
that he is risen, the longer it is again ere he be fully fallen, by which time the Seednesse is past,
and men cannot sow the ground in due season. It hath bin generally receiued for a truth, That
D presently vpon the departure of this deluge and ouerflowing of Nilus, they were wont to cast
their seed-corne vpon the floten ground, and presently let in their swine after for to trample it
with their feet into the earth whiles it was soft and drenched. And verily, for mine owne part, I
beleue wel, they vsed so to do in old time: for euen now adaies also, much more ado they make
not about it. Howbeit, this is certaine, that first they cast their seed vpon the slime and mud so
soone as the riuier is downe, which commonly falleth out in the very beginning of Nouember:
which done, they go ouer it with the plough and giue it a light tith, so as it may be couered on-
ly and lie vnder a small furrow. Some few there be that afterwards fall a weeding, which point
of husbandry they call *Boranismos*: but the most part, after they haue once sowed and turned
their seed into the ground, neuer after make a step into field to see how their corne groweth, vn-
til they go once for all with syth on neck or sickle in hand, namely at the end of March; for then
they fall to reaping and cutting it downe, so as by the moneth of May they sing in Egypt, Har-
uest in, and all is done for that yere. As touching this corne gathered in Base Egypt, the straw
is neuer a cubit long: the reason is, because the seed lieth very ebbe, and hath no other nutri-
ment than from the mud and slime aforesaid; for vnder it is nothing but sand and grauell. But
those that inhabit higher vp into the country, namely about Thebais, they be far better prouid-
ed for corne, because Egypt indeed (for the most part) lyeth low vpon marais ground. Toward
Babylon likewise and Seleucia (where the riuers Euphrates and Tigris doe swell ouer their
banks and water the country) the same husbandry is practised, but to better effect and greater
profit, by reason that the people may let in the water at sluices and flood-gates, more or lesse
with their owne hands, according as they list themselves. Also in Syria, they haue their small
ploughs for the nones to take a shallow stich and make light worke: whereas in many places
here with vs in Italy, eight oxen are little enough to euery plough, and to go away withall they
must labor at it till they blow and pant again. It is an old said Saw, and may goe for an Oracle
to be practised in all parts of husbandry, but in this point of ploughing especially, *See ruled by*
D d d the

the nature of euery countrey, and see what each ground will abide. To come now vnto our ploughes. Of Shares, there be many sorts: first, there is that instrument called a culter, which serueth to make way before, cutting and cleauing the hard and thick ground as it goeth, before it be broken vp and turned aroneside: this sheweth by the flits and incisions that it maketh (as it were by a true line drawn) how the furrows shall go; after which cometh the broad bit of the ploughshare indeed, lying flat-wile, and in earing casteth vp all before it, and cleareth the furrow. A second sort there is, commonly vied in many places, and it is no more but a bar of yron pointed sharpe in manner of a beak-head or stem of a ship; and it may be called a Rostle. And when the ground is not stubborn but gentle to be wrought, there is a third kind vied, which is nothing but a piece of yron not reaching all ouer the * plough head and shooing it to the full, but turning vp like a snout with a small point sharp at the end. This nee is somewhat broader in a fourth kinde of shares, but as it is broader in blade and trenchant withall, so it is sharper also at the end; inso-much, that both with the point forward & the edges of the sides, it not only pierces the ground before it pointant like a sword, but also cutteth the roots of weeds which it incountrith: a deuise inuented not long since in Rhætia. As for the Gaules, they set too besides, certain small roundles or wheels; & a plough thus shod & harnaised, they call in their language * Planarati: the head of their share is broad, fashioned like vnto the bit of a spade: and thus they sow their grounds for the most part, new broken vp and not tilled nor eared before. And for that their plough-shares be large and broad, so much the easier turn they vp good turfs of earth and make broad furrows. Presently after the plough, they throw in their seed, and mould or couer it afterwards with yron-toothed harrows drawn aloft. Lands in this manner sown, need no other raking or weeding; for commonly they make not past two or three bouts in a land, and as many ridges. Finally, it is thought, that in this manner there may be sown in one yere by the help of one yoke of oxen, 40 arpens or acres of land ordinarily; if the ground be gentle and easie to be eared; but if it be stiffe and stubborne, they shall haue worke enough to go through thirty.

CHAP. XIX.

¶ The seasons that be proper for tilling the ground: also the manner of coupling oxen in yoke.

IN this operation of ploughing ground, I am of mind to follow that Oracle or Aphorisme of Cato, who being asked which was the first and principall point of Agriculture, answered thus, *Euen to husband, order, and tend ground well*: being demanded againe, what was the second, hee made answer, *To plough well*. And when the question was propounded concerning the third point of husbandry, he said, *That it consisted in manuring and dunging it well*. There be other necessarie rules besides, set downe by him as touching this matter; namely, Make no vnequall furrowes in ploughing, but lay them alike with one and the same plough. Passe not the kindly season, but eare the ground in due time. In the warmer countries, lands would be broken vp and fallowes made, immediately after the Winter Solstice or Sun-stead. In colder regions, touch them not before the spring Equinox or Mid-march. In a drie quarter, plough more early than in a moist: sooner also in a fast and compact soile, than in a loose and light ground: in a fat and rich field, than in a leane and poore land. Looke in what climat the Summer is ordinarily drie and hot, it is thought more profitable to eare vp a chalky or a light and leane ground, between the Summer Sunstead and the Equinoctiall in the fall of the lease. If the climat be such as yeeldeth but little heat in Summer, and therewith many showers of raine, where the soile also is fat and beareth a thick green-sourd, it were better to break vp ground and fallow in the hottest season: where the soile is heauie, grosse, and fat, and wherein a man may tread deepe, I like well that it should be tilled and stirred in winter: but in case it be very light and drie withall, it would not be medled with but a little before * seednes. Here also be other proper rules set down by Cato, pertinent to Agriculture: Touch not (qd. he) in any hand a piece of ground that soon will turne to dust and mire. When thou dost plough indeed for to sow, employ thy whole strength thereto: but before thou take a deep stich for all, giue it a pin-fallow before; this commodity cometh thereof, that by turning vp the turfe with the bottom vpward, the roots of weeds are killed. Some are of this opinion, that howsoeuer we do els, a ground should haue the first braking vp about the spring Equinox: a land that thus hath bin once plowed in the spring, is called in Latin *Veracium*, & hath the name of the foresaid time *Ver* [i. spring.] Indeed ley grounds & such as

* Dentalis.

* or as some think, *Pfluggradi*.

* Bene colere.

* Bene arare.

* Bene sercare.

* In the spring

A rest each other yere, must be in this wise followed. Now if you would know what the Latines mean by *Nonale*, they take it for a field sowed euery second yere. And thus much of the land.

To come now vnto our draught oxen that must labour at the plough: they ought to be coupled in yoke, as close together & as streight as is possible, to the end that whilst they be at work and ploughing, they may beare vp their heads; for by that meanes they least doe gall or bruise their necks. If they chance to goe to plough among trees and vines, they must be muzzled with some frailes or deuises made of twigs, to the end they should not brouse and crop off the yong springs and soft tendrils. Moreover, there ought a little hatchet to hang euermore fast to the plough beame before, therewith to cut through roots within the ground, that might breake or stay the plough: for better is it so to do, than to put the plough to it, to keep a plucking at them or to force the poore oxen to lie tugging & wrestling with them. Also in ploughing, this order

is to be kept, That when the oxen are * gone down with one furrow to the lands end, they turne and goe vp againe with another; so that in ploughing of a land they * rest betweene whiles as little as may be, but euermore go forward in their labour vntill they haue made an end of their * halfe acre, or halfe daies worke: and verily it is thought sufficient for a teem of oxen to breake vp (at the first tith) in one day of restie or ley ground, one acre, taking a furrow or stich of nine inches; but at the second tith or stirring, an acre and a halfe; which is to be vnderstood of an easie and mellow soile to be wrought, for if it be tough and churlish, it is wel if they eare vp at the first, halfe an acre; and at the next time they may go through with one whole acre, how hard soeuer the ground be; for thus haue poore beasts their taske set, and their labour limited by Natures lore and appointment. Euery field to be sown must be eared at first with streight & direct furrows; but those that follow after, ought to go byas and winding. If a ground vpon the pendant or hanging of the hill be to be broken vp, the furrowes must go crosse and ouerthwart: howbeit, the point and beak of the plough-share must be so guided, that one while it beare hard above on the one side, and another while beneath on the other side: and verily in this mountaine worke, the ploughman that holdeth the plough hath toile enough, and laboreth at it as hard as the oxen do. Certes, there be some mountaines that haue no vse at all of this beast, but they eare their ground with raking and scraping hooks only. The ploughman, vnlesse he bend and stoop forward with his body, must needs make sleight worke, and leaue much vndon as it ought to be; a fault which in Latine we call *Preuarication*: and this terme appropriate vnto husbandrie, is

borrowed from thence by Lawyers, and translated by them into their courts and halls of pleas: if it be then a reprochfull crime for Lawyers to abuse their clients by way of collusion, wee ought to take heed how we deceiue and mocke the ground, where this fault was first found and discovered. To proceed, the plough-man euermore and anone had need to cleanse the culter and the share with his staffe, tipped and pointed at the end like a thistle-spade: he must beware that between two furrowes, he leaue no naked balks raw and vntilled: also that the clots ride not one vpon anothers back. Badly is that land ploughed, which after the corn is sowed, needs the great harrows and clotting. Contrariwise, a man may know where there is good worke; namely, if the turfe be so close couched that there be no seams to be seen where the plough-share went: finally, it is a profitable point of husbandry and much practised (where the ground doth both beare and require it) For to draw here and there broad gutters or furrows, to drain away the water into ditches and trenches cast for the nones betweene the lands, that otherwise would stand within and drowne the corne.

CHAP. XX.

¶ Of harrowing and breaking clods. Of a certaine kind of ploughing vied in old time. Of the second tith or fallow called *Stirring*: and of cutting.

AFTER the second fallow called *Stirring*, done with crosse and ouerthwart furrow to the first, then followeth clodding, if need be, either with rakes or great harrowes: vpon which inso-much sowing; and when the seed is in the ground, harrowing a second time with the small harrow. In some places, where the manner of the country doth so require, this is performed with a tined or toothed harrow, or els with a broad planke fastened vnto the plough taile, which doth hide and couer the seed newly sown; and in this maner to rake or harrow, is called in Latine *Lirare*, from whence came first the word *Delirare*, which is to leaue bare balks vncouered, and by a Metaphore and borrowed speech, to rane and speake idly.

Ddd 2

It

* Illa fides de-
mum anis re-
fpondet anari.
Agricola, his
que iusti bis fri-
gora fuffit.
1 Brekinge.
2 Sturings.
3 Crufting.
4 Setting vp.
5 Cafting
downe.

It should seem that *Virgil prescribed, that the ground should haue foure tilthes in all, by these words, when he said, That the corne was best, which had two Summers and two Winters. But if the ground be strong and tough, as in most parts of Italy, there needs a * fift tilth before sowing, and in Tuscan verily they giue their ground, otherwhiles no fewer than nine fallowes, before it be brought into tillage. As for Beans and Vetches, they may be sowed vnder furrow, without breaking vp the ground before; for this is a ready way, gaining time, sauing charges, & sparing labour.

And here I cannot ouerpasse one inuention more as touching earing and ploughing the ground, deuised in Piemont and those parts beyond the Po, by occasion of some hard measure and wrong offered to the people and peisants of that country during the wars. And thus stood the case. The Salassians making rodes into the vale lying vnder the Alpes, as they forraied and harried the country all ouer, assailed also to ouerrun their fields of Panick and Millet being now come vp and wel growne, meaning thereby to destroy it; but seeing the nature of that graine to be such, as to rise againe and to check this iniury, they set ploughs into it, and turned all vnder furrow, imagining by that means to spoil it for euer. But fel what ensued therupon; those fields thus misused (in their conceit) bare a twofold crop, in proportion to other yerres; & yeelded so plentiful an harvest, as that thereby the peisants aforesaid learned the deuise of turning corn in the blade into the ground, which I suppose in those days when it new came vp, they called *Ara-rrare*. And this point of husbandry they put in practise, when the corne begins to gather and shew the stem or straw; to wit, so soone as it hath put forth two or three leaues and no more.

Neither will I conceale from you another new deuise, practised and inuented first, not above three yerres past in the territory of Treuiers, neer to Ferrara. For at what time as their corn fields by reason of an extreme cold winter, seemed to be frost-bitten and spoiled, they sowed the same again in the month of March, raking and scraping the vpper coat of the ground onely without more ado: and neuer in their liues had they the like increase when harvest came. Now as touching all other tillage and husbandry meet for the ground, I will write thereof respectfully to the seuerall kinds of corne.

CHAP. XXI.

¶ Of the tillage and ordering of the ground.

The fine Wheat Siligo, the red bearded Wheat Far, and the common Wheat Triticum; Spelt or Zea (generally called Seed) and Barly, when they be new sown, would be wel clotted and couered first, harrowed afterwards, & weeded at the last to the very root; al at such seasons as shall be shewed hereafter. And to say a truth, every one of these is a sufficient worke for one man to do in a day throughout an acre. As for the Sarceling or second harrowing, it doth much good to corn: for by loosening the ground about it, which by the winter cold was hardened, clunged, and (as it were) hide bound, it is somewhat enlarged and at libertie against the Spring tide, and full gladly admitteth and receiueth the benefit of the fresh and new come Sunshine daies: let him take heed who thus sarches or rakes the ground, that he neither vndermine the roots of the corn, nor yet race or disquiet & loosen them. The common wheat, Barley, the Seed Zea (i. Spelt) and Beans, would do the better if they were thus sarched, and the earth laied loose about them twice: the grubbing vp of weeds by the root, at what time as the corne is ioined (namely, when the vnprofitable and hurtful hearbs are plucked forth and rid out of the way) much helpeth the root of the corn, discharging it from noisome weeds, procuring it more nutriment and seuering it apart from the other green sould of common grasse. Of all Pulse, the cich pease askech the same dressing and ordering, as the red wheat Far. As for beans, they passe not at all for weeding; and why: they ouergrow all the weeds about, and choke them. The Lupines require nought els to be done to them but only weeding. Millet and Panick, must be clotted and once harrowed vntill they be couered: they call not for a second raking & scraping about them, for to loosen the earth, and to lay fresh mould vnto them; much lesse to be weeded. As for Silicia or Siliqua, i. * Fenigreeke, and Fasels, i. Kidney-beans, they care onely for clodding, & there an end.

Moreover, there be certain grounds so fertile, that the corn comming vp so thick & ranke in the blade, ought then to be kemberd (as it were) & raked with a kind of harrow set with teeth or spikes

* For so he in-
re mereth at
h-helfe n the
hap of this
booke.

A spikes of yron: and yet for all this, they must be grafted or eaten down besides neuerthelesse with sheep. Now we must remember, that after such cattel hath gon ouer it with their teeth, the same corne thus eaten downe, must of necessity be sarched, and the earth lightly raked and raised vp fresh againe. Howbeit, in Baetiana, Africke, and Cyrene, there needs no such hand at all: for the climate is so good, so kinde, and beneficiall, that none of all this paines is required: for after the seed is once sowne, they neuer visit it but once for all at nine months end, at what time they returne to cut it down and lay it vpon their thrashing floores: the reason is, because the drought keepeth downe all weeds; and the dewes that fall by night, are sufficient to refresh and nourish the corne.

Virgil is of opinion, That fallowes would be made euery yeare, and that our corn field should rest betwene whiles, and beare but each other yere. And surely, I doe find this rule of his most true, and doubtlesse right profitable; in case a man haue land enough for to let his grounds play them, and rest euery second yere. But how if a man is streighted that way, and hath no such reach and circuit lying to his liuing? Let him help himselfe this way: let him (I say) sow his good red wheat Far againe the next yere, vpon that ground from whence he gathered this yeare a crop of Lupines, Vetches, or Beans, or some such grain as doth enrich and muck the ground. For this also is principally to be noted, that some corne is sowne for no other purpose, but by the way as it were to aduance and help others to fructifie: howbeit, small fruit and increase (to speak of) ariseth thereby, as I haue obserued once for all in the booke immediatly going before, because I would not willingly reiterate and inculcate one thing often. For herein regard especially ought to be had, vnto the nature and property of euery soile.

CHAP. XXII.

¶ Of certaine countries exceeding fertile and fruitfull. Of a Vine bearing grapes twise in one yeare. Of the difference and diuersitie obserued in waters.

There is in Africke or Barbary a city called Tacape, scituate in the midst of the sands, as men go to the Syrtes and Leptis the great: the territory lying about which city, by reason that it is so well watered, is maruellous fruitfull, and indeed passeth a wonder and is incredible. Within this tract there is a fountain, which serueth abundantly for three miles well neer, every way; the head thereof verily is large enough otherwise, howbeit the inhabitants about it are serued with water from thence by turns, and dispensed it is among them at certain set hours, and not otherwise. There standeth there a mighty great date-tree, hauing vnder it growing an oliue, vnder which there is a fig-tree, and that ouerspreadeth a Pomegranat tree, vnder the shade whereof there is a Vine: and vnder the compasse thereof, first they sow Frument or eared corne, after that Pulse, and then worts and herbs for the pot, all in one and the same yere. Euery one of these reharfed, liue, joy, and thriue vnder the shade of others. Euery foure cubits square of this soile (taking the measure of a cubit from the elbow, not to the fingers ends stretched out in length, but clasped together into the fist) is sold for * 4 deniers Roman: but this one surpasseth all the rest. The vines in the said territory beare twice a yeare, and yeeld their grapes ripe for a double Vintage. So exceeding fruitfull is the soile, that vnlesse the ranknesse thereof were abated and taken downe, by bearing sundry fruits one vnder and after another, so that it were imployed to one thing alone, the inhabitants should neuer haue any good thereof: for by reason of the ouer-ranknesse, each seuerall fruit would perish and come to nought: but now by means of plying and following it still with seed, a man shall gather one fruit or other ripe, all the yeare long. And for certaine it is knowne, that men cannot ouercharge the ground, no nor feed the fertilitye of it sufficiently.

Moreover, all kinds of water are not of like nature nor of equall goodnesse, for to drench and refresh the ground. In the prouince of Narbon, now Languedoc, there is a famous wel or fountain named Orge, within the very head whereof there grow certaine herbes, so much desired and sought for by kine and oxen, that to seeke and get a mouthfull of them, they will thrust in their whole heads ouer their eares, vntill they meet therewith: but howfoeuer these herbes seeme to spring & grow within the water, certain it is, that nourished they are not, but by rain from aboue. And therefore to conclude & knit vp all in one word, Let euery man be wel acquainted with the nature both of his own land which he hath, and also of the water wherewith he is serued.

Ddd 3

CHAP.

* 2 lb. 6 d. sterl.
By which re-
c-koning one
acre would
cost about 200
pound sterling
so much in pro-
portion of the
whole, as this
cubit is vnder
our halfe yard
or 18 inches.

CHAP. XXIII.

¶ *Of the diuers qualities of the soile. Also, the manner of dunging or manuring grounds.*

IF you meet with a ground of your owne, which we called heretofore by the name of Tenera, the soile indeed and principall of all others; after you haue taken off a crop of Barley, you may very well sow Millet thereupon: and when that is in and laid vp in the barne, proceed to Raddish. Last of all, after they be drawne, there may be barley or common wheat sowed in the place, like as they do in Campaine; for surely such a piece of ground needs no other tillage, but often sowing. Another order there is besides this in sowing of such soile; namely, that where there grew the red wheat Adoreum or Far, there the ground should rest all the four winter moneths, and in the Spring be sowed again with Beans, so that it alwaies be imploied and kept occupied vntill Winter without any intermission. And say that the ground be not altogether so fat, yet it may be ordered so, that it be euer bearing by turns in this sort, that after the Frumenty or Spike corne be taken off, there be pulse sowne three times, one after another. But in case the ground be ouer poore and lean, it must be suffered to rest and take repose two yeares in three. Moreover, many husbandmen do hold, that it is not good to sow white corne or Frument vpon any land, but such as lay fallow and rested the yeare before.

Howeuer it be, the principall thing in this part of Agriculture, consisteth in dunging, whereof I haue written already in the former book next to this. This one point only is resolved vpon by all men, that none of our grounds ought to be sowed, vnlesse they be manured and mucked before. And yet herein must we be directed by certain rules peculiar and proper thereunto, as follow. Millet, Panick, Rapes, Turneps, or Navews, ought neuer to be sowed but in a ground that is dunged. If there be no compost laid vpon a ground, sow vpon it Frument or bread-corne, rather than Barley. Likewise in grounds that rest and lie fallow euery other yeare, albeit in all mens opinion, they are thought good for to beare Beans, yet notwithstanding Beans loue better where-soeuer they come to be sowed in a ground but newly mucked. He that mindeth to sow at the fall of the leafe, must in the month of September before, spread his dung, turn it in with the plough, and so incorporate it with the soile presently after a shower of rain: euen so also, if a man purpose to sow in the spring, let him in the winter time dispose of his mucke vpon the lands and spread it. The ordinary proportion is, to lay 18 tumbrels or loads thereof vpon euery acre. Throwne abroad it must be also before it be dried, and ere you sow, or els so soone as the seede is in the ground, that it may be harrowed in with the corne. But in case this manner of dunging be neglected, it followeth then before that you do harrow, to strew the short small dung in manner of dust gathered out of Coupes, Mues, and Bartons, where foule are fed; or els to cast Goats tred-dles vpon the land, as if you would sow seed, and then with rakes and harrowes to mingle it with the soile.

To the end now that we may determine fully as touching this care also, belonging to dung, euery sheep or goat and such small cattell, should by right yeeld ordinarily in dung one load in ten daies: and euery head of bigger beafts ten load; for vnlesse this proportion and quantity of muck be gathered, plain it is, that the granger or master of husbandry, hath not don his part, but failed in liting of his cattell. Some hold opinion, that the best way of mucking a land is, to fold sheep and such like small cattell thereupon, euen in the broad open field; and to this purpose they inclose or impark them within hurdles. In a word, a ground not dunged at all, groweth to be cold; and again if it be ouermuch dunged, the heart thereof is burned away. And therefore the better and safer way is to muck by little at once and often, rather than to ouerdo it at once. The hotter that a soile is, it stands by good reason, that the lesse compost it requireth.

CHAP. XXIII.

¶ *Of good seed-corne. The manner of sowing ground well. How much seed of euery kind of graine an acre will take. The due seasons of Seedtime.*

THe best corne or Zea for seede, is of one yeares age, two yeares old is not so good: that of three, is worst of all: for Leyond that time, the heart is dead, and such corne wil neuer spurt.

And

A And verily this that is said of one sort may be verified of all kinds. The corne that setteth to the bottome of the mowh in a barn toward the floore, is euer to be reserved for seed. And that must needs be best, because it is weightiest, for therein lieth the goodnesse: neither is there a better way to discern and distinguish good corn from other. If you see an eare of corn hauing grains in it here and there staring distant asunder, be sure the corn is not good for this purpose; and therefore it must be cast aside. The best graine looketh reddish, and being broken between ones teeth, retaineth still the same colour within: the worse corn for seed is that which sheweth more of the white flower within.

Furthermore, this is certain, that some grounds take more seed, and some lesse. And hereby verily do husbandmen gather their first presage religiously, of a good or bad haruest; for when they see the ground swallow more seed than ordinary, they haue a ceremonie to say & beleue that it is hungry, and hath greedily eaten the seed. When a man is to sow a moist ground, good reason there is to make the quicker dispatch, and to do it betimes, for fear lest rain come to rot it. But contrariwise in dry places it is not amisse to stay the later, and attend till raine follow, lest by lying long in the earth, and not conceiuing for want of moisture, it lose the heart & turn to nothing. Semblably, when a man soweth early, he must bestow the more seed and sow thick; because it is long ere it swel and be ready to chit. But if he be late in his seednes, he should cast it thin into the ground, for thick sowing will choke and kill the seed. Moreover, in this feat of sowing there is a pretty skil and cunning, namely to cary an euen hand, and cast the seed equally thorowout the whole field. The hand (in any case) of the seeds-man must agree with his gate and march: it ought alwaies to go iust with his right foot. Herein also this would not be forgotten, that one is more fortunate and hath a more lucky hand than another: and the seed will prosper better and yeeld more encrease that such a one soweth: an hidden secret surely in Nature, and whereof we can yeeld no found reason. Ouer and besides, this is to be considered, that corn comming from a cold soile, must not be sowne in a hot ground; nor that which grew in a forward and hasty field, ought to be transferred into lateward lands. Howsoeuer, some there be that haue giuen rule clean contrary: howbeit they haue deceived themselues with all their foolish curiositie.

Now as touching the quantitie of seed that must be giuen, according to the varietie both of ground and grain, these principles following are to be obserued: in a reasonable good ground of a mean temperature, an acre in ordinarie proportion will ask of common wheat Triticum, or of the finewheat Siligo, 5 modij, of the red wheat Far, or of * seed [or so we call a kind of bread corn] ten Modij, of Barly six, of Beans as much as of common wheat, and a fift part or one Modius ouer, of Vetches 12, of Cich pease the greater, Cichlings the lesse, and of pease three, of Lupines ten, of Lentils 3; [as for these, folk would haue them sowed together with dry dung] of Ervile six, of Silicia or Feni-greek six, of Phascols or Kidny beans foure, of Dradge or Balmong for horse prouender, 20; but of Millet and Panick 4 Sextars. Howbeit herein can be set down no iust proportion, for the soile may alter all. And in one word, a fat ground will receiue more, and a lean lesse. Besides, there ariseth a difference another way, in this manner; if it be a massie, fast, chalky, and moist ground, you may bestow in one acre thereof six Modij, either of common wheat or of fine Siligo; but in case it be loofe and light, naked, dry, and yet in good heart and free, it will aske but foure. For the leaner that a ground is, vnlesse it be sown scant, and the straw come vp also thinne, the shorter eare will the corne haue, and the same light in the head, and nothing therein. Be the ground rich and fat, ye shall see out of one roor a number of stems to spring; so that although the grain be thin sown, yet will it come vp thick, and beare a faire and full eare. And therefore in an acre of ground you shall not do amisse to keep a meane between foure and six Modij, hauing respect to the nature of the soile. And yet some there be who would haue [of wheat] five Modij sown at all aduenture, and neither more nor lesse, whatsoever the ground be. To conclude, if the ground be set with trees, or lying on the side of an hill, all is one, as if it were lean, hungry, and out of heart. And hereto may be reduced that notable Aphorisme, worthy to be kept and obserued as a diuine Oracle: Take not too much of a land, weare not out all the fatnesse, but leaue it in some heart. Ouer and aboue the rules aforesaid, Accius in his Treatise called Praxidicus, comes in with one more of his own: Sow your ground (saith he) when the Moone is in any of these signes, Aries, Gemini, Leo, Libra, and Aquarius. And Zoroastres hath another Astronomicall obseruation by himselfe, That the Sun should be

entred

* or rather (as
ter columella)
39 daies.

* ten daies: and euery head of bigger beafts ten load; for vnlesse this proportion and quantity of muck be gathered, plain it is, that the granger or master of husbandry, hath not don his part, but failed in liting of his cattell. Some hold opinion, that the best way of mucking a land is, to fold sheep and such like small cattell thereupon, euen in the broad open field; and to this purpose they inclose or impark them within hurdles. In a word, a ground not dunged at all, groweth to be cold; and again if it be ouermuch dunged, the heart thereof is burned away. And therefore the better and safer way is to muck by little at once and often, rather than to ouerdo it at once. The hotter that a soile is, it stands by good reason, that the lesse compost it requireth.

* He meaneth
Zea or Spelt.

entred into Scorpio, and past twelue degrees thereof, the Moone being at the same time in G Taurus.

Now followeth the deep question to be discussed and determined, As touching the fit time and season of sowing corn: which I haue put off and deferred to this present place. And this would be handled and considered vpon with exceeding great care and regard, as depending for the most part of Astronomie, and requiring good insight in the course and motion of the Planets, in the order also and influence of the fixed stars: and therefore I purpose to lay abroad the opinions and judgments of antient writers principally in that behalf. To begin therefore with Hesiod, esteemed the prince and chiefe of all those that gaue precepts of Agriculture; he hath set down one certain time of Seednes, to wit, presently after the fall or occultation of the Star Vergilia, i. the Brood-hen: and no maruell, for he wrot that book of his in Boeotia, a countrey in the very heart of Hellas or Greece, respectfully to his own countrymen and that climat: and in very truth that was the time of sowing there, as we haue noted and specified already. The best Authors of name, and who haue written most exactly of this argument, are all agreed vpon this point and conclusion, saying, That as all fowles of the aire and foure footed beasts haue their due season of ingendring; euen so there is a certaine time when as the earth is as it were in the ruit, and hath a lust to be conceiued. The Greeks in general termes haue described that season in this wise, namely, When the earth is hot and moist. Virgil giueth a precept to sow the common wheat Triticum, and the red bearded wheat Far, after the retrait or departure aforesaid of the Brood-hen Vergilia. As for Barly, he would haue it cast into the ground betwene the Æquinox in Autumne, and the winter Sun-set: but Verches, Kidney-beans, or Lentils, at the setting or going downe of the star Boote. Which being so, it would do well to digest the rising and falling both of these stars and also of others, into their set dayes; to shew (I say) at what fixed time they appear, and when again they are hidden. Some there be who are of opinion, that it is good sowing euen before the occultation of the said star Vergilia, but in a dry ground only and in hot countries: for so (say they) will the seed swell and mortifie the better; which the naturall humiditie only of the earth is sufficient to putrifie and prepare so, that when the next rain fallerh, it will be ready to spurt and chit within a day. Others attend and wait seuen dayes after the retrait of the foresaid Brood-hen, for the rain that commonly falleth about that time. There be again that begin to sow in cold regions immediatly after the Æquinox in Autumne: but in hot countries they be later in their seednes, for fear that the corn would be winter-proud and grow ouermuch before the cold weather come. But all writers accord herein, that it is not good sowing before the winter Solstice, when the daies be at the shortest: the reason is verie pregnant and apparant, for winter seed if it be sown before mid-winter, will spurt and spring at the seuen-nights end; sow after that time, you shall haue it lie in the ground forty daies before it make any shew of comming vp. Many make hast and put their seed into the ground betimes, hauing this prouerbe vsually in their mouth, *Well may ouertimely and hasty sowing oftentimes faile, but late sowing shall euer misse and deceiue the master.* Contrariwise, others there are of this minde, That it were better stay vntill the spring to do it wel and surely, rather than to sow in a bad Autumne, and hasard the losing of all. If there be no remedie therefore but to take the spring season, a man must make chioise of the time betwene the midst of Februarie [at what time as the Westwind Favonius doth rise and begin to blow] and the Æquinox in March. Some haue no regard at all to the constitution and figure of the heauens in this case, thinking the rising and falling of stars, the course and motions of celestiall bodies to be friuolous matters and nothing pertinent to this purpose, but content themselves only with obseruing the cardinall seasons of the yere, and some other times, in a generality. In the spring (say they) sow Linseed, Otes, and Poppies, and so hold on vnto the festiuall holydaies of Minerva, called Quinquatrus; like as at this day thoroughour all Lombardie and beyond the Po, they go by no other rule. As for Beans and the fine wheat Siligo, put them into the ground in the moneth of Nouember. Let the winter red wheat Far take his fortune and be interred, from the end of September, vntill the midst or fifteenth day of October. Others goe beyond that day, and continue their seednesse vnto the Calends or first day of Nouember. Now as these men haue no regard at all to the speculation of Nature, and the course of the starres; so the other before named are giuen too much thereto, and wrapt they are so high among the stars and planets, that their owne eyes be dazeled therewith: and besides, their subtilties and quidities do blind others, considering that the pra-

ctise

- A Rise of these matters must passe through the hands of rustical peasants, who are so far off from conceiuing Astronomy, & the constellations aboue, that they know not one letter of the book, nor neuer learned their A. B. C. Howbeit, we cannot chuse but confesse, that the true reason and knowledge of Agriculture, depends principally vpon the obseruation of the order in heauenly bodies: for Virgil saith very wel, That before all other things, a husbandman should be skilfull in the winds and haue the foreknowledge and prediction of them: also to haue an insight into the nature and influence of the starres, and in one word, to obserue both the one and the other, as well as the Sailers and mariners at sea. Certes, a hard peece of worke it is, and infinite; and smal hope I haue that euer I shall be able to driue into their heads that are so ignorant & grosse of conceit, this high learning and heauenly diuinitie, as touching the Planets, the fixed starres, together with the reason of their orderly motions and celestiall powers: howbeit considering the great profit that may arise and grow therupon to mankind, I will cast a proper and giue the attempt to make ploughmen Astrologers, or Astronomers at leastwise, if it may be. But first my purpose is, to lay open before their eyes certain difficultys (which troubled also some of the antient writers, and those not vnskilfull in this part of Philosophie) as touching the course and order of the Starres: which beeing not onely discovered, but also assoiled and cleared, their minds with better contentment may goe from the contemplation of heauen to the rest of Natures workes, and see those things by the effects, which they could not possibly foresee by their causes.

CHAP. XXV.

¶ The times and seasons of the rising and setting of Starres, digested into order, as well by ² day as night,

* 2. Evening and morning.

- I N the first place, there offereth it selfe vnto vs one difficultie aboue the rest, so intricate, as hardly is it possible to resolve vpon it; namely, as touching the very daies of the yere, how many they be, in number; and the reuolution of the Sunne, how and when he returneth againe to the same point: For whereas some do account the solare yere to be 365 daies iust, others adde thereunto certain quadrants or foure parts of day and night together, to wit, six houres euery yere, which beeing put together, make the fourth yere Bissextile or Leape yere: so as it is in manner impossible to assigne the certaine daies and houres of the Starres apparition or occultation.ouer and besides, how obscure, how darke and confused all this matter is, appeareth manifestly herin, That the times and seasons of the yere prefixed by antient writers, fall not out accordingly; and namely, in the obseruation of the winter seasons & tempests by them set down: for one while you shall haue them to preuent and come sooner by many daies than ordinarie, which the Greekes call *anomalion*: another while to draw back and come later, which they terme *anomalion*. Yea and for the most part this happeneth, by reason that the influence of the celestiall starres reacheth sooner or later to the earth, and thereafter sheweth the effects: so as, the common people, when they see the said foule weather past, and all cleare and faire againe, say then and not before, That such a planet or Starre hath performed his course, and is vpon the point of his Tropicke or return againe. Moreouer, considering that all these occurrents depend much vpon those stars which be set & fixed in the firmament, yet shall we haue the Planets play their parts besides, which by their motions and operations, worke no small effects vpon the earth, as we haue shewed before; and namely, causing betwene-whiles stormes of raine and haile out of course: no maruell then, if they trouble our heads and put vs out of our account, interrupting that order of the fixed Stars, vpon which we conceiued and built our hope of the faire season, and our new spring. And herin, not we only that be men faile of our reckoning, but other liuing creatures also be deceiued, which naturally haue much more sense and vnderstanding of these workes of Nature, than we, in as much as their whole life standeth thereupon: for the Summer-birds (as great fore-sight as they haue of such seasons and tempests) are ouer-taken and killed by Winter frosts and cold, comming sooner than they looked for, and before they be gone out of the countrey, as also winter foules miscarrie by the hot weather of summer, continuing longer than it was wont, and holding on still after they be come. Hereupon it is, that Virgil expressly willerh vs to learne thoroughly the skill of the wandring Starres or Planets also, and principally giueth vs warning to marke the course of that cold Planet Saturne.

But

But now to come more particularly to the signs which fore-token the Spring: some there be that goe by the Butterflie, and hold that their brood comming abroad, is an assured token that the Spring is come, for that these creatures so feeble, are not able to abide any cold: howbeit, this was checked that very yere, wherein I wrote this Booke or History of Nature's work: for seen it was and marked very well, that 3 flights of them one after another were killed with the cold weather that surprised them thrice, for that they were stirring too early, and came abroad too soon. Yea, and the very birds who are our guests in warm weather, visited vs siue or fixe daies before Februarie, & made a goodly shew of a timely Spring, putting vs in good hope, that al cold weather was gone: howbeit, there ensued a most bitter after winter streight vpon it, that nipped and killed them in manner euerie one. Hard and doubtfull therefore is the case, that whereas first and principally we were to fetch our rule from the heauens to guide and direct vs, then afterwards we should be driuen to goe by other signes and arguments meere conjecturall. But aboue all, the cause of this incertitude and difficultie, is partly the conuexity of the cope of heauen, and partly the diuerse climats obserued in the globe of the earth, by means whereof, one and the same star seemeth to rise at sundrie times in diuerse countres, and appears sooner or later to some than to others: and therefore the cause depending thereupon, is not in all places of like validity, nor sheweth the same effects alwaies at the same times. And yet there is one difficultie more, arising from those Authors who writing of one and the same thing, haue deliuered diuers opinions, according to the sundry climates wherein they were, at what time as they obserued the figure and constitution of the heauens. Now were there of these Astronomers three Sects, to wit, the Chaldeans, the Egyptians, and the Greeks. To which there may be added a fourth, which among vs *Cesar* the Dictatour first erected: who obseruing the course of the Sun, and taking with him also the aduise of *Sosigenes* (a learned Mathematician and skilfull Astronomer in his time) reduced the yere vnto the said reuolution. Howbeit, in this calculation of his, there was found an error, and short he came of the marke, which he aimed at, by reason that there was no Bissextile or leap yere by him inserted, but after 12 yeres. Now, when it was obserued by this reckoning, that the sun had performed his reuolution sooper than the yere turned about, which before was wont to prevent the course of the Sun, this error was reformed: and after euery fourth yere expired, came about the Bissextile aforesaid, and made al streight. *Sosigenes* also himselfe, albeit he was reputed a more curious and exquisite Mathematician than the rest, yet in three feuerall treatises that he made, retracting or correcting that in one booke that he had set down in another, seemed euermore to write doubtfully, and left the thing in as great ambiguitie & vndermined as he found it. As for these writers whose names I haue alleadged & prefixed in the front of this present volume now in hand, they haue likewise deliuered their opinions as touching this point, but hardly shal you find two of them in one & the same mind. Lesse maruell then if the rest haue varied one from another, who may pretend for their excuse the diuers tracts and climates wherein they wrote. As for those who liued in the same region, and yet wrot contrarie, I canot tel what to make of them: howbeit, I care not much to set downe one example of their discord & disagreement. *Hesiodus* the Poet (for vnder his name also there goeth a Treatise of Astrologie) hath put down in writing the matutine setting of the star Vergiliae (which is the occultation thereof by the raies and beames of the Sunne toward morning) to begin ordinarily vpon the day of the Equinox in Autumne. *Thales* the Milesian saith, That it falleth out vpon the siue and twentieth after the said Equinox. *Anaximander* writeth, That it is nine and twenty daies after: and finally, *Euctemon* hath noted the 48 day following the said Equinox, for the retreat or occultation of the forenamed Brood-hen star Vergiliae. Loe what varietie there is among these deepe clearkes and great Astrologers.

For mine owne part I hold well with *Cesar's* calculation, and will keep me to his obseruations as neere as I can, for that the same wil fit best with our meridian here in al Italie. Yet neuertheless I will not sticke to set downe the opinions of others, because my desseigne tendeth not to one particular place alone, but I purpose and professe to represent vnto the reader the vniuersall history of Nature, and the whole world. But my meaning is not to rehearse the names of euery Author one by one (for that were a tedious peece of work, and would require a long train of superfluous words) but only to put down the regions of euery climate, and that as succinctly and briefly as I can. Where, by the way I must aduertise the Readers, that they remember well this one thing, how when for breuities sake I name the land or region Attica, they must with- all

A all vnderstand the Islands Cyclades: when I name Macedonie, I comprehend therewith Magnesia and Thracia: vnder Egypt I comprise Phoenice, Cyprus, and Cilicia: vnder Boeotia, the regions of Locris and Phocis: and in one word, alwaies the tracts and Countries adiacent and confining together. Item, In making mention of Hellespontus onely, I take together with it, Chersonesus, and all the continent or main firme land, as far as to the mountaine Athos: in naming Ionia, I reckon also Asia the lesse or Natolia, and the Isles thereto adioyning: vnder the name of Peloponnesus I count Achaia, and other lauds in that climat lying to the West. Finally, the Chaldeans shall make demonstration, as in a map, of Assyria and Babylonia. As for Africke or Barbary, Spaine and France, maruell not if I passe them ouer in silence: for there is not a writer in all these Nations, one or other, who hath either obserued or penned downe the time when these fixed stars rise or fall. Howbeit it were no hard matter to come to the knowledge thereof in those climats and countries also, by the meridionall lines and conformities of the Parallele circles, which I digested orderly in the sixt booke of this work. For thereby a man may vnderstand the vniforme agreement in the position of the heauen, not only for whole Climats and countries, but also for euery feuerall city by it selfe, vnder the same meridian or Parallele: followin: stil the known paralels of these regions which we haue named, and taking with all the eleuation of any circle pertaining to euery such land as a man wil seeke, and respectiue to the rising of the stars, according to the equal shadowes throughout all those paralel circles. Moreouer, it ought to be shewed and declared, that ordinarily the times and seasons haue their temperature and influence euery foure yeres together: and those lightly return the same without any great alteration, from yere to yere duly according to the course and recourse of the Sun, during that term: many in eight yeres they sensibly do increase, namely by what time as the Moon is in her hundreth reuolution.

Now all the knowledge of the heauens pertinent to Agriculture, standeth principally vpon three sorts of obseruations, to wit, the rising of the fixed stars, the setting of the same, and the four cardinal points, to wit, of the two Tropicks or Sunsteads, and the double Equinox, which diuide the whole yere into foure quarters and notable seasons. Where note, that the rise and fall of those stars before said is to be considered and taken two waies. For first when the Sun approacheth vnto them with his beams, they be hidden and no more seen: likewise after his departure they shew themselves again: and as the one, me thinks, might haue bin more aptly called an Apparition than a Rising, so we should haue framed our tongue in common speech to haue termed the other Occultation, rather than Setting. Secondly, according as the said stars begin either to shine out or be hidden in the morning before the Sunne be vp, or at euening after the Sun is set, they be said to rise and go downe, and thereupon are named Matutine or Vespertine, Orientall or Occidental, according as the one or the other hapneth vnto them in the twi-light, morning, or euening. Certes, when they are to be scene Matutine or Vespertine, it must be at the least three quarters of an houre either before the Sun is vp, or after he is downe: for within that space there is no looking after them. Moreouer, some stars there be that rise and fall twice. But take this with you, ere I proceed further, that all this speech of mine is to be vnderstood of the fixed stars, which being setled fast in the sky, moue not of themselves: and in no wise of the planets.

As touching the foure cardinal seasons of the yere, whereby it is diuided into foure quarters, limited they be according to the light more or lesse, and as the daies be longer or shorter: for so soon as the winter Sunstead is past, the daies do lengthen; and by that time that 90 daies and three houres be gon and past, they be iust as long as the night, and this is called the spring Equinox. From which very day, for ninety three days together and twelue houres, namely vnto the summer Sunstead, the daies be longer than the night, and so continue vntill the Autumne Equinox, at what time the daies and nights be equall againe; from which time they shorten and decrease as they grew in length and increased before, for eighty nine daies together, and three houres, vntill the foresaid winter Sunstead, when as the daies be shortest. And here you must note, that in all these additions of houres at this present, I mean those only that be Equinoctiall, which diuide the day and night equally in foure and twenty parts, and not the common houres of any other day artificiall whatsoever. Also take this with you, that all these distinctions and diuisions of the foure seasons, begin alwaies in the eight degree of those signes vnder which the Sunne is at those times: as for example, The winter Sunstead or shortest day

* ortus & occasus Heliacut.

* ortus & occasus Cosmicalis.

* 15 of Dec-
ember.

* Called inter-
ualla after-
ward in this
chapter: and
contain much
about fixe
weekes.

of the year, called in Latine Bruma, falleth out in the eight degree of Capricorn, which lightly is vpon the * 18 day before the Calends of Ianuary. The Spring Æquinox, when nights and daies be of a length, in the eight degree of Arics. Semblably, the summer Sunstead, or longest day of the year, is alwaies when the Sun is entred eight degrees into Cancer. Last of all, the other Æquinox in Autumne, when day and night is equall, lighteth vpon the eight degree of Libra. And certes, feldom or neuer shall you see any of these foure daies without euident shew of some notable change in the weather. Again, these cardinall seasons or quarters of the year admit also their sub-diuisions still into some notable and special times, obserued in the * very middle space from the one and the other. For betweene the summer Sunstead and the Æquinox in Autumne iust vpon the fife and forty day after the same Sunstead, the reitrait or setting of the star called in Latine Ficulæ, i. the Harp, beginneth the Autumne. Likewise, betweene that Æquinox and the winter Sunstead or shortest day of the year, the Matutine or morning fall of the star Virgilæ, vpon the three and fortieth day after the said Æquinox, setteth the beginning of the winter. So likewise vpon the fife and fortieth day between mid-winter or the shortest day of the year, and the spring Æquinox, the blowing of the Western wind Favonius beginneth the Spring. And last of all, vpon the three and fortieth day from the sayd Æquinox toward the Summer Sunstead, at what time as the star Virgilæ doth rise Matutine, begins the Summer

But to returne again to our Agriculture, begin I will at the Seednes of Frument come, that is to say, at the rising or apparition of the starre Vergiliæ in the morning, without making any mention at all of other pety stars, for to interrupt the train and course of our treatise, & to heap difficulties one vpon another, considering that the fierce and vehement star Orion is departed a great way off from vs by that time. I am not ignorant, that many fall to sowing corne long before, and preuent this time, beginning their Seednes within 11 daies after the Æquinox in Autumne, namely, at the approach and rising of the star Corona, i. the Crowne; promising themselves assuredly to haue rain vpon it for certain daies together. Xenophon would not haue vs begin to sow before that God giue vs some good signe and token so to do. And Cicero our countryman expounding this saying of Xenophon, taketh the raine in * Nouember to be that signe which God giueth: whereas in very deed the true and vndoubted rule to goe by, is to make no great hast into the field for to sow, before the leaues begin to fall: and this euery man holdeth to be at the very occultation or reitrait of the star Vergiliæ. Some, as we haue before said, haue obserued it about 3 daies before the Ides of Nouember. And for that the said star is so euident in the heauen, and easiest to be known of all others, called it is by the name of a garment hanging out at a Brokers shop. And therefore by the fall or reitrait thereof, as many men as haue a care and forecast to preuent the couetous dealing of the merchant-Tailor (as commonly such occupiers lie in the wind for gain) guesse aforehand what winter will follow: for if it be a cloudie season when the star retirith, it threatens a rainy winter and then these merchants presently raise the price of the clokes which they sel: but if the weather be faire and cleare at the setting or occultation thereof, it sheweth a pinching and hard winter toward; and then they hold other garments also very deare. But this Husbandman of ours, who cannot skill at all to looke vp and to learn the order and position of the heauens, must spy this signe of winter amongst his briars and brambles: he must find (I say) the time of Seednes as he looketh downe vpon the ground, namely, when he sees the leaues fallen and lying vnder his feet. Thus may a man know the temperature of the climat, and the year, according as he perceiues the leaues be fallen more at one time than another, sooner also in some places, and later elsewhere. For as the season is forward or late, as the climate also is affected, so are the trees knowne to shed their leaues accordingly. And in very truth this is the truest signe of all others. And the best thing therein is this, that being general throughout the whole world, and yet peculiar to each place, it neuer faileth. A man might make a wonder hereat, if he did not see and remember, that vpon the very shortest day in the yere, euen in midwinter when the Sun is entred Capricorn, the herb Penyroial vseth of it selfe to floure, either set in chaplets, or otherwise hanging and sticking in the flames; so willing is Nature to shew vs all her secrets, and to keepe nothing hidden from vs. For loe what signes and marks she hath giuen vs, whereby we might know the time of sowing corn: and verily, this is the only true and infallible direction grounded vpon approoued experience, and the same shewed first by dame Nature: for by this dropping & fall of leaues what doth she els teach

* Called by our
Husbandmen
Gore-moone.

A teach and counsell vs but to haue our eye vpon the ground, and to cast seed into it, assuring vs of a certain supply of dung and compost, by ouerspredding the ground, and cast seed into it, that soon will turne into muck: what doth she else (I say) but by couering the earth in this manner with leaues, shew how carefull she is to defend it against hard frosts and pinching winds, and in one word, thereby putteth vs in mind to make the more hast and get our seed vnder mould? As for Varro, he is of the same opinion for beans also, and willet vs to obserue the said rule in sowing them at the fall of the leafe. Others are of this mind, that the best sowing thereof is in the full Moone. But for Lentils, we should attend the last quarter toward the change, to wit, from the 25 day to the thirtieth. Also, that Vetches must be sowed at the said age of the Moon: for in so doing we shall preferre such pulse from the naked snail. Howbeit, some others there be that indeed would haue these kindes of Pulse to be sowed at this time of the year and age of the Moon for prouender and forage to be spent out of hand: many if we would keepe the same for seed, then we should take the season of the Spring.

Besides those rules and tokens aboue specified, there is one more, which Nature vpon an extraordinary providence ouer vs, hath presented vnto our eies after a wonderfull manner, which Cicero expresth in these termes

*Iam vero semper viridis, semperq; gravata
Lentiscus, triplici solita est grande scire fatu:
Ter fruges fundens, tria tempora monstrat arandi.*

C	The Mastick tree All times, you see, Is clad and richly dight, With green in cold, With fruit three-fold, A faire and goodly sight.	As she therefore, By Natures lore, Doth fruit thrice yearely beare: So thereby we Know seasons three, Our land to duly care.
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Of which three seasons, one is appropriate for the sowing both of Poppy and also of Linefeed: But since I haue named Poppy, I will tell you what Cato saith as touching the sowing thereof: vpon that land (quoth he) where you mean to sow Poppy, burn your winding rods, the cuttings also and twigs of vines, which remained and were left at the pruning time: when you haue burned them, sow wild Poppy seed in the place; for it is a singular medicine being boiled vp to a Syrup in honey, for to cure the maladies incident to the chawes and throat. As for the garden Poppy, it hath an excellent and effectfull vertue to procure sleep. And thus much concerning Winter corne and the Seednes thereof.

CHAP. XXVI.

¶ A summarie or recapitulation of all points of Husbandry: and to what out-works in the field a husbandman should be employed, respec-
tively to euery month of the year.

E B Vt now to compassse vnder a certain brieve Abridgement or Breviarie, all points of husbandrie together: At the same time before named [to wit, at the falling of the leafe] it is good also to lay dung vnto the roots of trees; likewise to mold and bank vines: and one workman is sufficient for one acre. Also, where the nature of the ground will beare it, the husbandman shall not do amisse to disbranch and lop his tree-groues, to prune his vineyards, to hollow the ground of his seminaries and nurse-plots with mattocke and spade, and dresse the mould light; to open his sluices and trenches for water-course, to drie and drain it out of the fields; and finally, to wash his Wine-presses first, and then to shut and lay them vp dry and safe. Item, after the Calends or first day of Nouember, let him set no hens vpon eggs vntill the winter Sunstead be past: when that time is come and gon, set Hens hardly, and let them coue 13 eggs; marie better it were all Summer long to put so many vnder them; for in winter fewer will serue: howbeit neuer vnder nine.

Democritus giueth a guesse what Winter we shall haue, by the very day of the Winter Sunstead: for look what weather is then and for threedayes about it, the like winter (he supposeth)

E e e

will

will ensue. Semblably, for the Summer he goeth by the other Sunstead or longest day of the year: and yet commonly for a fortnight about the shortest day in the year (to wit, during the time that the fowles Halcyones do lay, couve, and hatch their eggs in the sea) the windes lie, and the weather is more mild and temperat. But as well by these signes as all other whatsoever, we must guesse the influences and effects of the stars, according to the euent, within some latitude of time; and not so precisely to limit and tie them alwaies to certain daies prefixed, as if they were bound to make their appearance peremptorily in court, iust then, and faile not.

Moreouer, in mid-winter meddle not at all with vines, touch them not in any hand, but let them alone. What then is the husbandman to do? Mary then (quoth *Hyginus*) after seuen daies be once past from the Sunstead, he is to refine his wines from the lees, and let them settle, yea and to poure them out of one vessel into another, provided withall, that the Moon be a quarter old. Also about that season (to wit, when the Sun is in Capricorn) it is not amisse to plant cherrie trees, and let their stones: then is it good also to giue oxen Mast to feed them; and one Modius or p.cke is sufficient to frue a yoke at one refection: allow them more at once, you glut them and fill them full of diseases: but at what time soeuer you make them this allowance, vnlesse you hold on thirty daies together, folke say, they will be scabbed and mangie when the Spring commeth, that you will repent for cutting them so short. As for felling timber trees, this was the proper season which we appointed heretofore. All other winter works for an husbandman to be busied in, would be done in the night for the most part: sit vp he must late, and rise betimes by candle light, and watch hardly about them, for that the nights be so much longer than the daies: let him a Gods name find himself occupied with making Wicker baskets and hampers, winding of hurdles, & twisting of frailes and paniers: let him thwite torch wood taperwise with links and lights: and when he hath by day light made ready and prepared thirtie poles or railes for vines to run on, and sixty stakes or props to support them, hee may in the euening make fivie poles or perches, and ten forks or supporters; and likewise as many early in the morning before day light.

But now to come to *Casars* reckoning of the times & digestion of the coelestiall signes: these be the notable stars which are significant and do rule that quarter which is between the winter Sunstead and the rising of the Western wind Favonius. Vpon the third day (saith he) before the Calends of Ianuarie, which is the 30 day of December, the Dog-starre goeth downe in the morning: vpon which day in Attica and the whole tract thereto adioyning, the star Aquila, [the Ægle] fereth (by report) in the euening, and loseth her light. The euen before the Nones of Ianuarie, i. the fourth day thereof, by *Casars* account [I mean for the meridian of Italy] the Dolphin star riseth in the morning, and the morrow after, the Harp-star Fidicula; vpon which day, in Egypt, the star Sagitta [i. the Arrow] setteth in the euening. Item, from that time to the sixt day before the Ides of Ianuarie [i. the eighth day of that moneth] when as the same Dolphin goeth down or retireth out of sight in the euening, usually we haue in Italy continual frost and winter weather: as also when the Sun is perceiued to enter into Aquarius, which ordinarily falleth out sixteen daies before the Calends of Februarie [i. the seuenteenth of Ianuary.] As for the cleare and bright star, called the star Royal, appearing in the breast of the signe Leo, *Tu-bero* mine Author saith, that eight daies before the Calends of Februarie, to wit, the 25 day of Ianuarie, it goeth out of our sight in the morning: also ouer-night before the Nones of Februarie [i. the fourth day of the same moneth] the Harp-star Fidicula goeth down and is no more seene. Toward the later end of this quarter, it is good and necessarie to dig and turne vp fresh mould with mattock and spade, against the time that roses or vines shal be set, where soeuer the temperature of the climat will beare it: and for an acre of such worke, sixty labourers in a day are sufficient to doe it well. At which time also old trenches and ditches would be scoured or new made. For morning worke before day the Husbandman must look to his iron tooles, that they be ground, whetted, and sharpened; that their steles, helues, or handles, be fitted and set to their heads; that shaken tubs, barrels, and such like vessels, be new cowed, bound with hoops, and calstretted; that their stauess be well scraped and cleansed, or else new set into them. And thus much of this Winter Quarter, as farre as to the comming of the Western winde Favonius.

Now as touching the entrance of the new Spring, which is from the rising of the said winde to the Equinox in March; *Cesar* sets downe for it the time, which for threed daies together is variable

A riable and inconstant weather, to wit, seuenteen daies before the calends of March, which is the thirteenth of Februarie. Also 8 daies before the said Calends, which is the 22 of Februarie, vpon the sight of the * first Swallow; and the morrow after, vpon which day the star Arcturus riseth Vespertine, i. appeareth in the euening. In like manner, *Cesar* hath obserued, that the said wind hath begun to blow three daies before the Nones of March, to wit, the fift of March, iust with the rising or apparition of the Crab-star Cancer. Howbeit most writers of Astrologic do assigne the first entry of the Spring and the comming of this wind, to the 8 day before the Ides of March, which is the eight of that moneth, when as the star Vincemiator, i. the Grape-gatherer, beginneth to appeare: at what time also the Northerly starre called the Fish, riseth: vpon the morrow whereof, to wit, the ninth day, the great starre Orion sheweth himselfe in his likenesse. In the region Atrica where Athens standeth, it is obserued, that the star Milvus, the Kite or Glede, appeareth then in that climat. *Cesar* moreouer noted, that the star Scorpio rises vpon the * Ides of March, those fatal Ides (I say) that were so vnfortunate vnto himselfe: also, that vpon the 15 Calends of Aprill, which is the 18 of March, the foresaid Milvus, the Kite-star, appeareth to them in Italie, and three daies after, the Horse-star is hidden toward the morning. This is the freshest, the most busie or stirring interual or time between that husbandmen haue; and yet therein they be oftentide deceived, for commonly called they are not to their work the very same day that the wind Favonius should by course blow, but when it begins to be aloft; which is a point to be considered and obserued with right great regard: for if a man would take heede and marke well, this is that moneth wherein God giueth vs that sure and infallible sign which neuer faileth. Now from what quarter or coast this wind doth blow, and which way it commeth, albeit I haue shewed already in the second booke of this storie, yet will I speake thereof more distinctly and exactly anon; mean while, from that day (when soeuer it hapneth) on which that wind beginneth to blow, come it sooner (as namely, when it is a timely and forward spring) or come it later, if it be a long winter (for it is not alwaies the * sixth day iust before the Ides of February) from that time, I say, must the rustical paisants settle to their work, then are they to goe about a world of toilsome labour, then must they plie their businesse and make speed to dispatch those things first that may not be deferred & put off, then or neuer would their summer three month come be sowne, their vines be pruned in manner abovesaid, their Oliue trees dressed and trimmed according: Apple-trees stocks and such like fruits, are then to be set and grafted; then is the time to be digging and deluing in vineyards, to remoue some yong plants out of their seminaries, and digest them in order as they must grow, and to supply their plots with new seed and impes: Canes and Reeds, Willows and Oliers, Broom also would then some be set, and others cut downe: Elmes, Poplars, and Plane trees, ought then to be planted, as hath been said before: then is the meetest season to cleanse the corne fields, to sarcle and rid the winter corn from weeds, and especially the bearded red wheat Far: in doing whereof, this must be the certain rule to direct the husbandmen, namely, when the root of the said Far begins to haue foure strings or threads to it. As for Beans, they must not be meddled withall in that order, before they haue put out three leaues; and then verily they must be lightly gone ouer, and cleansed rather with a light hooke, than otherwise. When Beanes be bloumed, for 15 daies together they ought not to be touched. As touching Barley, it would not be * sarcl'd or raked, but in a drie ground, and when the weather holds vp. Order the matter so, that by the Equinox in March, all your pruning and binding of Vines be done and finished. If it be a vineyard, foure men are enough to cut and tie an acre of vines: and if they grow to trees, one good workeman will be able to ouercome fifteen trees in one day. This is the very time moreouer of gardening and dressing rose-plots or rosiers [whereof I mean to treat apart and seuerally in the booke next following] of drawing vinets also, knots, and fine storie works in gardens: this is the only season to make trenches and ditches: the ground also would now be broken vp for a fallow against the next year, according to the mind and counsell of *Virgil* especially, to the end that the Sunne might thoroughly parch and concoct the clots, and thereby make it more mellow for the Seednes. Howbeit I doe like better of their opinion (as the more thriftie and profitable of the two) who aduise to plough no ground in the mids of the Spring, but that which is of a mean temperature: for if it be rich and fat, presently the weeds will ouergrow and take vp the scanis and furrowes: againe, say it be poore and leane, the hot weather comming so soon vpon the fallow, will dry it too fast, spend all the moisture, and kill the heart therof, which should maintain the seed

* Whereupon the said wind Favonius, is called Chelidonias and Ornebius.

* 13 of March: for vpon that day was he murdered.

* 2 the Queen of Februarie.

* Sarcl'd.

put her horns direct and streight forth, she presages thereby some great tempest at sea presently to follow, unless it be so that she haue a guirland or circle about her, and the same cleer and pure; for then there is good hope that there will be no foule nor rough weather before the full. If at the full, one halfe of her seeme pure and neat, a signe it is of a faire season; if it be red, the wind will be busie; if enclined to blacke, what else but raine, raine. Doe you see at any time a darke mist or cloud round about the body of the moone? it betokeneth winds from that part where it first breaketh: and in case there be two such cloudie and mistie circles enuironing her, the tempest will be the greater: but how if there be three of them for failing, and those either black, or interrupted, distracted and not vnited? surely then there will be more storms & more. The new moone whiles she is croissant, if she rise with the vpper tip or horne blackish, telleth beforehand that there will be store of raine after the full, and when she is in the wane: but if the nether tip be so affected, the rain will fall before she be at the full. But what if that blacknesse appeare in the middle of her body betwene; then (saith Varro) it will poure of rain in the very full. A full moone hauing about her a round circle, sheweth that there will be wind from that part, where the said circle is most splendant. If her hornes appeare when she riseth, more grosse and thicke than ordinarie, look soon after for a terrible tempest and a stormie weather. If she shew not in our Horizon before the prime or fourth day after the change, and the West wind blow withall, then that moone throughout threatneth cold and winter weather: and if the day after the full she seeme extraordinarily enflamed, she menaceth vnto vs sharp showres and bitter tempests. Finally, in euery moon there be eight points and so many daies (according as the lighteth vpon the angles of the Sunne) which most men obserue onely, and take their presages of future weather by, to wit, the third, seuenth, eleuenth, fifteenth, nineteenth, one and twentieth, seuen and twentieth, and the very day of her conjunction or change.

In the third place, a man may know the disposition of the seasons by the fixed starres, and therefore it behooueth to obserue and marke them. They seeme otherwhiles in the sky to sit and run too and fro, and then we shal not be long without great winds, rising from that quarter where such appeared and gaue token.

The starrie skie, if it shew cleare and bright al ouer, and in euery part alike, during that particular season [namely, between the occultation of the Harp-star, and the Equinoctiall point] which I proposed and set downe heretofore, it is a fore-token of a faire and drie Autumne, but yet cold.

If the Spring add Summer both, passed not cleare without some raine and wet weather, it will be an occasion that the Autumne following shall be drie, and lesse disposed to wind; howbeit, thicke, muddy, and enclined to mists. A faire and drie Autumne, bringeth in alwaies a wintrie winter.

When all on a sudden the stars lose their brightnesse and looke dim, and that neither vpon a cloud nor a mist in the aire, it signifieth either raine or grievous tempests.

If the starres make semblance as if they flew vp and down many together, and in their flying seem whitish, they denounce winds from that coast where they thus do shoot. Now if it seeme to the eye, as if they ran and kept one certaine place, those winds will hold and sit long in one corner: but in case they do so in many quarters of the heauen, they betoken variable and inconstant winds, going and coming, and neuer at rest. [When you see a circle about any of the other fixe planets or wandering stars, you shall haue powring showres soone after.] Within the signe Cancer, there be two prettie stars which the Mathematicians call Afelli, [i. little Affes] betwene which there seemeth to be a small cloud taking vp some little roome, and this they name in Latine Praesepia, [i. a Crib, Cratch, Bowzey, or Manger:] now if it chauce that this Racke or Crib appeare not, and yet the aire bee faire and cleare otherwise, a signe it is of cold, foule, and winter weather. Also if one of these two little stars, to wit, that which standeth Northerly, be hidden with a mist, then shall you haue the South wind to rage; but in case the other which is more Southerly, be out of sight, then the Northeast wind wil play his part.

As touching the Rainbow, if it appear double as if there were two of them at once, it telleth of raine toward. A Rainbow presently after raine, is a signe of faire weather: but this is not so certaine, neither will it hold long. Also, when a man seeth new circles still about any planets, there will be much raine soone after.

In Summer time, if there chauce to be more thunder than lightning, it threatneth winds from

from that coast where it thundreth: contrariwise, if it lighten much & thunder little, looke for rain plentiewhen you see it lighten, and the skie otherwise cleare & faire, it is a token that rain and thunder will follow thereupon, yea and rigorous cold weather besides: but the cruellest and most bitter impressions of the aire, ensue vpon such lightnings: as come from all the foure quarters of heauen at once: if it lighten, from the Northwest only it betokens rain the day following; if from North, it is a signe of wind from thence: if from the South, Northwest, or full West, it happen to lighten in the night & the same be faire, it sheweth wind and rain from out of those coasts: morne thunders foreshew winds, but if they be heard at noon, they presage rain.

As touching clouds, if you see the rack ride apace in the aire, the weather being faire & drie, looke for wind from that quarter whence those clouds doe come; and if they seeme to gather thicke in that place, dispeared they will be and scattered when the Sun approacheth: but more particularly, if this happen from the Northeast, they portend rain; if from the South, storm and tempest: if at the Sun setting the rack seeme to ride from both sides of him into the open aire, they shew of tempests toward: if the clouds be very blacke, flying out of the East, they threaten rain against night: but if they come out of the West, it will surely raine the morrow after, if the clouds be disparted many together out of the East, and flie like fleeces or flocks of wooll, they shew rain for 3 daies after: when clouds flie low, and seeme to settle vpon the tops of the hills; looke shortly for cold weather, contrariwise, if you perceiue those tops of mountaines cleare without moist or cloud, the weather will soone take vp and turne to be faire: when the clouds seeme to be heauily charged and full, and yet looke white withall (which * constitution of the aire is called commonly the white weather) there is an haile-storme at hand: moreover, be the skie neuer so cleare, the least cloud appearing therein, is enough to engender and foreshew wind and storme: mists if they come downe and fall from the mountaines, or otherwise descend from heauen and settle vpon the vallies, promise a faire and drie season.

Leauing the stars and clouds above, let vs come to our fires that we make and keepe in our houses here beneath, for they are to be raunged in the next place of our prognostication. If the fire then burne in the chimney pale, and keep there with a huzzing noise, we find by experience it foreshewes tempest and stormie weather: as also wee may be sure of rain, in case we see a fungous substance or foot gathered about lampes and candle snuffs: if you see the flame either of fire or candle mount winding and wauing as it were, long you shall not be without wind. The like is to be said of fire and candle light, if either they seem to go out of themselves, or to kindle and take fire with much adoe. Also, when we discern in the fire a number of sparkles gathered together and hanging one to another: or if when the pot is taken off from the fire, the coles sticke to the bottome and sides: or when the fire being raked in embres, keepeth a spitting and sparkling from it: also, if the ashes lying vpon the hearth grow together: and last of all, when the liue-cole shineth brighter or scorcherh more than ordinarie, all these be signes of rain.

Goewe a little lower to the water, for that element also giues signes of the weather: and first of all, if you see the sea within the haue, after the floud is gone, in a low and ebb water to bee calme, and yet heare it keep a rumbling noise within, it foreshews wind: if it doe thus by times and fits one after another, resting still and quiet between whiles, it presages cold weather & rain. Item, if in calme and faire weather the sea stonde or water banks resound and make a noise, it is a token of a bitter tempest: so it fares also with the very sea it selfe, for if it be calme, & yet make a roaring, or if the some thereof be seen to scatter to & fro, or the very water to boile & buble, you may be bold to foretell of tempests: the Puffins also of the sea, [i. fishes named in Latin Pulmones] if they appear swimming aboue water, foreshigne cold weather for many daies together: oftentimes the sea being otherwise calme, swells, & by heouing higher than ordinarie, sheweth she had wind good store enclosed within her, which soon after will breake out into a tempest.

Let vs come aland againe, and marke the disposition of woods and hills: you shall heare the mountains and forests both, keep a founding and rumbling noise, and then they foretell some change of weather, nay you shall mark the leaues of trees to moue, flicker, and play themselves, & yet no wind at all stirring, but be sure then you shall not be long without. The like prediction is to be gathered by the light downe of either poplars or thistles flying too and fro in the aire; also of plumes and feathers floting vpon the water. Goe down lower to the vales & plains: if a man chance to heare a bustling there, he may make account that a tempest will follow. As for the rumbling in the aire, it is an vndoubted signe and token thereof.

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More-

* Some call them Towers.

Moreover, the verie bruit and dumb creatures preface and giue warning what weather there will be. To begin with the fishes of the sea: the dolphins playing & disporting themselves in a calme water, doe certainly fore-shew wind coming from that coast whence they fetch these frisks and gambols: contrariwise, if they fling and dash water this way and that way, the sea at that time being rough and troubled, it is an infallible signe of a calm and of faire weather toward. The Cuttle or little Calamarie Loligo, launching it selfe and flying about the water; the Cockles & winkles cleaving and sticking hard to the grauell, the Sea-urchins thrusting themselves into the owfe and mud, or otherwise balaised & couered with sand, be all signes of tempests neare. The like may be said of Froggs, when they crie more than their custome is, and of Seamewes also, when they gaggle in a morning betimes extraordinarily, semblably, the Cormorants, Gulls, Mallards, and Ducks, when they keep a prouing of their feathers with their bills, fore-shew wind: and generally, when you see other water-foule to gather and assemble together and then combat one with another, or Cranes make haft to flie into the midland parts of the maine. The Cormorants and Gulls flying from the sea and standing lakes, and Cranes soaring aloft in the aire still, without any noyse, doe put in comfort of a faire and drie season: so doth the Howlat also, when she cries chuiit in rainie weather: but if it be then faire and drie, we shall be sure to haue foule tempests for it afterwards: Rauens crying one to another as if they lobbed or yexed therewith, and besides clapping themselves with their wings, if they continue this note, doe portend winds; but if they giue ouer between-whiles, & cut their crie short as if they swallow it backe again, they preface rain and wind both. Lacke-dawes, if it be late ere they returne from their reliefe abroad, foretold cold and hard weather; so do the white-birds when they assemble and flock together, as also when land-foule (and the crow especially) keep a crying against the water, clapping their wings, washing also & bathing themselves. If the Swallow flie low and so neere the water, that the flap the same oftentimes with her wings, it is a sign of rain and foule weather. Semblably, all other birds that nestle in trees, if they seem to make many flights out, but returne again quickly to their nests. Moreover, if Geese hold on a continuall gagling out of all order vtunably, a man may guesse no better by them, no more than he can of the Heron which he seeth heavy and sad vpon the sands.

And no maruell that these riuier-foules, or generally any other birds of the aire whatsoeuer, should haue a secret preface and foreknowledge of the disposition of the aire; for the very four-footed beasts of the earth doe make shew thereof by their behauiour. The sheep and such small cattraile, leaping and playing wantonly, dancing also as vntowardly without measure, doe testifie some change of weather: nay the dull and heauie oxen holding vp their nose and muzzles, snuffe and smell into the aire, yea and keep a licking against the haire [toward rain.] Also when you see the foule and filthie hogs, rend, teare, and fling about them bottles of hay, and yet they care not for it when they haue done, because it is no meat for them: likewise if you perceiue the pismires or ants either lying close and idle, full against their nature (whose propertie is to be industrious and euer busie) or encountering one another in battailewise, or else carying their eggs abroad out of their holes. Finally, when the mads or earthwormes come forth and appeare, a man may be bold to foretell of a change in the weather.

What should I say more? It is knowne for certaine, that Clauer-grasse or hearbe-Trefoile will looke rough against a tempest, yea and the leaues thereof will stand staring vp as if it were affraid thereof. And to conclude and make an end once of this discourse, whensoever you see at any feast the dishes and platters wherein your meat is serued vp to the board, sweat or stand of a dew, and leauing that sweat which is resoled from them either vpon dresser, cupboud, or table, be assured that it is a token of terrible tempests approaching.

An



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When thou hast found out in this maner the North-east wind Aquilo, be sure that the wind which bloweth full against it from the point where the Sun setteth in midwinter when daies be shortest, is the Southwest, called in Latin, Africus; and in Greek, Lybs. Obserue this wind well, for if a beast after she be couered, turn about directly into this wind, she will for certaine conceiue a female. And thus much of the Line in the Quadrant next to the North point on the East side.

The third line from the North point (which we drew first through the latitude of the shadow before said, and which we called Decumana) pointeth out the Equinoctial Sun-rising in March and September, directeth thee also to the East wind vnder it, called in Latine Subsolanus, and in Greek Apeliotes. Where the climat is healthful and temperat, let vineyards be planted and arranged into this wind: let ferm-houses also in the country be so built, as the dores and windows open into it. This wind loueth well to be dropping, and to distill gentle shoures of rain; howbeit drier it is than the West wind Favonius, which bloweth ouer-against him from the Equinoctial Sun-setting full West, called in * Zephyrus. Vpon this Western wind Oliue rowes should stand, according to *Cato's* mind. This wind is he that beginneth the Spring: this winde openeth the veins and pores of the earth, and with his milde coldnesse is healthfull and wholesome for all plants, for man also and beast. This wind gouerneth this whole season, and prescribeth the time for pruning Vines, for fardeling and dressing corne, for planting trees, for grafting fruit, for trimming and ordering Oliues; and to say all in one word, so kind he doth breath, that he cherisheth and fostereth the earth and all things thereupon.

The fourth line in your quadrant or compasse (reckoning from the North point, which also reacheth next to the South point on the East side) noteth the Sun-rising in mid-winter when the day is shortest; and withall the Southeast wind called in Latine Vulturus, and in Greeke Eurus, which as it is a drier wind than the two last named, so is it also warmer. In regard whereof it is good to set Bee-hiues and plant vines tending into this course, I meane in other parts of Italy remote from the sea, and also in Gaule. Then shall you haue to blow full opposit vnto it the wind Corus, directly from the sun-setting in mid-summer when the day is longest: by-west from the North; and this North-west wind the Greeks call Argetes: one of the coldest he is, like as all they be which blow from any point of the North. No maruell therefore if he be as much dread and feared as the North winde Septentrio, for commonly he bringeth with him haile stormes good store.

As touching the Southeast wind Vulturus, if the coast be cleare where and when he beginneth to rise, it will not be long ere he lie, and commonly hee is down before night, but the East wind indeed continueth most part of the night. But be the wind what he will be, if he blow sensibly hot, you shall haue him hold many daies together. And to conclude, would you know when to haue a North-west wind? marke when the earth drieth suddenly at one instant, it will not be long but he will be with you: contrariwise, when you see the ground moist and wet with a kind secret dew vnseen and vnknown, reckon vpon it that shortly you shall haue a South wind to blow. And thus much for winds.

CHAP. XXXV.

¶ Signes to prognosticate what weather is toward.

HAuing thus set down sufficiently a discourse of the winds, because I would not re-iterate one thing often, what remaineth now, but in good order to passe & proceed to the prognostication and fore-knowledge of the weather? and the rather, for that I see that *Virgil* took great pleasure herein, and stood much vpon this point: for thus he relateth vnto the rude and ignorant men of the country, That oftentimes in the very mids of haruest hee hath seene whirle-puffs and contrarie winds encounter and charge one another as it were in battell, doing much harme to corne. Moreover it is reported, that *Democritus* at what time as his brother *Damasus* was entred well into haruest worke, taking the opportunity (as he thought) of a most hot season, besought him earnestly to let the rest of his corne stand still a while longer, and to make hast to get that into the Barne vnder rouse, which was cut and reaped downe; and this he did without any reason by him made, why and wherefore. And what ensued hereupon? Surely within few houres after, there poured downe a mightie showre of raine, and proued *Democri-*

A to be a wife man and a true prophet. Moreover, it is a rule commonly giuen and obserued, That neither Reeds would be set & planted but toward rain, nor corn sowed but against a good showre. And therefore since this skill is of such importance, I am content briefly to touch those signes that foreshew what weather will be, and make choise of such which by search and experience are knowne principall and make most for this purpose.

And first begin I will at the Sun, the best prognosticator of all others: When he rises cleare and not fiery red, it is a signe that the day will be faire; but if he shew pale and wan, it presages a cold winter-like haile-storme that very day: but in case he went downe ouer-night cleare and bright, and so rose the next morning, so much surer may you be of faire weather. If the Sunne in rising seeme hollow, he foretellet rain: and when before his rising, the clouds be red, the winds will be aloft that day: but in case there be some blacke clouds intermingled among, you shall haue raine withall. If the raies and beames of the Sun be red, both when he riseth and when he setteth, there wil fall good store of raine. Are the clouds red about the Sun as he goes downe? you shall haue a fair day the morrow after. If when the Sun doth rise you see flying clouds dispersed, some into the South, and others Northward (say all be cleer and faire otherwise about him) make reckoning that day of wind and raine both. Marke at his rising or going downe, if his beames be short and as it were drawne in, be sure of a good showre. If at the Sun setting it raine, or that his raies either looke darke and blew, or gather a banke of clouds, surely these be great tokens of tempestuous weather & storms the morrow after: when in his rising the beames shine not bright and cleer, although they be not ouer-cast with a cloud, yet they portend rain. If before he rise, the clouds gather round together like globes, they threaten sharpe, cold, and winter weather: but in case he driue them before him out of the East so as they retire into the West, we haue a promise thereby of a faire time. If there appeare about the bodie of the Sun, a circle of clouds compassing it round, the nearer they come about him and the lesse light that they leaue him, the more troubled and tempestuous weather wil follow: but in case he be enuironed with a double circle, so much more outrageous and terrible wil the tempest be. If peradventure this happen at his rising, so as the said clouds be red againe which compass the Sun, look for a mighty tempest one time or other of that day. If haply these clouds enclose him not round, but confront and seeme as if they charged vpon him, look from whence they come, from that quarter they portend great wind: and if they encounter him from the South, there will be raine good store and wind both. If as the Sun riseth he be compassed with a circle marke on what side the same breaketh and openeth first, and from thence look for wind without faile: but if the said circle passe and vanish away all at once equally, as well of one part as another, you shall haue faire weather vpon it. If at his rising you see him to cast his beames afar off among the clouds, and the mids between be void thereof, it signifieth raine. If he spread his beames before he be vp and appear in our Horizon, look for wind and water both. If about him toward his going downe there be seene a white circle, there will be some little tempest and troublesome weather that night ensuing: but in stead thereof if he be ouer-cast with a thicke mist, the tempest will be the greater and more violent. If the Sunne couchant appeare fierie and ardent, there is like to be wind. Finally, if the circle aforesaid be blacke, marke on which side the same breaketh, from thence shall you haue blustering winds. And so an end of the Sunne and his prognostications,

Now by right, the Moone challengeth the next place for her presages of weather to come. First and foremost, the Egyptians obserue most her prime: or the fourth day after the change: for if she appeare then, pure, faire, and shining bright, they are verily perswaded that it will be faire weather: if red, they make no other reckoning but of winds: if dim and blackish, they look for no better than a soule and rainie moneth. Mark the tips of her hornes when she is due daies old, if they be blunt, they foreshew raine; if pricking vpright and sharp pointed withall: they alwaies tell of winds toward: but vpon the fourth day especially, this rule faileth not, for that day telleth truest. Now if that vpper horne of hers only which bendeth Northward, appeare sharpe pointed and stiffe withall, it presageth wind from that coast: if the nether horne alone seem so, the wind will come from the South: if both stand streight and pricking at the point, the night following will be windie. If the fourth day after her change, she haue a red circle or Halo about her, the same giueth warning of wind and raine. As for *Parro* he (treating of the presages gathered from the Moone) writeth thus: If (quoth he) the new moon when she is just foure daies old,

put her horns direct and streight forth, she presages thereby some great tempest at sea presently to follow, vnlesse it be so that she haue a guirland or circle about her, and the same cleer and pure; for then there is good hope that there will be no foule nor rough weather before the full. If at the full, one halfe of her seeme pure and neat, a signe it is of a faire season; if it be red, the wind will be busie; if enclined to blacke, what else but raine, raine. Doe you see at any time a darke mist or cloud round about the body of the moone? it betokeneth winds from that part where it first breaketh: and in case there be two such cloudie and mistie circles enuironing her, the tempest will be the greater: but how if there be three of them for failing, and those either black, or interrupted, distracted and not vnited? surely then there will be more storms & more. The new moone whiles she is croissant, if she rise with the vpper tip or horne blackish, telleth beforehand that there will be store of raine after the full, and when she is in the wane: but if the nether tip be so affected, the rain will fall before she be at the full. But what if that blacknesse appeare in the middle of her body betwene; then (saith Varro) it will poure of rain in the very full. A full moone hauing about her a round circle, sheweth that there will be wind from that part, where the said circle is most splendant. If her hornes appeare when she riseth, more grosse and thicke than ordinarie, look soon after for a terrible tempest and a stormie weather. If she shew not in our Horizon before the prime or fourth day after the change, and the West wind blow withall, then that moone throughout threatneth cold and winter weather: and if the day after the full she seeme extraordinarily enflamed, she menaceth vnto vs sharp shewes and bitter tempests. Finally, in every moon there be eight points and so many daies (according as she lighteth vpon the angles of the Sunne) which most men obserue onely, and take their presages of future weather by, to wit, the third, seuenth, eleuenth, fifteenth, nineteenth, one and twentieth, seuen and twentieth, and the very day of her conjunction or change.

In the third place, a man may know the disposition of the seasons by the fixed starres, and therefore it behooueth to obserue and marke them. They seeme otherwhiles in the sky to sit and run too and fro, and then we shal not be long without great winds, rising from that quarter where such appeared and gaue token.

The starrie skie, if it shew cleare and bright al ouer, and in every part alike, during that particular season [namely, between the occultation of the Harp-star, and the Equinoctiall point] which I proposed and set downe heretofore, it is a fore-token of a faire and drie Autumne, but yet cold.

If the Spring add Summer both, passed not cleare without some raine and wet weather, it will be an occasion that the Autumne following shall be drie, and lesse disposed to wind; howbeit, thicke, muddy, and enclined to mists. A faire and drie Autumne, bringeth in alwaies a windie winter.

When all on a sudden the stars lose their brightnesse and looke dim, and that neither vpon a cloud nor a mist in the aire, it signifieth either raine or grievous tempests.

If the starres make semblance as if they flew vp and down many together, and in their flying seem whitish, they denounce winds from that coast where they thus do shoot. Now if it seeme to the eye, as if they ran and kept one certaine place, those winds will hold and sit long in one corner: but in case they do so in many quarters of the heauen, they betoken variable and inconsistent winds, going and coming, and neuer at rest. [When you see a circle about any of the other fixe planets or wandering stars, you shall haue powring shewes soone after.] Within the signe Cancer, there be two prettie stars which the Mathematicians call Afelli, [i. little Affes] betwene which there seemeth to be a small cloud taking vp some little roome, and this they name in Latine Præsepia, [i. a Crib, Cratch, Bowzey, or Manger:] now if it chauce that this Racke or Crib appeare nor, and yet the aire bee faire and cleare otherwise, a signe it is of cold, foule, and winter weather. Also if one of these two little stars, to wit, that which standeth Northerly, be hidden with a mist, then shall you haue the South wind to rage; but in case the other which is more Southerly, be out of sight, then the Northeast wind wil play his part.

As touching the Rainbow, if it appear double as if there were two of them at once, it telleth of raine toward. A Rainbow presently after raine, is a signe of faire weather: but this is not so certaine, neither will it hold long. Also, when a man seeth new circles still about any planets, there will be much raine soone after.

In Summer time, if there chauce to be more thunder than lightning, it threatneth winds from

from that coast where it thundreth: contrariwise, if it lighten much & thunder little, looke for rain plentie: when you see it lighten, and the skie otherwise cleare & faire, it is a token that rain and thunder will follow thereupon, yea and rigorous cold weather besides: but the cruellest and most bitter impressions of the aire, ensue vpon such lightnings: as come from all the foure quarters of heauen at once: if it lighten, from the North-west only it betokens rain the day following; if from North, it is a signe of wind from thence: if from the South, Northwest, or full West, it happen to lighten in the night & the same be faire, it sheweth wind and rain from out of those coasts: more thunders foreshew winds, but if they be heard at noon, they presage rain.

As touching clouds, if you see the rack ride apace in the aire, the weather being faire & drie, looke for wind from that quarter whence those clouds doe come; and if they seeme to gather thick in that place, dispeared they will be and scattered when the Sun approacheth: but more particularly, if this happen from the Northeast, they portend rain; if from the South, storm and tempest: if at the Sun setting the rack seeme to ride from both sides of him into the open aire, they shew of tempests toward: if the clouds be very blacke, flying out of the East, they threaten rain against night: but if they come out of the West, it will surely raine the morrow after, if the clouds be disparked many together out of the East, and flie like fleeces or flocks of wooll, they shew rain for 3 daies after: when clouds flie low, and seeme to settle vpon the tops of the hills; looke shortly for cold weather, contrariwise, if you perceiue those tops of mountaines cleare without moist or cloud, the weather will soone take vp and turne to be faire: when the clouds seeme to be heauily charged and full, and yet looke white withall (which * constitution of the aire is called commonly the white weather) there is an haile-storme at hand: moreover, be the skie neuer so cleare, the least cloud appearing therein, is enough to engender and foreshew wind and storme: mists if they come downe and fall from the mountaines, or otherwise descend from heauen and settle vpon the vallies, promise a faire and drie season.

Leauing the stars and clouds above, let vs come to our fires that we make and keepe in our houses here beneath, for they are to be raunged in the next place of our prognostication. If the fire then burne in the chimney pale, and keep there with a huzzing noise, we find by experience it foreshewes tempest and stormie weather: as also wee may be sure of rain, in case we see a fungous substance or foot gathered about lampes and candle snuffs: if you see the flame either of fire or candle mount winding and wauing as it were, long you shall not be without wind. The like is to be said of fire and candle light, if either they seem to go out of themselves, or to kindle and take fire with much adoe. Also, when we discern in the fire a number of sparkles gathered together and hanging one to another: or if when the pot is taken off from the fire, the coles sticke to the bosome and sides: or when the fire being raked in embres, keepeth a spitting and sparkling from it: also, if the ashes lying vpon the hearth grow together: and last of all, when the liue-cole shineth brighter or scorcherh more than ordinarie, all these be signes of rain.

Go we a little lower to the water, for that element also giues signes of the weather: and first of all, if you see the sea within the haue, after the floud is gone, in a low and ebb water to bee calme, and yet heare it keep a rumbling noise within, it foreshewes wind: if it doe thus by times and fits one after another, resting stil and quiet between whiles, it presages cold weather & rain. Item, if in calme and faire weather the sea stonde or water banks resound and make a noise, it is a token of a bitter tempest: so it fares also with the very sea it selfe, for if it be calme, & yet make a roaring, or if the some thereof be seen to scatter to & fro, or the very water to boile & buble, you may be bold to foretell of tempests: the Puffins also of the sea, [i. fishes named in Latin Pulmones] if they appear swimming about water, foregnifie cold weather for many daies together: oftentimes the sea being otherwise calme, swell, & by howing higher than ordinarie, sheweth she had wind good store enclosed within her, which soon after will breake out into a tempest.

Let vs come aland againe, and marke the disposition of woods and hills: you shall heare the mountains and forests both, keep a founding and rumbling noise, and then they foretell some change of weather, nay you shall mark the leaues of trees to moue, flicker, and play themselves, & yet no wind at all stirring, but be sure then you shall not be long without. The like prediction is to be gathered by the light downe of either poplars or thistles flying too and fro in the aire; also of plumes and feathers floring vpon the water. Goe downe lower to the vales & plains: if a man chance to heare a bustling there, he may make account that a tempest will follow. As for the rumbling in the aire, it is an vndoubted signe and token thereof.

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More-

* Some call them Towers.

Moreover, the verie bruit and dumb creatures preface and giue warning what weather there will be. To begin with the fishes of the sea: the dolphins playing & disporting themselves in a calme water, doe certainly fore-shew wind coming from that coast whence they fetch these frisks and gambols: contrariwise, if they fling and dash water this way and that way, the sea at that time being rough and troubled, it is an infallible signe of a calm and of faire weather toward. The Cuttle or little Calamarie Loligo, launching it selfe and flying about the water; the Cockles & winkles cleauing and sticking hard to the grauell, the Sea-vrchins thrusting themselves into the owse and mud, or otherwise balaied & couered with sand, beall signes of tempests neare. The like may be said of Froggs, when they crie more than their custome is, and of Seamews also, when they gaggle in a morning betimes extraordinarily, semblably, the Cormorants, Gulls, Mallards, and Ducks, when they keep a proining of their feathers with their bills, foreshew wind: and generally, when you see other water-foule to gather and assemble together and then combat one with another, or Cranes make hast to flie into the midland parts of the maine. The Cormorants and Gulls flying from the sea and standing lakes, and Cranes soaring aloft in the aire still, without any noise, doe put in comfort of a faire and drie season: so doth the Howlar also, when she cries chuiit in rainie weather: but if it be then faire and drie, we shall be sure to haue foule tempests for it afterwards: Rauens crying one to another as if they sobbed or yexed therewith, and besides clapping themselves with their wings, if they continue this note, doe portend winds; but if they giue ouer between-whiles, & cut their crie short as if they swallowed it backe again, they preface rain and wind both. Iacke-dawes, if it be late ere they returne from their reliefe abroad, foretold cold and hard weather; so do the white-birds when they assemble and flock together, as also when land-foule (and the crow especially) keep a crying against the water, clapping their wings, washing also & bathing themselves. If the Swallow flie low and so neere the water, that the flap the same oftentimes with her wings, it is a sign of rain and foule weather. Semblably, all other birds that nestle in trees, if they seem to make many flights out, but returne again quickly to their nests. Moreover, if Geese hold on a continuall gagling out of all order vntunably, a man may guesse no better by them, no more than he can of the Heron which he seeth heauy and sad vpon the sands.

And no maruell that these riuer-foules, or generally any other birds of the aire whatsoever, should haue a secret preface and foreknowledge of the disposition of the aire, for the very four-footed beasts of the earth doe make shew thereof by their behauiour. The sheep and such small cattraile, leaping and playing wantonly, dancing also as vntowardly without measure, doe testifie some change of weather: nay the dull and heauie oxen holding vp their nose and muzzles, snuffe and smell into the aire, yea and keep a licking against the haire [toward rain.] Also when you see the foule and filthie hogs, rend, teare, and fling about them bottles of hay, and yet they care not for it when they haue done, because it is no meat for them: likewise if you perceiue the pismires or ants either lying close and idle, full against their nature (whose propertie is to be industrious and euer busie) or encountering one another in battailewise, or else carying their eggs abroad out of their holes. Finally, when the mads or earthwormes come forth and appeare, a man may be bold to foretel of a change in the weather.

What should I say more? It is knowne for certaine, that Clauer-grasse or hearbe-Trefoile will looke rough against a tempest, yea and the leaues thereof will stand staring vp as if it were afraid thereof. And to conclude and make an end once of this discourse, whensoever you see at any feast the dishes and platters wherein your meat is serued vp to the board, sweat or stand of a dew, and leauing that sweat which is resolu'd from them either vpon dresser, cupboud, or table, be assured that it is a token of terrible tempests approaching.

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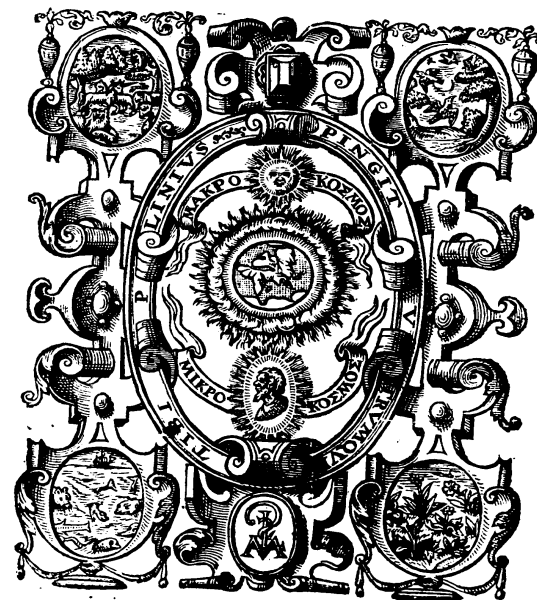
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THE HISTORIE OF THE WORLD.

Commonly called,
THE NATVRAL HISTORIE OF
C. PLINIVS SECVNDVS.

Translated into English by PHILEMON HOLLAND,
Doctor of Physicke.

The second Tombe.



LONDON,
Printed by Adam Jlsip.
1634.



TO THE READER.



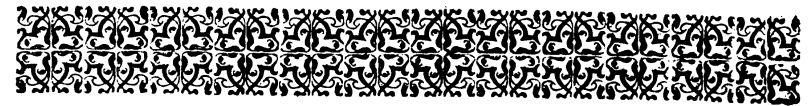
Or as much as this second Tome treateth most of Physicke, and the tearms belonging thereto (as wel concerning diseases as medicines) be for the most part either borrowed from the Greek, or, such as the vnlearned be not acquainted with (which partly vpon necessity I was forced, and partly for varietie induced to vse) I could not content my selfe to let them passe without some explanation: for since my purpose especially is to profit and pleasure the most ignorant (for whose sake *Plinie* also himselfe, as hee professeth, compiled this worke) I would not be so iniurious vnto them as to interrupt their reading with obscuritie of phrase, when the matter otherwise is most familiar. In regard whereof, I thought good to prefix a brieue Catalogue of such words of Art, as euer and anon shall offer themselves in these discourses that insue, with the explanation thereto annexed, and the same deliuered as plainly as I could possibly deuise for the capacity of the meane. In the handling whereof, so I may satisfie my countrymen that know no other Language but English, I shall thinke my paines and labour well bestowed, and lesse feare the censure of those that haply expect some deeper learning; for euer still
A 2 the

TO THE READER.

the verse of that Comickall Poet resoundeth from the stage
in mine eares,

αὐτὸς ὁ ποιητὴς ἑαυτοῦ ἀποφασίζει. (id est)

Speake with lesse shew of learning, so is be with more perspe-
cutive. Vale.



A brieft Catalogue of the words of Art, with the Explanation thereof.

A

A *Bort*, or *Abortive* fruit, is an vtinely
birth.

Absterfue, i. scouring, cleansing, or wi-
ping away, such as the Greekes call *Sme-*
ctica, and they enter into sope & washing
balls.

Accesse, i. a fit, whether it be of an Ague, fal-
ling sicknesse, or any such diseases as re-
turne at times.

Actabulum, or *Actable*, a measure among the
Romans, of liquour especially, but yet of
dry things also, the same that *oxybaphon*
in Greeke: and for that, as both words do
import, they vsed to dip their meats in vi-
negre out of such, it may wel go for a sau-
cer with vs; for it contains, as some think,
fifteen drams, which grow neere to two
ounces, of which capacitie our small sau-
cers are: but as others suppose, it receiues
two ounces and an halfe, the measure of
ordinary saucers.

Acrimonic, i. Sharpenesse.

Actually, i. sensibly and presently, as fire is a-
ctually hot.

Aduiales, or *Adycales epula*, were great and
sumptuous feasts or suppers, held by the
Pontifices or high Priests in testimony of
publique ioy.

Almonds, see *Amygdals*.

Amphora, a measure in Rome of liquors only:
it seemes to haue taken that name of the
two ears which it had of either side one: it
contained 8 Congios, which are much a-
bout 8 Wine gallons, or rather betweene
seuen and eight: so as in round reckoning
it may go for a ferkin, halfe kilderkin, or
half scestern with vs.

Amygdals be kernils at the root of the tongue
subiect to inflammations & swellings, oc-
casioned by deflux or falling down of hu-
mors from the head: they be called *Anti-*
ades, *Paristhnia*, & *Tonilla*: the foresaid
infirmities also incident vnto them, doe
likewise cary the same denominations.

A

Antidotes, i. countrepoysons, properly, defen-
satiues or preseruatiues against poyson, pe-
stilence, or any maladic whatsoeuer.

Antipathie, i. contrarietic, enmity, and repug-
nancie in nature, as between fire and water,
the vine, and the Colewort, &c.

S. Antonies fire is a rising in the skin occasio-
ned by hot bloud mixt with abundance of
choler, and such be the shingles and other
wild fires called in Greeke *Erysipelas*.

Aquosities be waterish humors apt to engen-
der the dropsies called *Ascites* and *Leuco-*
phlegmatia.

Aromatised, i. Spiced.

Arthriticall griefes, such as possesse the ioints,
as all the sorts of gout.

Astrictiue or *Astringent*, be such things as bind
the body, or any part thereof.

Attractiue, i. drawing, as the loadstone draw-
eth iron, amber straws or bents, *Dictamnus*
arrow heads or spils out of the bodie, and
cupping glasses (or ventoses) humours and
wind.

Austere, harsh or hard, as in fruits vnripe, and
hard wines of hedge grapes.

Axinomanie, a kind of magicke diuination by
an ax head red hot.

B

B *Asis* in a compound medicine is that drug
or simple which is predominant, and cari-
eth the greatest force in it, as the ground
thereof, whereupon the whole taketh the
name; as Poppy in *Diacodion*, *Quinces* in
Diacydonium, &c.

Bole is the form of a medicine when it may be
giuen in grosse manner at a kniues point to
the quantitie of a nutmeg at a time, vntill
the whole receit be taken.

Browning, a term vsuall in the mouths of ma-
riners and winnowers of corne, when they
are calmed and do call for wind.

Bulbes, although *Pliny* seemed to giue that
name vnto some one speciall hearbe, yet it

A 3

signifieth

The explanation of

signifieth generally all those as haue round roots, as Onions, Squilla, Wake-robin, and such like; whereupon these and other of that kind are said to haue bulbous roots.

Cacochymie is that indisposition of the body in which there is abundance of humors.

Calcinig, i. the burning of a mineral, or any thing, for to correct the malignitie of it, or reduce it into powder, &c.

Callositie, thicknesse and hardnesse of skinn in maner senslesse, as in fistulaes, and vnder our heeles.

to Carminat, is to make more fine and thin the grosse humors, by such medicines as by their heat are apt to cut and dissolue them; whereupon they likewise be called **Carminatiue**, a terme receiued by Apothecaries, and borrowed from those that card wooll.

Cancer is a swelling or fore coming of melancholy blood, about which the veins appeare of a blacke or swart colour, spread in manner of a Creasie clec; whereupon it tooke that name in Latine, like as in Greek **Carcinoma**. And such vlcers as in that sort be maintained and fed with that humor, are called cancerous, and be vtoward to heal, worse commonly for the handling.

Carnositie, i. fleshy substance.

Cataplasme, a pulstesse or grosse maner of plastre

Cartilage in man and beast is a gristle, in roots and fruits, that substance which we obserue in the radish root, and the outward part of a cucumber, as *Pliny* seems to take it, which thereupon be called Cartilaginous.

Cataract is a dimnesse of sight caused by an humor gathered and hardened betwene the tunicle of the eye, called Cornea, and the Crystalline humour; it is next cousin to blindness.

Causick, i. burning, blistering, or scalding.

to Cauterise, is to seare or burne by a Cauterie.

Cauterie actual is fire it self or scalding liquor: and so a searing iron, gold, or other metall made red hot, is called an Actual cauterie, which without the help of our natural heat doth work presently.

Cauterie potentiall is that which will raise blisters and burn in time, after it is once set on work by the heat of our body, as Cantharides, Spewwort, &c.

Ceres the first inuentress of the sowing & vse of corne.

Cerate is of a middle nature betwene an ointment and a plaister, not so hard as the one, nor so soft as the other.

Cicatrices in eyes be whitish spots, otherwise called pearls: they be the skars also remaining after a fore is healed vp: and so a place is said to be cicatrised, when it is newly skinned vp and healed.

Circulation is the deuise of subliming or extracting water or oile by a stillatorie, a lembick, or such, because the vapor before it be resolued into water or oile, seemes to go round circlewise.

Clysterised, i. conueyed vp by a clyster into the guts.

Coliaci be those that through weakenesse of stomacke are troubled with a continuall flux of the belly.

Colature, a thin liquour that hath passed thorow a strainer or colander.

Colliquation is a falling away and consumpti- of the radicall humour or solid substance of the body.

Collyries, are properly medicines applied to the eies in liquid forme; whereas the dry kind be rather called Sief & Alcohol, especially in powder: howbeit *Pliny* attributeth this terme to all eye-salues whatsoever. Also it seemeth that hee meaneth thereby, tents to be put in a fistulous vlcere, as in pag. 509 b. 510 k.

Collution, a liquour properly to wash the mouth, teeth, and gums withall.

Concocted, i. altdred to that substance by natural heate, as either in health may serue to nourish, or in sicknes is apt to be expelled

Consolidat, to knit, vnite, & make found again that which was broken or burst.

Concrete, i. hardened and grown thicke.

Conditio, i. preserued in some conuenient liquor.

to Concorporate, i. to mix and vnite together into one masse.

Consistence, i. substance or thicknesse.

Constipate, i. to harden and make more fast and compact.

Contraction of sinews, a shrinking or drawing of them in too short.

Contusions, i. Bruises.

Convulsions, painfull cramps.

Criticall daies be such, as in short diseases & those of quicke motion, do giue light vnto the physitian of life or death. *Pliny* obserues the odd daies to be most significant, and those vsually determinof health; and the euen days contrariwise: so that the seventh is *Rex*, i. a gracious prince, the sixth *Tyrannus*, i. a cruell tyrant.

Cruditie.

the words of Art.

Cruditie. See Indigestion.

Cyath, a small measure both of liquid and drie things; the twelfth part of a setarius, which was twenty ounces: whereby it appeareth, that a cyath was one ounce, one half ounce, one dram, and one scruple: it may goe with vs for foure ordinarie spoonfulls.

Cubit, a measure from the elbow to the middle finger stretched out at length, which went ordinarily for 24 fingers bredth, or 18 inches, which is one foot and a halfe: yet *Pliny* in one place maketh mention of a shorter cubit, namely from the elbow to the end of the fist or knuckles, when the fingers be drawn in close to the hand.

Cutaneum eruptions be such wheales, pushes, or scabs as do breake out of the skin and disfigure it.

D

Debilitie, i. weaknesse or feeblenesse.

Decoctio, a liquor wherein things haue bin sodden.

Decretorie daies, be such as in a sicknesse shew some chaunge or alteration in the patient, either for good or bad.

Defensatiue, in medicines taken inwardly, are such as resist venom or pestilent humor: in outward applications, such as defend the fore or place affected from the flux or fall of humors thither.

Denarius, a coin of siluer in Rome, and in other countries of gold, the same that Drachma Attica, i. a dram in weight, which is *vij. d. ob.* of our mony; and the piece in gold answereth neere to a full French Crowne; in poise it goeth for a dram.

Dentifrices, are meanes in Physicke to preserue the teeth, and make them white and faire.

Depilatorie are those medicines which either fetch off the haire, or hinder it from coming vp againe at all, or at leastwise from growing thicke. They were called in Greek and Latine both *Psilothra*.

Desiccative, i. drying.

Digestiue be those medicines which taken inwardly, helpe concoction of meate or humors; or applied without vnto a sore, doe comfort the place, and makeway for speedie healing.

Dislocations, when the bones be either out of ioynt, or else displaced.

to Dissipate, i. to open.

to Dissipate, i. to scatter and dispatch.

Distortion, crookednesse or turning awry vnnaturally.

Diureticall, such things as prouoke vrine.

Dose, i. that weight or quantitie of any medicine that may be giuen either conueniently or without danger to the patient.

Dram, the eight part of an ounce, which is the weight of a Roman denier, or Denarius.

Dysenteric, is properly the exulceration or sore in the guts, whereupon ensueth besides the painefull wrings of the belly, a flux also of blood at the siege, and therefore it is vsually taken for the bloody flux.

E

Etiologies. See Etiayls.

Electuaries, be medicinable compositions or confections to be taken inwardly, made of choise drugs, either to purge humors, to strengthen the principall parts, or to withstand any infirmities for which they are made. The substance is betwene a syrrop and a Conserue, but more inclining to the consistence of conserues.

Eidylls, or Eidyllia, be small poemes or pamphlets written by Poets, such as *Theocritus* in Greeke compiled, and much like vnto the Pastorals or Eclogues of *Virgill* in Latine.

Embrochation is a deuise that physitians haue for to foment the head or any other part, with a liquor falling from aloft vpon it, in manner of rain, whereupon it tooke the name in Greeke Embroche, and hath found none yet in Latine, vnlesse we should vse Superfusio.

Emollitiues, medicines that do soften any hard swelling.

Empiricks were those physitians, who without any regard either of the cause in a disease, or the constitution and nature of the Patient, went to worke with those medicines whereof they had experience in others, fall it out as it would.

Empirick books of *Diodorus* contained receits approoued and found effectually by experience.

Emunctories be those kernelly places in the body, by which the principall and noble parts doe void their superfluities, or such things as offend; to wit, vnder the ears for the brain, the arm-pits for the heart, and the shere for the liuer, &c.

Empla.

The explanation of

Emplastration in the Hortyard, is grafting by inoculation with a scutcheon in Phy sicke, the applying of a salve or plastre.

Epilepsie, i. the falling sicknesse.

Errhines be deuises made like tents, sharper at one end than the other, to bee put vp into the nose, either to cure some vicer there, or to draw downe and void humors out of the head, or to prouoke sneezing, &c.

Eschare, is that crust which ariseth vpon a cauterie, either a ctuall or potentiall, as also the roufe or scab that groweth vpon a sore.

Euationation, i. Voidance and riddance of any thing out of the bodie by vomite, purging, bleeding, sweating, &c.

Excelsaforie, i. Heating or chaufing.

Excoriation, i. fretting the skin off, when a part is made raw: a way to exulceration.

Exerescence, i. ouergrowing vnnaturally of any thing in mans bodie.

Exoticall i. forraigne, and brought from other countries.

Exorcismes, i. coniuurations by certain charmes and spels.

Exorcists, they that practised such Exorcismes. To **Expectorare**, i. to rid and discharge out of the breast by coughing or reaching.

Expiaatorie, were sacrifices or oblations for to make satisfaction and atonement.

Exiccative. See **Deficcative**.

Extenuat, i. to make thin.

Exulceration, i. a forenesse of any part inward or outward, when not onely the skin is off, but the humor doth fret deeper still.

Exulceratiue, be such things as are apt to eat into the flesh and make an vicer.

F

Fermentation, i. an equall mixture of things working as it were together: a tearme borrowed from the leuaine, which disperfeth it selfe into the whole masse or lump of dough.

Filaments bee the small strings that hang to a root like threads or haire, which some call the beard of the root: and in resemblance thereof, other things growing likewise, bee so called.

Fiffures, clifts or chaps, whether it bee in the hands, feet, lips, or fundament.

Flatuofities, i. windinesse gathered within the bodie.

Flora, the goddesse of floures among the Paimns.

Fomentations properly be deuises for to be applied vnto any affected part, either to comfort and cherifh it, or allay the paine, or els to open the poores to make way for ointments and plastes. If they be liquid things they are laid too by the means of bladders, fponges, or such like: if drie, within bags or quilts.

Fractures, i. bones broken.

Fricions or **Frications**, rubbings of the bodie vpward or downeward gently or otherwise, as the cause requireth.

Frontall, the forme of an outward medicine applied vnto the forehead, to allay paine, to procure sleepe, &c.

Fukes, i. paintings, to beautify the face in outward appearance. They are called at this day complexions, whereas they bee cleane contrarie: for the complexion is naturall, and these altogether artificiall.

Fumofities bee vapours steaming vp into the head, troubling the braine.

Fungous, i. of an hollow and light substance like to Fuffes or Mushromes.

G

Garga risines bee collutions of the mouth, and parts toward the throat, either to draw downe and purge humors out of the head, or to repress and reftreine their flux, or to mundifie and heale any fore there growing.

Gargarifing or **Gargling** is the action of vsing a liquor to the said purpose.

Gestation, an exercise of the bodie, by beeing carried in coach, litter, vpon horsebacke, or in a vessell on the water.

Glandulous swellings. See **Kings euill**.

Gleir, i. the white of an egge.

Gymnicke exercises, were those that were performed by men naked, and the place for such exercises, was thereupon called **Gymnasium**.

H

Habit of the bodie, is taken for the outward parts thereof, opposit vnto the bowels and principall within, which being comforted and fortified, do thrust forth offenseue matters to the habit and exterior skin.

Hemine, a measure in Rome, as well of liquors as drie things: so called, because it was half Sextarius: it contained ten ounces, and is somewhat

the words of Art.

somewhat vnder our wine pint, it is the same that **Cotyla** in Greeke.

Humiditie, i. moisture.

Hydromantia, a kinde of magicall diuination or foreknowledge of things to come, by obseruation of the water.

Hydrophobie, is a symptome or accident befalling to them that are bitten by a mad dog, whereby they are afraid of water.

Hypochondriall parts, be the flanks or soft parts vnder the short ribs.

I

Ilike passion, the wrings and torments of the vpper small guts, occasioned by wind or sharp humors. Some improperly call it the collicke of the stomacke.

Imbibition, a drinking or receiuing of any liquor into a thing: as when drougs lie steeped therein vntill they be thoroughly soaked therewith.

Impostumes properly be collections or gatherings of winde and humors especially betwene parts of the body, whereupon there appeareth a rising or swelling, and in time they become corrupt and do rankle, vnlesse by some meanes they be either drawn away or disperfed. Some terme them wens, howbeit, the word is taken for inflammations and biles.

To **Incorporate**, is to mixe and vnite well together.

To **Incrassate**, is to make thicke.

Indigestion, i. want of concoction and digestion, by which means many crudities & raw humors are ingendered, & by consequence abundance of rheumes.

Inflation, i. swelling or puffing vp with winde.

Infrangible, i. that cannot be broken.

Infusion signifieth the conuenance of some medicinable liquor into the body by clystere or other instrument. It importeth also the steeping of drougs in a conuenient liquor: and the liquor it selfe, when it is strained from the rest.

Ingredients, be those simples that goe vnto the making of any medicine compound.

Iniection, is the conuenance of any liquid medicine by syringe or such like instrument into any part of the body or hollow and fistulous vicer.

Insects, little vermine or smal creatures, which haue (as it were) cut or diuision betwene their heads and bodies, as Pismires, Flies,

Grashoppers, vnder which are comprehended Earth-wormes, Caterpillars, &c.

Infusions be bathing tubs or vessels halfe full, wherein the patient may sit vp to the middle or about in some conuenient decoction

Intermittent feauer, are those which come by fits, and yeeld some rest betwene whiles.

Inunction, i. anointing.

Iulebs or **Iuleps**, be drinckes giuen commonly as preparatiues for to open the passages of the inward parts, and to prepare the humors for a purgation, made either of some stilled waters and syrups mixed together, or of a decoction sweetened with hony or sugar, or els mingled with syrups.

K

Kings euill, is the hard swelling of the Glandules or Kernels commonly about the necke: they be called also **Scrophules**.

L

Lachrymal, is the corner of the eie where in the teares appeare first, and thereof it taketh the name.

Lastitude, is wearinesse or vnlustinesse.

Lauature, **Lotion**, or **Loture**, is a liquor to bathe or wash withall: likewise to cleanse and mundifie any part.

Ligula, **Lingua**, or **Lingula**, a small measure among the Romanes, both of liquor and drie things, containing the fourth part of Cyathus, to wit, three drams & one scruple or scruple, somewhat vnder halfe an ounce, and may goe well for our Spooonefull.

A **Liniment** is thicker than oyle, and thinner than an ointment, it may be taken for a thinner kind of ointment.

Lobes and fibres are the lappets and extreame parts of the liuer, with the master veines growing thereto.

Locall medicines, be those that are appropriate for the forehead, **Errhine** or **Nasal** for the nostrils, &c. or to be applied outwardly, ointments, which are not to be vsed before general or vniuersal means by euacuation.

Loch or **Lobach**, is a medicin more liquid than an electuary, appropriate for the lungs and windpipe, and is to be licked and let goe downe leisurely.

Longaon, is the nethermost gut reaching vnto the very seat or the fundament.

End.

The explanation of

Luted, i. close stopped with clay, dough, or such like.

M

Maturationes be medicins that help to ripen any swelling impostume, bile, or botch. *Maturity*, is the ripenesse thereof.

Membranes, be fine skins which inwrap other parts, as the brains, eies, and muscles of the flesh.

Metrenchyte, an instrument serving to infuse or inject a liquid medicine into the matrice of a woman, in manner of clystire.

Mitigatives, be such remedies as do asswage paine.

Mina, or *Mina*, was a Roman weight, which poised twentie ounces, that is to say, the ordinary pound, called *Libra* or *Pondo*, & two third parts: for the common *Libra* called *Medica*, weighed twelue ounces, so that *Mina* seemed to answer vnto the measure *Sextarius*.

Mollitiue. See *Emollitiues*.

Mordicative, is biting and stinging, as *Senuy* feed.

Mucilage, is a slimy liquor drawne from some roots or seeds, as from the marsh Mallow or *Althea* root, the seed of *Pillium* or *Flewort* and others.

Muscles be the fleshy parts of the bodie, contained within their seuerall membranes or skinnies.

N

Narcoticke medicines, be those that benum and stupifie with their coldnesse, as *Opium*, *Hemlocke*, and such like.

Nasals be Nose-rents. See *Errhina*.

Nerves, i. Sinewes.

Nodosities, hard knubs & knots growing vpon the ioynts in old gouts, and in other parts.

O

Obolus, halfe a scriptule, or the sixt part of a dram.

Obstructions, i. Stoppings.

Opiats, were properly at the first such electuaries or confections, which had a good quantitie of *Opium, i.* the iuice of Poppie in them, such as *Philonium* and *Requies*, that were deuised to mitigate intollerable

paine, and to bring the patient to sleepe: howbeit, in these daies all electuaries, euen cordials, in a liquid form be called *Opiats*; although there be not one grain of *Opium* in them.

Opilation. See *Obstruction*.

Orthopnoicke, are those that haue the disease *Orthopnoea*, which is a difficulty of drawing their wind, vnlesse they sit vp right.

Ostes, be words cast forth at vnwares, presaging somewhat.

Otenchyte, an instrument, deuised for to infuse or poure some medicinable liquor into the eares,

Oxyerate, a mixture of water and vineger together.

P

To Palliat, i. to couer: & such cures be called *Palliatiue*, which searce not to the root and cause, but giue a shew only of cure; as when a sore is healed vp aloft, and yet festereth vnderneath: and so sweet *Pomanders* do palliat a stinking breath, occasioned by a corrupt stomacke or diseased lungs, and such like.

Paradoxes, strange opinions.

Pectorals, i. such medicines as bee fit for the breast and lungs.

Pellicles. See *Membranes*.

Penetratiue, i. Piercing.

Periodicall, such agues be called, as return at their iust course from day to day, euery third fourth, or fifth day, &c.

Peripneumony, is the inflammation of the lungs.

Pessary, is a deuise made like a finger or suppository, to be put vp into the natural parts of a woman.

Phlebotomie, i. blood-letting, or opening of a veine by incision or pricke.

Phthisicke, to speak properly, is the consumption of the body occasioned by the fault of exulcerat and putrified lungs. But *Pliny* otherwise seemeth to take it for any other consumption.

Pomona, a deuised goddesse amongst the *Painims*, of apples and such fruits.

Prodigies bee strange sights and wonderfull tokens, presaging some fearefull thing to come.

Propinquitie, nearnesse or affinity.

Proscription, was a kind of outlawing and depriving a man of the protection of the state, with

the words of Art.

S

Saluation, is a drawing of humours to the mouth, and a deliuerie of them from thence in manner of spittle.

Sarcling is the baring of roots, by ridding away the earth and weeds from about them, that did clog them.

Scarification, is a kind of pouncing or opening of the skin by way of incision slightly, with the fleame or lancet, either to giue some issue for the blood and humours to passe forth, or prepare a place for the cupping-glasse to extract more.

Schirre, is a hard swelling almost fencelesse.

Scriptule, or *Scruple* is foure and twenty grains weight, or the third part of a dram.

Scrophules. See *Kings euill*.

Seat, is the circumference or compasse about the tuill or fundament.

Secundine, i. the afterbirth that infolded the infant within the mothers wombe.

Sege, a stoole of ealement, whereupon wee sit to discharge the order and excrements of the guts.

Serofities, or *Serous humors*, be the thinner parts of the masse of blood, answering to the whey in milke, such as we see to float vpon blood that hath run out of a veine.

Sextarius, a measure among the *Romanes*; wherof six goe to their *Congius*, wherupon it tooke that name: it contains two hemines, and is somewhat lesse than a wine quart with vs, it beareth twentie ounces.

Sinapisme, a practise by a plaster of mustard seed, and such like, to reuiue a place in manner mortified, and to draw fresh humors & colour to it.

Solstice, i. the Sunnestead, as well in winter as Summer, when hee is come to his vtermost points North and South, but vually it is put for Mid-summer onely.

Sophisticated, i. falsified & made corrupt, howbeit, going for the right. Thus drougs and gems are many times thrust vpon vs.

Spasmes, be painefull crampes or pluckings of the sinewes and cords of the Muscles.

Spasmatike, are such as be thus plucked. *Species*, be either the simple ingredients into a composition, or else the bare powders mingled together, ready to be reduced into an electuarie liquid, or Tables.

Speculative knowledge, or *Speculation*, is the insight into a thing by reading only & contemplation

with confiscation of his lands and goods. *Propagat*, to grow and increase, after the manner of Vine branches, which being drawne along in the ground from the motherstock do take root.

Propitius, i. gracious and mercifull.

Proximitie, neere neighbour-hood or resemblance.

Prisane, the decoction of husked Barley: a grewell made therewith, or the creame thereof.

Pulpous, i. full of pulpe, or resembling pulpe, which is the soft substance in Apples or such fruits, answerable to the flesh in liuing bodies.

Purulent, yeelding filth and Attyr.

Putrefactiue, such venomous medicines or humors, as do corrupt and putrifie the part of the body, which they possesse.

Q

Quindecimvirs, were certain officers, fifteen in number, ioined in one commission.

R

Receptorie, a vessell standing vnderneath, ready to receiue that which droppeth and distilleth from something aboue it.

Reciprocall, going and comming, as the tides of the sea ebbing and flowing.

To Rectifie, i. to set streight, to reforme, or amend.

Repercussive, i. driuing or smiting backe.

Residence, i. the setting toward the bottome, as in vrine.

Retentive facultie, i. the naturall power that each part or member of the body hath to hold that which is committed vnto it, the due time, as the stomacke, meat, the bladder, vrine, &c.

Reuerberatiue, i. rebounding or striking backe.

Rhabdies, bee properly the chaps in the fundament or seat.

Rubified, i. made red, as when by application of mustard plastes, called *Sinapismes*; or beating a part that is benumbed with nettles, it recouereth a fresh colour againe, whereupon such plastes be called *Rubificatiue*, and the operation is named by the *Greekes Phoenigmos*.

Rupture, the discale of bursting, as when the guts or other parts fall downe into the bag of the cods.

templation, without practise & experience.
Sperme, is naturall seed.

Spondyles, be the turning ioints of the chine or backbone.

Stomachicall fluxe, is the same that *Cœliaca passio*. See *Calici*.

Stomachicall medicines, be such as are appropriat for the diseases incident to the mouth, and the parts adjoining.

Stypticke, be such things as by a certain harsh tast, doe shew that they bee astringent, as medlars and alumne, which thereupon is named *Stypteria*, and such like.

Succedan, that drug which may be vsed for default of another. The Apothecaries call such, *Quid pro quo*.

Suffusion. See *Cataract*.

Suffumigation, is the smoke that is receiued in to the body from vnder a stool, for the diseases of the guts, fundament or matrice.

Suppuration, is when a bile or impostume gathereth to an head and must be broken.

Sympathie, i. a fellow-feeling, vsed in Pliny, for the agreement or amitie naturall in diuers sencelesse things, as betweene yron and the loadstone.

Symptome, an accident accompanying sickness, as head-ach the ague, stich, shortnesse of wind, spitting blood, cough, and ague, the pleurisie.

Syringe, an instrument in manner of a pipe to iniekt a medicinable liquor into the bladder.

T

Tellus, the earth.

Tenacitie, clamminesse, such as is in glew, birdlime, and Bitumen.

Theoricke, or *Theoretique*, contemplatiue know-

ledge without action and practise.

Tineſme, an inordinat desire to the stool without doing any thing to the purpose.

Tonsils. See *Amygdals*.

Transparent, i. cleare and bright throughout, as cryſtall, amber, aire and water.

Transuſation, i. the pouring of liquor out of one vessell into another.

Triuial, i. vulgar, common, and of base reckoning.

Triumvirat, the Tripartite dominion of *Antonie*, *Octavius*, and *Lepidus*, when they held all the world in their hands, each one their third part.

Trochisques, or *Troſques*, be litle cakes or roundles, into which diuers things medicinable are reduced for to be kept the better, & to be ready at hand when they shall be vsed.

Tuile, the same that the Fundament or nethermost gut.

V

Vegetatiue, that power in nature which God hath giuen to creatures, whereby they liue, are nourished, and grow.

Ventoſitie, windinesse.

Vicinitie, neernesse, or neighborhood.

Victoriat, a silver coine in Rome, Halfe a denarius, so called because it had the image of victory stamped on the one side: it is *loma*, what vnder our goat.

Vnction, anointing.

Vnguent, an ointment.

Vreters, be the passages or conduits whereby the water or vrine passeth from the kidnies into the bladder.

Vulnerarie, i. belonging to a wound; as *Sanicle* is a vulnerary herbe, and *Machaon* was a vulnerarie Physician.



THE NINETEENTH BOOKE OF THE HISTORIE OF NATVRE, WRITTEN BY C. PLINIVS SECVNDVS.

The Proeme.

I Related we haue in the former booke, of the stars and signes aboue, which giue vs intelligence as well of the seasons, as the disposition of the weather to come: and that in plaine and easie manner, by so euident and vndoubted demonstrations also, as may content the meane capacitie of the vnskilfull and ignorant. And verily, if we will rightly weigh and consider the thing, we shall find and vnderstand, that our countrey farmes and villages stand vs in good stead to know the inclination of the well and throughly learned, many haue bin of opinion, That the knowledge of gardens and the care thereto belonging, should by good right follow next. Howbeit, I for my part am of this mind, that here be other matters concerning Agriculture, deserue to be handled, before we leape thus soon to gardening. And here I cannot chuse but maruell much at some men, who making such profession of learning, and namely, in the skill and science of Agriculture, as they haue done yea, and seeking thereby to win all their credit and name of erudition and literature, haue notwithstanding omitted many things requisite therunto, without any mention made, or one word spoken of so many herbes and simples which either come vp of themselves, or grow by meanes of mans hand: considering that the most part of them are in greater price and reputation, yea, and in more vse and request far, for the maintenance of this our life, than either corne or Pulse, or any fruits of the earth whatsoever.

And to begin first at those that are known commodities, and so notorious, as that the vse thereof not only reacheth all our the maine and continent, but extendeth also to the very seas, and one spreadeth them: What say we to Line or Flax, so commonly sowed as it is? yet may it not be ranged either among the fruits of the field, or herbes of the garden. But what region (I pray you) or part of the earth is without it; and what is there so necessary for this life of ours in all respects? Again, is there any thing in the whole world more wonderfull and miraculous, than that there should be an herb found of this vertue and property, as to bring set saile from the straits of Messina in the straits of Sicily, and in seven daies to arrive at Alexandria: Babilus also Gouvernor there likewise, in six; and that by the means of the said herb? Moreover, what say you to Luc Lord Pretour, embarked and tooke ship at Puteoli, and in nine daies sailed to the said Alexandria, and yet he had but a very mild and still wind to helpe him in that voyage? Is not this a strange and soueraigne les pillars, into the harbor of Ostia in Italy? can shew (I say) the kingdome of Catalogne in Spaine before the said port-towne in foure daies, Province in three, and Barbary in two? for C. Flaccus, lieutenant vnder Vibius Crispus the Pro-consull, did as much I speake of, and that with no great forewind, but a most gentle and milde gale. Oh the audacious boldnesse of this world, so rash, so full of sin and wickednesse, that a man should sow and cherish any such thing, as might receiue and swallow the Windes, stormes, and tempests; as if the flout and tide alone were not sufficient to carrie so proud a creature! But now are wee growne moreouer to this passe, that sailes bigger than the Shippes themselves, will not serue our turnes. For albeit one might be sufficient to carrie the biggest crosse-yard that can be denised, yet are not wee content with a single maine-saile

B

maime sailet herenpon, unlesse we set up Saile vpon Saile, top and top-gallant: unlesse (I say) we haue for-
sailes and sprit-sailes in the Prow, misnes also hoised up and displaid in the Poupe; besides other trinkets
and more cloath still; and all to set vs more forward vpon our death, and to hasten our end. Finally, is there
ought againe so admirable, as that of so small a graine as is the Line-seed, there should grow that which is
able to carry to and fro in a moment, this round globe of the earth, the same being so slender a stalke as it is,
and not growing high from the ground? considering withall, that twisled it is not entire and whole in the
stem; but before it can be occupied, it must be watered, dried, braked, tow-aved, and with much labor dri-
uen and reduced in the end to be as soft and tender as wooll: and all to do violence to Nature and Mankinde
most audaciouslly euen in the highest degree, in such sort, as a man is not able to proceed so far in execration,
as is due vnto this inuention. The first deuise whercof I haue inuiged against in conuenient place else-
where, and not without desert; as who could not be content, that a man should die vpon the land, but hee
must perish vpon the sea, to feed Haddockes there, without the honour of sepulture. In the booke but next be-
fore this, I gaue warning and aduertised men, That for to enioy corne and other victuals necessarie for this
life, in suffisance and plenty, we should beware of winde and raine: and now behold, man is so wicked and
vngenerous, his wit so inuentione, that he will be sowing, tending, and plucking that with his own hand, that
calls for nothing else at sea but winde; and neuer rests till Browning be come. See moreover, how well this
vnhappy hand of his speeds: for there is not a plant againe commeth vpon sooner, or thrineth faster than this
Flax. And to conclude, that we may know how Nature her self is nothing wel pleasing therewith, and that it
groweth maugre her will, it burnes the field wherein it is sowed, it eateth out the heart of the ground, and
maketh it worse where-euer it comes: this is all the good it doth vpon a land.

CHAP. I.

¶ The maner of sowing Line or Flax: the sundry kindes thereof: the order how to dresse it.
Also of Napkins and other Naperie. Of Flax and Linnen that will not burne in
the fire. And when the Theatres or Shew-places at Rome
were first encourtained.

Line-seed loueth grauelly or sandie grounds passing wel, and commonly is sowed with
one tilth and no more: yet is there nothing maketh more haste to be aboue ground,
or sooner commeth to maturitie. Being sowne in Spring, it is pluckt in Summer. See
how * injurious it is still to the earth euen this way also! Wel, say that the Egypti-
ans in some sort may be excused, for sowing it as they doe, and making saile-cloath thereof; in
regard of the necessarie traffique they haue into Arabia and India, for to fetch in the commodi-
ties of those countries, what need or reason, I pray you, hath France so to do? Can the Gauls
be sorted in the same range with the Egyptians? Whether would they go? Is it not sufficient
that they see the mightie mountaines standing iust between them and the Mediterranean sea?
Will not this serue to keepe them from Nauigation, that on the huge Ocean side they can dis-
couer nothing but the vast Elements of Water and Aire together? Howbeit, for all this re-
straint, the Cadurci, Caletes, Rutene, and Bituriges; the Morini also, who are supposed to be
the farthest people inhabiting our Continent; yea and thoroughout all parts of France they
weave Line and make Sailes thereof. And now adayes also the Flemmings and Hollanders
dwelling beyond the Rhene (I meane those antient Enemies to the State of our Empire) doe
the like*: in so much as the women there cannot deuise to go more rich and costly in their ap-
parell, than to weave fine Linnen. The obseruation whereof putteth me in mind of a thing that
M. Varro doth report of the whole Race and Familie of the Serrani: in which House this Or-
der was precisely kept, That there was not a woman amongst them knowne to weave any Lin-
nen about her, no not so much as in a smocke next her bare skinn. Now in Germanie, the
spinners and weavers of Linnen doe all their worke in throuds, caues, and vaults, buried, as it
were, vnder the ground: so do they also in Italy and that part of Lombardie that lieth between
the Po and Ticinus, to wit, in the * Countrey Aliana; where (after the Scetabines in Castile,
which is the best) there is very fine workmanship of Linnen cloath, and may deserve the third
place for goodnesse thoroughout all Europe. For the Retovines, bordering hard vpon the
foresaid Alianes, and the Faventines, who inhabit the broad port-way Emilia, are to be ran-
ged

* For that so
quickly it
robbereth her
of moisture.

* It seems that
fine Holland
cloth & Cam-
bricke was in
request by Eli-
zabeths time.

* Regione Alia-
na. Turach.

Aged in a second degree and next to the Scetabines for the fine Linnen which they make. And in
very truth, this Fauentine cloth is alwaies far whiter than the Allian, which is ordinarily brown
when it is new wouen, and before it be bleached. Like as the Retovine is exceeding fine & thick
wouen withall, and besides, not inferior in whitenesse to the Fauentine, howbeit, no nap or down
it carrieth, a thing which as there be some who dogreatly praise and like, so there be others againe
discommend and dislike as much. As touching the thred it selfe that they make of their Flax, it
is more euen (if euener may be) than that which the Spider spinneth, so neruous also and strong
withall, that if a man list to make triall thereof with his teeth, it will giue a twang and ring a-
gain like a Lute-string: and therefore it carrieth a double price to other. As touching the Spa-
nish Flax, and namely, that which Aragon and Cartalogna doth yeeld, it is passing faire and
white, by reason of a certain brook or running water passing vnder Tarracon, wherein it is water-
ed: the nature whereof is to giue it a singular brightnesse aboue the rest. Wonderous fine it is,
and runneth into a dainty small thred: for there first was deuised the fine Cypres or Lawne, and
the curtains thereof. It is not long ago, since out of the same parts of high Spaine, there was
brought into Italy the flax of Zoela, most commodious & meet for hunters to make great nets
and toile. A maritime city this Zoela is, in Gallitia, scituat neere the ocean. There is excellent
good Line also to be found at Cumes in Campaine within Italy, which serueth very well for
snares and small nets to take fishes, and to catch birds with. The same also yeeldeth matter and
stufte for the great cord-nets abouesaid: for wore wel this, that Flax fitteth our turns, as well to
snare and intrap all other beasts, as it doth to indanger our own selues, [vpon the sea.] But of all
others, the toile made of Cumes flaxen cords, are so strong, that the wild bore falling into it, will
be caught: and no maruell, for these kind of nets will checke the very edge of a sword or such
like weapon. I my selfe haue scene so fine and small a thred, that a whole net knit thereof, toge-
ther with the cords and strings called Courants, running along the edges to draw it in and let it
out, would passe all through the ring of a mans finger. I haue known one man also carry so many
of them (easily) as would go about & compasse a whole forest. But this is not the greatest won-
der of them, for more than so, euery one of these threds that went to the making of the masses,
was twisled 150 double: and euen of late daies, *Iulius Lupus*, who died Lord Deputy or Gover-
nor of Egypt, had such. This may well seem a maruell incredible to those who neither knew nor
saw the net-worke Habergeon, or Curer of *Amasis*, a king sometime of Egypt, which was shewed
of late daies within the temple of *Minerva*, in the Isle of the Rhodians; euery thred whereof
carried a twist * 365 double. Certes, *Mutianus* a man of good credit (as who had bin thrice con-
full of Rome) hath related so much at Rome vpon his owne knowledge: for whereas there remai-
ned yet certaine small reliques and little peeces therof, it was his hap of late to meet with some
of them and by his owne triall to find that true, which hac bin reported by others. And verily,
great pittie it is, that such an excellent, rich, and rare peece of work (as it was) should thus come
to nothing, by mens iniurious handling of it, raveling out the threds as they haue don, for to see
the prooffe of the thing.

But to returne againe to our flax of Italy. That which groweth in the Pelignians countrey is
at this day in great account and request: howbeit, none vse it but the Fullers. There is not a
whiter flax to be found, & indeed resembling wool nearer than this flax. Like as, for quilts, ticks
and mattraffes, the flax of the Cadurei in France had no fellow: for surely the inuention therof,
as also of floss to stuffe them with, came out of France. As for vs here in Italy, euen as our maner
was in old time to lie and sleep vpon straw-beds & chaffy couches, so at this day wee vse to call
our pailers still by the name of Stramenta. The Line or flax of Egypt is nothing strong, howbe-
it the people there do raise exceeding great gaine and profit thereof. And foure distinct kindes
thereof are knowne, according to the names of the sundry countries where they grow, to wit,
Tanicum, Pelusiacum, Buticum, and Tentyriticum.

Moreover, in the higher parts of Egypt which bend toward Arabia, there groweth a certaine
shrub or bush carrying cotton, which some call Gossypium, others * Xylon, and the linnen ther-
of made they therefore call * Xylina. This plant is but small, and bringeth forth a fruit resem-
bling the bearded nut or filberd; out of the inner shell or huske whereof [called * Bombyx] there
breaks forth a cotton like vnto downe, so easie to be spun: and there is no flax in the world com-
parable to it for whitenesse & softnesse. Of this cotton, the Egyptian priests were wont to wear
their fine surpleesses, and they tooke a singular delight therein. A fourth kind of linnen there is,
called

* According to
the daies of
the yere.

* Cotton or
Bombace.
* Linly, wol-
sey, or our Fu-
sians rather.
* Hercupon
cotton is cal-
led Bombac

called Orchomenium; it cometh from a certaine fennie reed growing in marishes, I meane the G
tender muchets or charts thereof.

In Asia they haue a certaine kind of broome, the stalke and branches whereof they water and
leafe in steepe ten daies together, and thereof make thread, passing good for to be twitted and
knit into fisher nets, for they will abide the water very well, and indure without rotting. The
Ethiopians and Indians both, find a stufte in manner of Line or cotton in some apples or such
like fruit: and the Arabians meet with the like in gourds, growing as I haue before said vpon
trees.

To come againe to our countrey Line or Flax within Italy, we go by two signes, and know
thereby when it is ripe and ready to be gathered; to wit, either by the swelling of the seed, or the
colour of the plant it selfe, leafe and stalk inclining to yellow. Then is it plucked vp and bound
into certaine bunches as much as handfuls: which done, they are hung vp to drie in the sun one
day, with their heels or roots vpward: the morrow after, they be turned quite contrary, and so
for five daies after, they hang with the foresaid roots downward, that the seed may fall downe
from their heads into the mids of euery bunch or bundle aforesaid; for the seed therof is medi-
cinable, and of effectuall operation in Physicke: yea and the rurall Peasants in Lombardie and
Piemont beyond the Po, vse to make therof a good country meat of a most sweet and pleasant
raist; but now for this good while, that kind of meat or bread is made onely for to be employed
in their sacrifices to the gods. Then after wheat harvest, the stems or stalks thereof are laied
in somewater that is warme with the Suns heat, charged with stones or other weights thereupon,
that they may be borne downe and sinke to the bottom: for there is not a thing besides lighter
than Line, or loueth better to swim. When they be sufficiently watered (which you shall know
by the skin or rind thereof if it be loose and ready to depart from the rowy substance of the stem)
then must the foresaid iauils or stalks bee hung out a second time to be dried in the sun, with
their heads and heels one while vp and another while downe, as before. After they be wel dried,
they are to be beaten and punned in a great stone mortar, or vpon a stone floore, with an hurden
mallet or tow-beetle made for the purpose. Now that part thereof which is vtmost & next to the
pill or rind, is called Tow or Hurd, and it is the worst of the Line or Flax, good for little or no-
thing but to make lampe-match or candle-wick; and yet the same must be better kembed with
hetchell teeth of yron, vntill it be clefted from all the grosse barke and rind among. As for the
good Flax indeed, which is the teere or marrow as it were within of the Line, there be diuers and
sundry sorts and degrees of it, distinct according either to the whitenesse or softnesse thereof.
And the spinning of this fine Flax (I may tell you) is so cleane a worke, that it will become a
man ywis to lay his fingers to it. But what shall be done with all the hard refuse, the long buns,
the stalks, the short shuds or shiues that are either driuen from the rest in the knocking, or par-
ted in the hetchelling; many they will serue very well to heat ouens and furnaces, or to maine-
taine fire vnder kills and leads. And here there is a prettie cunning and skill in the hetchelling
and dispensing of Flax to the prooffe: for if the Line bee good and well ordered, euerie fiftie
pounds of it in bunches or bundles aforesaid, must yeeld fiftene ordinarily of tried and carded
Flax. Moreover, when it is spunne into thread, it must be polished againe and whitened in wa-
ter, with much punning and knocking vpon a stone together with the water. And yet there is
no end, for after it is woven to cloath, it ought to bee followed and beaten a third time with
good clubbe-headed cudgels: in such sort, as the more iniurie that is done vnto it, the better
it is.

Furthermore, there is a kind of Line found out which will not consume in the fire: this in I-
taly they call Quick-line, and I my self haue seen table-clothes, towels, & napkins thereof, which
being taken foule from the board at a great feast, haue been cast into the fire, and there they burne
before our face vpon the hearth, by which meanes they became better scoured, and looked
fairer and brighter a hundred times, than if they had bin rinsed and washed in water; and yet no
part of their substance, but the filth only, was burnt away. At the roiall obsequies and funeralles
of KK the manner was to wind and lap the corps within a sheet of this cloth, of purpose to sepa-
rate the cinders comming of the body, from other ashes [of the sweet wood that was burnt
therewith.] This manner of Line groweth in the deserts of India, where no rain falls, where the
countrey is all parched and burnt with the Sunne, amongst the fell dragons and hideous Ser-
pents: thus it is insured there to line burning, which is the reason, that euer after it wil abide the
fire.

A fire. Geason it is to be found, and as hard to be wouen, so short and small it is. How soeuer other-
wise it be naturally of colour reddish, yet by the fire it getteth a shining glosse and bright hew.
They that can come by it and meet withall, esteeme it as precious as the best orient pearles. In
Greece they call this Line, Asbestinum, according to the nature and propertie that it hath, not
to consume with burning.ouer and besides, *Anaxilaus* saith, That if a man would cut downe or
fall a tree by stealth and in secret, let him compass the body thereof with a sheet of this lin-
nen, he may hew as long as he will at it, and all the strokes that he giueth will be so drowned, that
they shall not be heard againe. To conclude, in all these respects aboue said, this Line may well
be counted for the principall and best that is in the whole world.

The next to it in goodnesse, is the Line called Byffus: the fine Lawn or Tiffany whereof out
wines and daries at home set so much store by for to trim and deck themselves: it groweth in
Achaia within the territorie about Elis: and I find, that in old time it was sold as deare as gold,
for a * scruple thereof was commonly exchanged for * foure deniers Roman.

The lint or nappie downe which linnen cloth beareth in manner of a soft cotton, especially
such as cometh of ship failles that haue lien at sea, is of great vse in Physicke. * The ashes also
made thereof, be counted a good Succedane of Spodium, and for their efficacie may go for it.
Moreover, there is a kind of Poppies much sought after for blanching and bleaching of linnen
clothes; for being skoured therewith, it is wonderfull how white and pure they will look: & yet
for all the beautie that consisteth in that colour, people are grown to this disorder & vain enor-
mity, that they haue assaid to stain and die their linnen and naperie into other colours, as well

C as their woollen cloth. Which practise was first seen in the Armada or fleet of K. *Alexander*
the Great, vpon the great riuer Indus, at what time as his captaines and Admiralls in a certaine
skirmish that they madewith the Indians, changed the armes and ensignes of their ships: where-
at the inhabitants (being vpon the shore and strond) were astonished to see their failles and stre-
mers painted with diuers colours wauiug in the wind. Semblably, the failles of that ship were
died purple, wherein *M. Antonius* together with *Cleopatra* came to Agium, and in which they
fled both from thence and escaped. And indeed heretofore a red purple banner erected on the
top of the mast, was the badge or ensigne of the royall Admirall ship: but afterwards they be-
gan at Rome to incourtaine their Theatre with such vailes dyed in colours, onely for shade: an
inuentiun deuised by *Q. Catulus* at what time as he dedicated the temple of the Capitoll. In

D proceffe of time, *Lentulus Spinther* (by report) was the first man that in the solemnity of the games
and plaies Appollinate, drew fine curtaines ouer the great Amphitheatre at Rome: howbeit
not long after, *Cesar* Dictator caused the grand Forum or Common place at Rome to be coue-
red all ouer with such rich Courtains, yea and the high faire street called Sacra, to bee hanged
on both sides from his owne dwelling house to the very Capitoll cliffe: which magnificent and
sumptuous sight, was more wondered at and scene with greater admiration, than the braue shew
and Tourney that he fet out at the same time of Sword-plaies at sharpe and to the vtterance.
Then followed *Marcellus* also the son of *Octavia*, sister to the Emperour *Augustus*, who in his own
Edileship and in the tenth Consulship of his vncke *Augustus* before said, vpon the Calends or
first day of August that yeare, caused the Romane Forum to be drawne all ouer and shadowed

F with the like courtains, although he represented at that time no solemnitie at all of games and
plaies: and this he did only, that they who came to plead at the barre, might stand vnder shade
more wholefomely. Lord, what a change was here at Rome since the daies of *Cato* the Censor,
who thought it meet and requisite, yea and gaue aduise that the said Forum or great Hal of com-
mon Pleas should be paved and laid all ouer with caltraps vnder foot, To keep our Lawyers and
busie pleaders from thence. Of late daies there were scene in the Amphitheatres of Emperour
Nero, trauerfes drawne vpon cords and ropes, with fine courtains of blew azure colour like the
skie, and those beset with stars; where the very floore of the ground vnder mens feet, was colou-
red red. And wherefore serue these in cloister courts and walks now, but to keepe the mosse for-
sooth vpon the ground, or rather the fine fret-worke in pauements, from sun-burning? But for
all these paintings and rich dyes, yet when all is done, the white linnen held the own still & was
highly esteemed aboue all colors. And no doubt in great price such cloth was in the time of the
Trojan war: and in good faith I see no reason why it should not be as well in bloody battails as
at broken shipwracks: howbeit *Homer* testifies, that few there were who went to the wars with lin-
nen habergeons or cures: but it should seem that the Poet (as the better learned expositors doe

* 24 grains;
* i about three
hal c-pence
the grain, and
better.
* Hercof were
m. de 8. 10. 100.
m. whic of
Galen writes
3. 25. m. m.
with which
lint he cured
Heracles and
stanchd his
bleeding.

* Called by
Punicus, Se-
ritia, as Festus
noteth.

terpret) meant, That ship-tackling, sailes, cords, and ropes, were made of this Line, speaking as G he doth of * Sparta, whereby he vnderstandeth indeed Sata, .i. cordage of sowne Line or garden Flaxe.

CHAP. II.

¶ The nature of Spart or Spanish broome : the manner of handling and dressing it : when it was first used in cordage : what Plants there be that line and grow without root.

Spart verily was not in vse and request for many hundred yeares after, neither was it knowne before the first voiage and expedition that the Carthaginians made in warlike manner into Spaine. An herb this is also, growing of it selfe without setting or sowing (which indeed it cannot abide.) Full well and properly it might be called, the rush of a dry and leane ground, and a very defect or imperfection appropriate to that countrey alone of Spaine : for, to say a truth, it is the fault and badnesse of the soile in the highest degree, that breedeth it, and where it commeth vp, nothing else can be sowed and set, or will grow at all. That in Affricke or Barbary is very small, and good for nothing. In the territory of new Carthage or Cartagena (which is in the higher part of Spaine) it groweth much : lowbeit all that tract is not giuen to breed it, but look where it commeth vp, you shall see whole mountaignes all ouer-spread and couered with it. Hereof the rusticall peasants make their mattraces and beds; this is their fewel wherewith they keep fires, of it they make their torches and links to giue them light; with it they are commonly shod; and the poore shepheards cloath themselves therewith. Howbeit, hurtfull is this plant to cattell, vlesse it be the tender tops and crops of the branches; which they may brouse and eat without harme. For other vses, when the Spaniards would plucke it vp they haue much adoe withall, and a great toile about it; for their legs must be wel booted as it were with grines; their hands couered with thick hedging-gloues, as gantlets; and being thus armed at all points, yet they lie tugging at it, pulling, writhing, and wresting the same with hooks and crooks either of bone or wood, vntill they haue their will of it. Come they about this work in winter time, it is in manner vnpossible to get it vp; but from the Ides [i. the mids] of May vnto mid-Iune, it is very tractable : for this is the time and season when it is ripe, and then commonly they gather it for their ordinary vses before named. Being once pulled and sorted, the good from the bad, it is made vp into bundles and faggots with the life still in it, and so piled on a heap for the first two daies; the third day they vnbind it, lay it loofe and scattering in the Sun for to be dried : which done, they make it vp againe into fagots, and so bring it in and lay it vp within house. After all this, they steep it in sea water (for that is best) or els in fresh, for want of the other. After this watering, it must be dried in the Sun, and then steeped in water a second time : but if a man haue vrgent occasion to vse it presently out of hand, he must put it in a great tub or bathing vessel, & let it soke there in hot water a time. Now if when it is dried againe, it be stiffe and will stand alone, they take it for a sure signe that it is sufficiently watered, and hath that which it should haue. This is a very neere and ready way, & saue them much labour. Thus being prepared one of these two waies, it ought to be brayed and beaten before it will serue the turne; and then no cordage in the world is better than that which is made of it, nor lasteth so well within the water and the sea especially, for it will neuer be done. For drier worke, I confesse, and out of the water, the gables & ropes wrought of hemp are better; but Spart made into cordage will liue & receiue nourishment within the water, drinking now the full as it were to make amends for that thirst which it had in the natue place where it first grew. Of this nature is Spart besides, that if the ropes made thereof be wornt, and (with much occupying) out of repaire, a little thing will mend and refresh them, yea and make them as good as euer they were; for how old soeuer it be, yet will it be wrought very well again with some new among. A wonderfull thing it is to consider and look into the nature of this herb, and namely, how much it is vsed in all countries, what in cables and other ship-tacking, what in ropes for Masons and Carpenters, and in a thousand necessities of this our life. And yet see! the place which furnissheth all this store, lying along the coast of new Carthage, we shal find to be within the compasse of thirty miles in bredth, & lesse somewhat in length. And verily, if it were fetched farther off within the main, the cariage would not quit for the cost and expences.

The

A The Greekes in old time employed their riches in drawing of ropes : as may appeare by the very word *seme*, which signifieth with them a rish, and a rope. But afterwards they vse their cordage of Date tree leaues, & the thin barks of the Linden or Tillet tree; from whence verily, like and probable it is, That the Carthaginians borrowed both their vse of Spartum, and maner also of dressing it.

Theophrastus writeth, That there is a bulbous plant, with a root like an Onion-head growing about the banks of riuers; between the vtmost rind whereof, and that part within, which is good to be eaten, there is a certain cotton or woolly substance, whereof folke vse to make * woollen sockes and some such slight peeces of apparell. But he neither named the countrey where they be made, nor sets downe any other particularities more than this, That the said plant they called *Eriophoron* [i. Bearing wooll :] so far as euer I could find in any copies comming to my hand. And albeit *Theophrastus* was otherwise a diligent and curious writer of plants, and searched deep into the nature of simples, foure hundred and ninety yeres before my time, yet hath he made no mention at all of Spart, a thing that I haue obserued and noted in him once already before now. Whereby euident it is, that the manner of dressing and vsing Spart, came vp after his daies.

And since we are entred into a discourse of the wonders of Nature, I will follow on still and continue the same, wherein this may be one of the greatest, That a thing should liue and grow as a plant without root. Looke but to those Mushrooms or Toad-stooles, which are called in Latin *Tubera*; out of the ground they grow, compassed about on euery side with the earth, with out root, without any filaments, or so much as small strings & beards resembling a root where-vpon they should rest: the place where they breed doth not swel or bear vp one jot, nay, it shews no chink or creuasse at all out of which they should issue; and to conclude, they seem not once to stick and cleaue to the ground whereupon they stand. A certaine barke or pill they seem to haue, which enloseth them, such as (to speake plainely) we cannot say is earth indeed, nor any thing else but a very brawnie skin or callositie of the earth. These breed commonly in drie and sandie grounds, in rough places full of shrubs and bushes, and lightly in none else. Oftentimes they exceed the quantity of good big Quinces, euen such as weigh a pound. Two sorts there be of them. Some be full of sand and grit, and such plague folkes teeth in the eating : others bee clean, and their meat is pure, without any such thing among. They differ also in color, for there be of them that are red-ye shall haue those also that seem blacke, and yet are white within. But the best simply are those that come out of Affricke or Barbarie. To determin resolutely whether they grow still from day to day, as other plants; or whether this imperfection of the earth (for better I know not how to call it) commeth at one instant to that full growth that euer it will haue; also, whether they liue or no, I suppose it is a difficult and hard matter: surely this is certaine, that their putrifaction is much after the manner of wood, and they rot both alike. Many yeres past there are not, since *Lartius Licinius*, sometimes lord Pretor and gouernour vnder the Romans in the prouince of Spain, chanced (of my knowledge) while he was there at Carthage, in biting one of these Mushrooms, to meet with a siluer Roman denier within it, that turned the edge againe of some of his fore teeth, and set them awry. Whereby a man may perceiue manifestly, that they be a certaine excrecence of the very earth, gathering into a round forme, as all other things that grow naturally of themselves, and come neither by setting nor sowing.

CHAP. III.

¶ Of the excrecence named * Misy : and of other such like Puffes and Mushrooms. Of those flat Puffes and broad Toad-stooles, called * *Pezizi*. Of the plant or herbe * *Laserpitium*. Of *Mazdaris*. Of *Atadder*. Of *Sope-weed*, or the Fullers herbe *Radicula*.

* or, Mison.

* or, Peziza.

* Laserwort.

W Itin the prouince of Cyrenaica in Affricke, there is found the like excrecence called *Misy*, passing sweet & pleasant, as well in regard of the smell as the tast, more pul-pous also & fuller of carnositie than the rest; likewise, another of that nature in Thracia, called *Ceraunium*. As touching al the sorts of Mushrooms, Toad-stooles, Puffes, Fusbals or Fussies, these particulars following are obserued, First it is known for certain, that if the autumn be much disposed to rain, and withal, the aire be troubled and disquieted with many thunders, during that season, there will be good store of such Mushrooms, &c. especially, (I say) if it thun-der

* or Mison, rather, according to *Turneb.*

der much. Secondly, they will not last about one yere. *Item*, The tenderest & daintiest be those that breed in the Spring, and that indeed is the best time for them. *Item*, In some countries the overflow of rivers engender Mushromes, and namely, at Mitylene, where (by report) they will not otherwise grow but upon floden grounds, and namely, in such places whither the water hath brought from Tiara, a certain vegetative seed to breed them. And verily, That Tiara is wonderfully stored & replenished with such. As touching the Truffles or Mushrooms of Asia, the most excellent of all others be neer unto Lampfacum and Alopecurus: but the best that Greece yeeldeth are in the territorie about the citie Elis. In this Toad-stoole or Mushrome kind are those flat Puffes and Puffes to be reckoned, which the Greekes name *Peziza: as they haue no root at all, so they be altogether without either stele or taile.

or Pezizi

* Some take it for Benion, or Asa dulcis.
* Which is equiuolent in weight to a dram, i. 7. doob English.

* Thought to be Asa fetida.

* 500 miles.

In the next place to these I must needs speake of the most noble and famous plant Laserpitium, which the Greeks name Silphium, discovered and found first in the abovesaid province of Barbarie Cyrenaica. The juice or liquor drawne out of this hearb they cal *Laser, a drug so magnified, of such singulartie and vse in Physicke especially, that it was sold by weight, and a dram thereof cost commonly *Romane denier. For these many yeares of late, there is none of this plant to be found in that country of Cyrenaica before said: for that the Publicans and Farmers of the pastures and grounds there, (vnder the people of Rome) doe put in their cattell among these plants, and eat al downe by that means: finding thereby a greater gaine or commodity, than by letting them stand for the juice or liquor aforesaid. One only stalk or stem thereof hath bin found in our days, which was sent vnto Emperor Nero as a present, for a great nouelty. If it chance at any time, that either sheepe or goat (which commonly bite neer to the ground) do light vpon a yong plant thereof, newly peeping forth and not euident to be seene, you shall know it by these signes, The sheepe presently so soone as she hath tasted it will drop asleep, and the goat fall a neesing. For these many yeres the merchants haue brought vs into Italy no other *Laser, than that which grows abundantly in Persis or Media, and in Armenia: but it is far inferior to this of Cyrenaica, and commeth short of it for goodnes. And this that we haue is no better than it should be, for they sophisticate and corrupt it with gum, with Sagapeum, or else with bruised Beans. In regard of which scarcity, I cannot chuse but remember that which befell at Rome in that yere wherin C. Valerius and M. Herennius were consuls, when by great good fortune there was brought from Cyrenæ thirtie pound weight of the best Laser, and set abroad to be seene in open place, of all commers. As also I may not let passe another occurrent, namely, how Caesar Dictator at the beginning of the ciuile war, tooke forth openly out of the chamber of the citie, with other treasure both of gold and siluer, an hundred and eleuen pounds of the best Laser. Moreover, this one thing more I cannot forget: the best and most renowned Greeke Authors haue left in writing, That 7 years before the foundation of the citie Cyrenæ, which was built 143 yeres after our citie of Rome, this plant Laserpitium that beareth the said Laser was engendered at one instant, by occasion of a certain thicke, grosse, and black shewer of raine, in manner of pitch, which sodainely fell and drenched the ground, about the horthyards or gardens of the Hesperides, & the greater Syrtis: The which rain was effectual, and left the strength thereof, for the compass of * foure thousand stadia within Affricke or Barbarie. They affirme moreover, That the herb Laserpitium, there growing, is of so sauage and churlish a nature, that it cannot abide any culture or good ordering by mans hand: but if one should goe about to tend and cherish it, it would rather chuse to be gon into the desert and vnpeopled parts of the countrey, or else winder away and die. Moreover, they set downe this description of it, That it hath many roots, and those bigge and thicke, a stemme or stalke, resembling the hearb Sagapeum or Fennell-giant, howbeit, not altogether so great: the leaues of this plant, which they termed by the name of Maspetum, come very near in all respects to those of Smallach or Persely. As touching the feed that it beareth, flat and thin it is in manner of leaues: but the leafe it selfe therof, sheddeth in the Spring time. The cattell that vse to feed thereupon (and whereof they be very greedy) first fall a scouring: but afterwards, when they be clenfed and rid of ill humors, begin to wax fat: and their flesh by this means becommeth wonderfull sweet and pleasant. They report moreover, that after the leaues be fallen, men also were wont in old time to eat the stem or stalk thereof, either roasted and baked vnder the cindres, or else boiled and sodden in water: and their bodies likewise for the first 40 daies ensuing, did nothing but purge til they were cleared of all diseases, breeding by occasion of any Cacochymie or collection of ill humours within them.

Now

A Now concerning the juice or soueraigne liquor before said, the manner was to draw it after two sorts; to wit, by scarification, either out of the root, or forth of the stem and maister stalke. And hereof it came to haue two names, Rhizias and Caulias. But the later of these two, to wit, that which came of the stem, was counted the worst, subiect to putrification, and sold cheaper than the other. To come now to the root of Laserpitium, it hath a blacke rind or barke vpon it, wherewith the merchants vse to sophisticate many of their drugs. As for the manner of dressing and ordering the juice thereof, it was no sooner drawne, but they put it into certaine vessels, together with brans among, then euer and anon they plied it with stirring and shogging, vntil it had lost the cruditie and verdure thereof, and by that working, came to the maturity and perfection: for if it were not thus well followed, soon would it catch a vine, begin to putrifie, and so continue but a while. In this worke of theirs they had an eye vnto the color how it changed: for when they perceived it to be high, & that they saw it once drie and haue don sweating & breathing out the raw humidity and vapor within, then they knew thereby that it was wrought sufficiently, and come to the full ripenesse. Others there be who say, that the root of Laserpitium beareth more than a cubit in bignesse, and that out of it there swelleth an excrecence, about the ground, out of which there was wont by way of incision to issue forth a certaine white juice in manner of milke: vpon which grew the stalke or stem which they called Magydaris. And they affirme besides, that it beareth leafy flat graines for the seed, in color like gold, which shed presently vpon the rising of the Dog-star, especially if the wind be south. Of which grains or seeds fallen to the ground, yong plants of Laserpitium vse to grow vp vnderneath, that within the compass of one yere wil thriue both in root and stem to the iust and full perfection: they haue written moreover, that the vse was to dig about their roots, and to lay them bare at certain times of the yere. Also, that they serued not to purge cattell as is aforesaid, but to cure them if they were diseased: for vpon the eating thereof either they mended presently, or else ended and died out of hand; but few they were that miscaried in this sort. As touching the former opinion of purging and scouring, true it is, that it agreeth well to the other Silphium or Laserpitium of Persia, aforesaid. Another kind there is of it named Magydaris, more tender and lesse forcible and strong in operation than the former; and affoordeth no such juice or liquor at all, it grows about Syria, and commeth not vp in all the region about Cyrenæ.

Moreover, vpon the mount Parnassus there is great plentie found of a certaine hearbe, which D the inhabitants would needs haue to be Laserpitium, and so they cal it: wherewith indeed they are wont to abuse and sophisticate that singular and diuine plant, the true Laserpitium, so highly commended, and of so great account and regard. The principall and best triall of the true and sincere Laser, is taken from the colour, somewhat enclining to rednesse without: breake it, you shall haue it appeare white within: and anon transparent. If you drop water vpon it, or otherwise thin spittle, it will resolute and melt. Much vse there is of it in many medicines, for to cure mens maladies.

Two plants more there be well knowne to the common sort and base multitude, and to say a truth, few e are acquainted with them, notwithstanding they be commodities of much gaine, and many a peny is gotten thereby. The first is Madder, in great request among diers and curriers: and for to set a color vpon their wooll and leather, right necessarie. The best of all and most commended is our Madder of Italie, principally that which groweth about villages neere vnto our citie of Rome. And yet, there is no country or province lightly but is full of it. It commeth vp of the owne accord, and is sowed besides of seed, and set of slips in manner of Erule. Howbeit, a prickie stalke it hath of the owne: the same is also full of joints and knots, and commonly about euery one of them it hath five leaues growing round in a circle. The feed is red. What medicinable vertues it hath, and to what purpose it serueth in Physicke, I will declare in place convenient.

The second is that which is called in Latin Radicula, [i. Sope-wort] an hearb, the juice wherof Fullers vse so much to scoure their wooll withall: and wonderfull it is to see how white, how pure, how neat and soft it will make it. Being set, it will come vp and grow in any place: but of it selfe without mans hand, it groweth most in Asia and Syria, among rough, craggie, and stony grounds. The best is that which is found beuond the riuer Euphrates, and that bears a stem like tall Fennell, howbeit small and slender, and whereof the inhabitants of the countrey there doe make a delicate dish; for besides, that it hath a commendable tast and much desired, it giueth a pleasant

pleasant colour to what meat soever is sodden in the pot with it. It beareth a leafe like the Olive: the Greeks call it Strution: it flourisheth in Summer: lovely it is to the eye, but no smell at all it hath to content the nose: prickie moreouer it is like a thorne, and the stalk notwithstanding couered with a soft down: seed hath it none, but a big root, which they vse to cut, shred, & mince small for the purposes aforesaid.

CHAP. IV.

¶ The manner of trimming and ordering Gardens: the sorting of all those things that grow out of the Earth, into their due places, besides corne and plants bearing fruit.

IT remaineth now to treat of Gardens, and the carefull diligence thereto belonging: a commendable thing in it selfe, and recommended vnto vs besides by our fore-fathers and auncient writers, who had nothing (to speake of) in more account and admiration in old time, than the gardens of the Hesperides, of *Adonis*, and *Alcionis*: as also those pendant gardens vpon terraces and leads of houses, whether they were those that *Semyramis* Queene of Babylon, or *Cyrus* K. of Assyria, deuised and caused to be made. Of which, and of their workmanship, my intent is to make a discourse in some other booke. Now for this present (to goe no farther than Rome) the Romane KK. verily themselves made great store of gardens, and set their minds vpon them: for so we read, that *Tarquin* surnamed the Proud (the last king of Rome, was in his garden when he gaue dispatch vnto that messenger that was sent from his sonne about a cruell and bloudie errand, for to know his fathers aduise and pleasure as touching the citizens of Gabij. In all the twelve tables throughout which contain our ancient lawes of Rome, there is no mention made so much as once of a Grange or Farm-house, but euermore a garden is taken in that signification, and vnder the name of Hortus [i. a Garden] is comprised Haredium, that is to say, an Heritage or Domain: and herupon grew by consequence, a certain religious or ridiculous superstition, rather of some whom we ceremoniously to sacre and blesse their garden and hortyard dores only, for to preserve them against the witchcraft, and forcerie of spitefull and enuious persons. And therefore they vse to set vp in gardens, ridiculous and foolish images of Satyres, Antiques and * such like, as good keepers and remedies against enuy and witchcraft, howsoever *Plantus* assigneth the custodie of gardens to the protection of the goddesse *Venus*. And euen in these our daies, vnder the name of Gardens and Hortyards, there goe many daintie places of pleasure within the very citie, vnder the color also and title of them, men are possessed of faire closes and pleasant fields, yea and of proper houses with a good circuit of ground lying to them, like pretie farmes and graunges in the countrey: all which, they tearme by the name of Gardens. The inuention to haue gardens within a citie, came vp first by *Epicurus* the doctour and master of all voluptuous idleness, who deuised such gardens of pleasure in Athens: for before his time, the manner was not in any citie, to dwell (as it were) in the countrey, and so to make citie and countrey al one, but all their gardens were in the villages without. Certes at Rome, a good garden and no more, was thought a poore mans cheinance; it went (I say) for land and liuing. The Garden was the poore commoners shambles, it was all the market place he had for to prouide himself of victualls. O what a blessed, what a secure, and harmlesse life was that, so long as men could be content to take vp with such a pittance, and stay themselves so! but better it is I trow, for to satisfie the appetit of our wanton gluttons and belli gods, to search into the bottom of the deepe sea: for to get (I say) oysters of all sorts, to feare no tempest nor shipwrack: for to meet with daintie fowle, to send out one way as far as beyond the riuer *Phasis* for those birds, which a man would thinke were sure ynough and secured from the fouler, by reason of the fearful tales that goe of them, and of the daunger of those that approach neere vnto them (and yet why say I so, considering they are the better esteemed and more precious the farther they be set and dearer bought): to haue purueys another way in *Numidia* and *Ethiopia*, for the rare birds there about the sepulchres, among those sepulchres (I say) where in stead of meeting with game, they stumble otherwhiles vpon their owne graues and neuer come home again: and lastly, to haue others to chase the wild and sauage beasts of the Forrests, yea and to maintain fight with them, in daunger to be deuoured as a prey, by those which for their must serue as venison for other men to eat. But to come againe to these commoditie Gardens, and the cates which

* as *Priapus*,
Phallus, and
Ithyphallus.

A which they affoord: how cheape be they? how ready at hand? how fitted are they not only to fill the belly and fatisfie hunger, but also to please the tooth and content the appetite, were it not that wealth and fulnesse stand in the way: the same that loath all things els beside, and disdain (no maruell) these ordinarie viands. Wel might it be borne with and suffered, that Apples and other fruits of the trees, such as are more exquisite and singular than the rest, in regard of their beauty, bignesse, pleasant sauour, or strange and monstrous manner of growing, euen against the course of Nature; that these dainties (I say) should be reserued for our rich and mighty men of the world; that poore men should be debarred and forbidden once to taste thereof. In some sort tolerable also it is, that great States and wealthy personages should be serued at their table with old wines, fined and refined, with Wines delaied, neatified, and goulded, as it were, by passing thorow an *Ipocras* bag; that such should drink no other but that which was wine before they were born, how aged soeuer they be and far stept in yeares. We may abide moreouer, that our grand-panches and riotous persons haue deuised for themselves a delicat kind of meat out of corn and grain (which should serue for bread only) and the same made of the finest and purest flour, bolted and searled from the rest, and none but that: to say nothing of the curious work in pastrie, the fine cakes, wafers, and marchpanes, artificially carued, ingraued, and painted in imagerie, as if these wantons could not liue, forsooth, but of such deuises. That there should be a difference also in bread, answerable to the distinction of States in the city, one sort for noble Senators, another for the worshipfull knights and gentlemen, and a third for the mean commoners and multitude. Finally, that in other victuals there should be a descent by so many degrees, from the highest to the lowest, many cary some apparence of reason, & be allowed. How then? must there be a distinction therefore inuented in worts and garden pot-herbs? Must the difference of persons according to their purse appeare also in a dish of * three farthings price, and no better? Surely I see no sense nor congruitie at all in this. And yet forsooth such herbes there be, that the tribes of Rome (the greater part I mean of the Roman citizens) may not presume to eat; as if the earth had brought them forth for rich men onely, being no meat ywis for poore people. Why (say they in scorn and contempt of pouertie) here is the stem of a Wort so well growne, here is a cabbage so thriuen and fed, that a poore mans boord will not hold it. Certes dame Nature ordained at the first, That Sperage should grow wilde and commonly in all places of the field, as if she meant thereby, that euery man that would might gather them for to eat: and now behold they are cherished carefully in gardens; and from *Rauenna* you shall haue of these garden Sperages so fair and big, as three of their crops or heads wil weigh a good pound, and are sold after three a Roman As. O the monstrous bellies that be now adaies! O the excessive gluttonie and gourmandise which now reigneth in the world! Is it any maruell, that poore Asles and such dum beasts may not feed vpon * Thistles, when the Commons of Rome are restrained and forbidden to eat * Thistles, and dare not once touch them? And yet here is not all: our waters also be distinguished and set apart for some persons; euen the very elements whereof this world consisteth, are distinct, seuered, and raunged into sundry degrees, and all at the pleasure of monied men: for some you shall haue to drinke snow, others ice: and will you see in one word their folly and vanity? the very miserie that high mountains are punished and

* *Estimatio*
est venalis.

* *carduus*
* *Arischoket*,
which are no
better than
Cardus altilis,
i. Garden-
Thistles.

But now it is time to returne againe vnto our gardenning, from which we were digressed. Certaine

rain it is, that in old time there was no market place at Rome yeelded greater impositiō vnto the State than the Herberie, in such request and so much called for were worts and pot-herbs. In regard of which exactions and payments, euermore going out of their purses, the Commons in the end complained, laid open their griefes, and made their mone to the Senate, of this burden and heavy load; and neuer gaue they ouer crying still vnto them with open mouth, for redresse, til they obtained a full releafe of rent and custome, raised before from the tallage and portage of this kind of ware and commoditie. Whereby it was well knowne and found by long experience, that there was no one thing of greater reuenue and more assured gain; none that stood so safe and certaine; none lesse subiect to the will and pleasure of Fortune & Casualtie, than gardenage: as being taken for no lesse than a yerely fee, that poore men might make account of as sure as if it were in their purse. Again, for the rent thereof paid to the land-lord, there was euer good securitie: the ground or soile was a sufficient surety; the profits thereof were alwaies seen and expofed openly to the eye; and lightly no weather whatsoeuer hindred the crop & gathering thereof. *Cato* highly commends the garden Coules or cabbages, whereby we may know, that in his daies gardens were in some respect. Also in times past, as husbandmen in the country were known especially, & their wealth valued by their gardens, so when there was a garden plot seen lying out of order, and not well kept, men iudged straitway, that the mistresse or dame there dwelling (for commonly this charge lay vpon women) was but an ill huswife, and thriflesse in her house: for in default of gardenage what remedy was there then, but to draw the purse strings, and go for euery thing either to the Butchery or the herbe-market, and so to liue vpon the penny. Neither were in those daies Coules or cabbages so well esteemed as now they be: for why, they could not away with double meats one vpon another, but condemned all dishes that required some addition, as help of sauce, broth, or such like to draw them downe. This was to spare cost, and by this means they saued oile. For as touching the pickle sauce * *Garum*, all those were reproched for gourmandise and gluttony, who could not eat fish or flesh without it. And therefore men tooke greatest contentment in their gardens & garden herbs: those were at hand and ready at all times, no great cookerie was required to dresse such dishes, no need of fire, no expence of wood and fewel. And hereupon it came, that salads of herbs were called * *Acedaria*, so little care and trouble went to the prouision and making of them. Beside, light they are of digestion, they breed no heauinesse in the head, they offend not the braine nor any of the senses; and least of any thing make quarrell to the loafe and spend little bread. That quarter of the garden which serueth an house with poignant herbs in stead of sauce, to giue a commendable tast and seasoning to our meat, sheweth plainly, that the master and mistresse thereof were not wont to run in the merchants books for spicerie, but changed the Grossier or Apothecaries shop for the garden; for the same contentment they had out of it, as from thence: also that they sought not either for pepper out of India, or for any kitchen spices transported from beyond the seas out of far countries. And as for the other quarters, set out with beds of floures, & sweet smelling hearbes, what reckoning was made of them in old time may appeare by this, That a man could not heretofore come by a Commoners house within the city, but he should see the windowes beautified with green quishins, wrought and tapissed with floures of all colours, resembling daily to their view the gardens indeed which were in out villages: insomuch, as being in the very heart of the city, they might think themselves in the country; till such time as these fly theues and night-hookers, the wicked rabble (I say) and off-scouring of the base multitude (not to be reckoned) committed such felonious outrages, as forced men to naile vp couers and cafes before these faire lights and beautifull prospects. Let vs giue therefore to gardens their due honour: let vs not (I say) depriue things of their credit and authoritie, because they are common and nothing costly: for I may tell you, some of our nobilitie, yea the best of the city, haue not disclained to take their sir-names from thence, nay they supposed themselves highly credited and honored thereby. Thus we see, that in the Noble house and lineage of the *Valerij*, some were not abashed nor ashamed to be called *Laetucini*, in regard of the best kind of Lettuce that they either had in their gardens, or affected most. And here I cannot chuse but mention by the way, the grace that hath growne to our name, by occasion of some diligence imploied and paines taken this way; whereby certaine Cherries beare our Name, and are called *Pliniana*, in testimonie of our affection and loue to that fruit. Which I remember the rather, for that *Virgil* confesseth how hard a thing it is, that so small matters as these be should grow

* Much like
to our An-
choues.

* *aliū ē garū.*

- A grow into the name and reputation of honor any way. And now to the purpose. No man doubteth, but that a garden should lie to a graunge or ferme-house, and ioine close vnto it: as also, that about all things there should be water at commaund, from some riuer or brooke running vnder, yea, and through it, if it were possible: if not so, yet that they are to be watered with pit water fed with Spring, either drawne vp by plaine poles, hookes, and buckets; or forced by pumpes and such like, going with the strength of wind within enclosed, or else weighed with Swipes and Cranes. Moreover, that a garden-plot should be broken vp and haue the first digging presently vpon the coming of the west wind *Fauonius* in the beginning of the Spring; and for any thing that must be set or sown there, against Autumne, it ought to be prepared and dressed readie for to receiue seeds and sets, 14 daies after: but for Winter stuffe, it should haue
- B a stirring or second tilth and deluing before the Winter Sunstead or shortest day of the yeare. Also, this is to be noted, that there would not be a greater plot of ground taken in, empaled and fenced about for a garden, than of 8 acres or Iugera at the most. Now for the manuring and ordering thereof: first, for three foot deep the dung would be tempered and mingled with the mould. *Item*, It ought to be diuided in principal quarters: the same also must be set out into seuerall beds, raised somewhat high and lying vpward. *Item*, Requisit it is, that euery quarter haue as welcetraine open gutters or furrowes drawne about them, as conuenient allies betweene to giue both passage for men to come and goe gainely; and also a currant to the course of water that shall be let in, when the springs be set open or fluces drawne.
- Garden plants and hearbs be not all commendable in one and the same respect. For of some
- C the goodnesse lieth only in their bulbous and round root: of others contrariwise in their head aloft. There be of them that haue no part good but their stem or maiest stalk: and there are for them againe, the leaues wherof be only eaten. Now a man shall haue amongst them those that are wholesome meat, both leafe and stalke. In some the seed or graine, in other the outward pill or rind alone of the root is in request. And as there be that tast well in the skin or cartilage and gristly substance without forth, so there are that haue either their pulposus carnosity within, or else their fleshy coat about, as daintie. All the goodnes of many of them lieth hidden within the earth: and of as many againe about the ground, and yet some there be that are al one, as good within as without. Some traine along and run by the ground, growing on end fill as they creep, as Gourds and Cucumbers. And yet the same, as well as they loue to be neere the earth, yet are
- D led Ipon trailes, and hang thereon, yea, and be knowne for to rampe vpon trees: Howbeit, much weightier and better nourished be they that keepe beneath. As for the Cucumber, it is the cartilage substance of the fruit thereof, that delighteth and pleaseth our tast: for of all fruits this proprietie it alone hath, that the vtmost rind which it beareth, groweth to a very wood when it is once ripe. Within the earth lie hidden and are kept all Winter, Raddishes, Nauews, Turneps or Rapes, Elecampane also after another sort; so doe Skirworts, and Parleneps or Wypes.
- Moreover, this I would aduertise the Reader, that when I tearme some hearbes Ferulacea, I meane such as resemble in stalke Dil or the great Mallowes. For some writers doe report, That in Arabia there be a kind of Mallowes which after they haue grown six or seuen months, come to be in the nature of pretie trees: insomuch, as their stalks streightwaies serue in stead of walking staues. But what should I stand vpon this? In Mauritania, by report of trauellers, neer the frith or arme of the sea adjoining to Lixos, the head citie of Fez, where sometimes (as folke say) were the hort-yards and gardens of the Hesperides, not about halfe a quarter of a mile from the maine ocean, hard vnto the chappell of *Hercules* (farre more ancient than that temple of his, which is in the Island Calis) there groweth a Mallow, that is a very tree indeed in height it is twentie foot, and in bodie bigger and thicker than any man can fadome. In this kind I meane for to range the Hempe likewise. And as I purpose to tearme such Ferulacea; so there be some others, that I will call Carnosa, such as resemble the riuer or fresh-water Spunges, which commonly are seene vpon ouer-floden meadows, where the water standeth. For as touching the fungous substance or callioitie of some plants, I haue already spoken thereof in the Treatise of Wood and Trees, and of their nature: Likewise in our late discourse of another sort of Mushrooms and Toad-stooles.

C

CHAP.

OF the cartilage and pulposus kind (such I meane onely, wherof there is nothing good but that which is about the ground) I reckon the Cucumber: a fruit that *Tiberius* the Emperour much loued and affected: for he tooke such a wondrous delight and pleasure therein, that therewas not a day went ouer his head, but he had them serued vp to his table. The beds and gardens wherein they grew were such as went vpon frames to be remoued euery way with wheelles: and in winter, during the cold and frosty daies, they could draw them backe into certaine high couert buildings exposed to the Sun, and there house them vnder roufe. Moreouer, I find in some ancient Greek writers, that their seed ought to lie 2 daies in steepe, or infused in honied milke, before they be prickt or set into the ground: for by that meanes the Cucumbers will be the sweeter and more pleasant. The nature of them is to grow in what forme and fashion soeuer that a man would haue them. Throughout all Italy, green they be of colour, and least of any others: in the out-prouinces they be as fair and great, and those either of a yellow color, like wax and citrons, or els blacke. In Affrick or Barbary men take delight to haue the greatest plenty of them; whereas in *Moesia* they lay for to haue them passing big and huge. Now when they exceed in greannes they be called *Pepones*, is *Melons* or *Pompons*. Let a man eat them alone, they will lie raw and greene in the stomacke a whole day, and neuer be digested: howbeit, with meats they are not vnwholsom, and yet for the most part swim they will aloft, and ride vpon a mans stomacke. A wonderfull thing in their nature: they cannot abide oile in any wise, but water they loue well; inso much, as if they be cut off, or fallen from the place where they grew, they wind and creep therinto, if it be but a little way off: contrariwise, if they will as fast from oile, if a man set it by them, and in case any thing be in their way to let them, or that they hang still vpon their plant, a man shall perceiue how they wil turn vp and crook, to shun & auoid it. This amitie to the one, and enmity to the other, may be seene euen in one nights space: for if a man set vnder them, 4 fingers off where they grow, a vessel with water ouer-night, he shal see by the morning that they wil come downe to it: contrariwise, let oile stand the like distance from them, shrink they wil from it, and hook vpward. Marke another experiment in the cucumber. If when it hath don flourishing, you enter the knot of the fruit into a long cane or trunk, it will grow vpon a wonderfull length. But behold a very straunge and new fashion of them in *Campaine*, for there you shall haue abundance of them come vp in forme of a Quince. And as I heare say, one of them chanced so to grow first at a very venture: but after from the seed of it came a whole race and progeny of the like, which therupon they cal *Melo pepones*, as a man would say, the quince pompons or Cucumbers. These neuer hang on high, but go low by the ground, and gather round in form of a globe. A strange case it is of this kind: for, ouer and besides their shape, their color, and fauor different from the rest; they are no sooner ripe, but presently they fall from the stele or taile wherto they grew, notwithstanding they hang not hollow from the ground, where their owne poise might weigh them downe. *Columella* tells of a pretie deuise that he hath of his own, how to keep of them fresh all the yere long: chuse (quoth he) the biggest bramble you can meet with among a thousand, translate it into a warm/sun-shine bank, and there replant it: then cut it off, leauing not about 2 fingers breadth from the root about the ground [but this must be don about the Spring Equinox in mid-March:] then take a Cucumber seed, & set it within the soft pith of the said bramble, bank it will round about with fine fresh mould & dung blended together: This is the way, he assureth vs, to make that the roots therof bearing such cucumbers or Melons, will abide the greatest cold in Winter, and neuer shrink at it: of cucumbers, the Greeks haue set down 3 kinds, to wit, the *Laconick*, the *Scythick* & the *Bœotick*. Of which as they say, the first sort only they be that loue waters so well: some there be who prescribe to take the seed of Cucumber or Melon & to temper it in the iuice of a certain heerb stamped, which they cal* *Culix*, & then to sow it, perswading vs that we shal haue fruit therof without any seed.

* Some take it
for *Ceniza*,
i. Fleabane
Mulle.

Of the like nature (I meane for their manner of growing) be the Gourds. Winter and cold weather they cannot endure: they loue also places wel watered & dunged. As wel Gourds, as the cucumbers or Melons aboue said, are commonly sowed between the Equinox in March, & the Sunstead in Iune: provided alwaies, that their seed ly in a trench within the ground a foot & a

M

halfe

A halfe deepe. But in very deed, the best and meetest time to sow them is about the feast *Parilia*, howsoeuer there be some would haue the seed of gourds to be put into the ground presently after the Calends or first day of March: but of cucumbers about the Nones, i. the 7 day thereof, or at farthest, by the feast or holy daies of *Minerva*, named *Quinquatrus*. They loue both alike to creep and crawl with their winding top branches or tendrels, and gladly they would be clambering vpon walls, and climbing vp to the house rooffe, if they can meet with any rough places to take hold by; for naturally they are giuen to mount on high. Howbeit, their strength is not answerable to their will and desire: for stand they cannot alone without the help of some props, forks, or railles, to stay them vpright. Exceeding forward and swift they be in growth. They run on end when they are set on it: and if they may be born vp & sustained in maner asore said, they will gently ouerthade galleries, walking places, arbors, frames, & allies vnder them in a garden, and that right quickly. In regard of which nature and behavior of theirs, two principall kindes there be of them, the one *Camerarium*, as one would say, the frame or trail. Gourd, and cucumber, which climbeth aloft; the other *Plebeium*, i. the vulgar and common, which creepeth along the ground beneath. In the former kind it is worth the noting, to see how the fruit (heauy as it is) hangeth stiffe poised as it were in the wind, and will not stir, notwithstanding the stele whereto it groweth be wondrous fine and final. Moreouer, Gourds also may be fashioned in the head euery way as a man will, like as the Cucumbers or Melons before named: and specially within wicker cases made of pliable oifiers, into which they are put for to grow & to take their form, so soon as they haue cast their blossom. The nature of them (I say) is to receiue what figure a man will force and put them to: but commonly shaped they are in their growth like to a Serpent, winding and turning euery way. There haue bin known of them (such I meane as were of the traile kind) being led vpon a frame from the ground, and permitted to run at libertie, which grew to an incredible length, for one of them hath bin seen 9 foot long. As for cucumbers, they bloom not all at once, but by piece-meale, floure after floure, now one and then another: yea, and floure vpon floure, one vpon the head of another. Howsoeuer the Cucumber loueth waterish grounds, yet can he abide drier places also. Couered al ouer this plant and fruit is with a white down, euen at the first: but especially all the while he is in his growth.

Gourds are imploied sundry waies, and to many more vses than Cucumbers. For first, their yong and tender stalks be very good meat, and being dressed, are serued vp as a dish to the table: but the rind is of a cleane contrary nature. Gourds of late time came to be used in stoues and baines for pots and pitchers: but long before that, they stood in stead of rundlets or small barrels to keep wine in. The green of this kind hath a tender rind, which must be scraped notwithstanding before a dish of meat can be made thereof. And certes, albeit Gourds be of digestion hard, and such as will not throughly be concocted in a mans stomacke, yet they are taken to be a light, mild, and wholsom meate, as they be handled and dressed diuers waies, for that they make not a mans belly to swell, as some meats doe. Of those seeds which be found within the gourd next to the neck therof, if they be set, come the long gourds commonly: & such lightly you shall haue ingendred of those also that are in the bottom, howbeit nothing comparable to the other. Those that lie in the midst bring forth round ones: but from the seeds that are taken out of the sides, ordinarily there grow the shorter sort of Gourds, such as be thicke and broad. These grains or seeds would be handled in this manner. First they are dried in the shadow, and afterwards when a man list to sow them, they ought to be steeped in water. The longer & slenderer that a Gourd is, the better meat it yeelds, and more pleasant to be eaten: and therefore it is, that they be thought more wholsome which grew hanging vpon trailes; such indeed haue least store of seed within them. Howbeit, wax they once hard, away with them out of the kitchen, for then they haue lost all their grace and goodnes which commended them to the cooks dresser. Such as are to be kept for seed, the manner is not to cut vp before winter: and then are they to hang or stand a drying in the smoake, as proper stufte and implements to be seen in a country house, to keep, as good chaffer, seeds for the gardner against the time. Moreouer, there is a means deuised, how to preserve them and cucumbers too, for meat, sound and good, almost til new come; & that is, by laying both the one and the other in a kind of brine or pickle. Some say also, that they may be kept fresh and greene, interred in a caue or ditch vnder the ground in some darke and shady place, with a good course or bed of sand laid vnder them, and well couered afterward with dry hay, and earth vpon the same in the end. Ouer & besides, as in all plants

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and

* *Cucumis
sylvestris,
Colocynthis,
or, Coloquin-
tida.*

and herbs in maner of the garden, there be both wild and tame: so is there of Gourds and Cucumbers both a certain * sauage kinde. Such are not for the kitchen, but for the Apothecaries shop, and good only in Physick: and therefore I will put off for this present the discourse of them & their nature, referring them for their seuerall treatises in other books concerning such medicinable simples.

As touching the rest of garden plants, which are of the like cartilage and pulpos substance, they be all the sort of them roots growing hidden within the ground: amongst which, I might seem to haue written already fully and sufficiently of Rapes and Turneps, but that the Physitians haue obserued in them both sexes, to wit, masculine & foeminin; for the rounder kind they wil haue to be the male, but the broader and flatter sort, which also are somewhat hollow, they account the female: and these last they hold to be the better far, and more pleasant, as being easier to be kept and condite; which also, if they be often removed and replanted, will turn to be males. Physitians likewise haue set downe five kinds of Nauewes, namely, the Corinthian, the Cleonæan, the Liothasian, the Boeotian, and that which simply by it self they called the green Nauew. Of all these, the Corinthian Nauews grow to a great bignes, and in maner all the root is seen naked about ground: for this is the only kind that coueteth to be aloft, and groweth not downward into the earth as the rest do. As for the Liothasian (some call it also the Thracian) of all others it will abide and endure frost and cold weather best. Next to it is the Boeotian nauew, sweet in tast, differing from the rest in the notable shortnesse and roundnesse withall that the root carrieth; nothing at all like to the Cleonæan, which is passing long. Generally this is obserued as a rule, that all Nauews, the slenderer, smaller, and smoother leaues that they beare, the more pleasant is their root to the tast: and contrariwise, the rougher that they be, the more cornered also and prickly, the bitterer they are. There is a wild kind of them besides, the leaues wherof resemble Rocket. The best Nauews that are sold at Rome, be those that come from Amitemum in Bruzze. The next to them in goodnes are those of Nursium. In the third place are they to be ranged which our country * about Verona yeelds. As concerning all things els, and namely the maner of sowing them, I haue said enough in the treatise of Rapes or Turneps.

* or rather
italie.

As for Radishes, their roots do consist of a rind without, & a cartilage or pulpos substance within: and verily many of them are known to haue a thicker skin or rinde than the barke is of some trees; bitter such are, more or lesse, according to the thickness of the said rind: otherwhile also the rest is all pith, and as hard as wood. All Radishes breed wind wonderfull much, & prouoke a man that eateth of them, to belch. A bafe and homely meat therefore it is, and not for a gentlemans table, especially if it be eaten with other worts, as Beets: many if a man take them with vnripe oliues condite, he shall neither belch or rift wind so much, ne yet so soure and stinking will his breath be afterwards. The Egyptians make maruellous great account of radishes, for the plenty of oile that they draw out of the seed: and therefore a great desire they haue to sow them if they may: for as they find it more gainful than corn, so they pay lesse tribute & custom in regard of that commoditie, and yet there is nothing yeeldeth more abundance of oile.

* *Thesophrastus*
writeth all this
of *Brassica*.
See how *Pliny*
is ouersciet
but that is no
newes with
him.
* Here he seemeth
to come
again to the
radish indeed.

* The Greeks haue made three sorts of Radishes, differing all in leafe: the first crisped and curled like a ruffe, the second smooth and plain, the third wild and sauage; and these wild ones verily haue smooth leaues, but short and round: plentiful also they be, and otherwise full of branches: a rough and harsh tast they haue, howbeit medicinable they be, and as good as a purgation to loosen the belly and make it laxatiue. As for the other two former kindes, a difference there is in the seed, for in some it is very fair & good, in others as small and bad: howbeit these imperfections light vpon none but such as haue the crisped and frizled leaues. * Our countrymen here in Italy haue made other kinds thereof; to wit, *Algiclenfe*, so called of the place: long they be, transparent and cleare, that a man may see through them. A second sort there be fashioned in maner of a Rape root, and those they call *Syriaca*, the sweetest for the most part of all others, and tenderest, such also as will hold out best against frost and winter weather. Yet the principal and very best indeed are those, which as it should seem were but lately brought out of Syria (at leastwise the seed of them) for that in no writers there is found any mention made of them: and they will continue all winter long.ouer and besides all these, there is one sauage kind of them more, which the Greeks name *Agrion*: the inhabitants of Pontus, Armon; others, *Leuce*; and our countrymen giue it the name of *Armoracia*: more shew it maketh in leafe than in the root or all the body besides. Moreover, the best token to know good Radishes by, is their stem

A stem or stalk: for such as bite at the tongues end, haue rounder and longer stems than the other that be mild: they haue long and hollow gutters also: the leaues besides are more bitter and vn-sauorie, cornered, more rough, and vntoward to be handled. Radish seed would willingly be sowne in a loose or light ground, and nathelesse moist enough: it cannot abide rank mucke, but contenteth it selfe with rotten chaffe or pugs, and such like plain mullock. It lixes and thrives so well in cold countries, that in Germanie a man shall haue their roots as big as pretty babes. To haue Radish roots in the spring, the seed would be sowed presently after the Ides or 13 day of Februarie: and a second time again about the feast of * *Vulcan*, which is indeed the better season for Seednes. Many there be that put the seeds into the ground in March, Aprill, and September. When they are come vp and begin to grow to some bignes, it is very good to enterre B and couer with mould round about the leaues, now one, and then another; but in any case to banke the roots well with earth: for looke how much appeareth bare about ground, proues either to be hard, or els fungous and hollow like a Kex, and nothing good to be eaten. *Aristomachus* would haue them to be stript from their leaues in winter, & in any hand to be banked well about, that the water stand not there in any hollow furrow or hole lower than the other ground; promising vs by this means, that they will proue faire and big against Summer. Some haue reported, that if a man make a hole in the ground with as big a stake as he wil, and strew or lay it in the bottom with a bed of chaffe six fingers deepe, and on it bestow his seed, with muck and mould heaped thereupon, the roots will grow so big as to fill vp the said hole full. Howbeit, in briefe, Radishes are best nourished and maintained in salt grounds: and therefore with such kind C of brackish waters they vse to be watered, which is the reason, that in *Ægypt* there are the sweetest and daintiest Radishes in the world, for that they are bedewed and sprinkled with Nitre. And verily it is thought, that they will lose all their bitterness whatsoeuer if they be corned or seasoned with salt, yea and become as if they were sodden and condite: for be they boiled once, they proue sweet and serue to be eaten in stead of Nauewes. And yet Physicians giue counsell and prescribe, That they should be eaten raw in a morning with salt, when a man is fasting, for to gather into the stomack the sharp humors and excrements that charge the belly & entrails; and thus taken, they are of opinion, that it is a good preparatiue to vomit, and to open the passages well for to avoid those superfluities. They giue out also, That the juice of Radish roots is singular good and necessarie for the midriffe, and the præcordiall parts about the heart; and namely, that nothing else but it, was able to cure a Phtisicke or vicer of the lungs, which had settled deep and taken to the heart: The experiment end prooffe whereof was found and seen in *Ægypt*, by occasion that KK. there, caused dead bodies to be cut vp, and anatomies to be made, for to search out the maladies whereof men died. It is reported, that the Greeks (as they be otherwise vaine in all their actions) so highly preferred the Radishes before other meats, in regard of the good nourishment, that whereas in an oblation out of the garden-fruits to be offered vnto *Apollo* in his temple at Delphos, they dedicated the Beet in siluer, and the Rape or Turnep in lead, they presented a Radish in beaten gold. A man may know hereby, that *Manius Curius* the great General of the Romane armie, was not that countreyman borne, whom the Samnite Embassadors (when they brought to him a great present of gold [vpon condition to surcease arms] which he meant to refuse and not accept at their hands) found roasting of a Rape or Turnep root at the chimney fire; according as we find in the Annals and Chronicles of the Roman history. To come again vnto our Radishes, *Moschian* the Greek writer so highly esteemed this root, that he compiled one whole booke of the Radish, and nothing els. Indeed Radishes are thought excellent good with meats in Winter time: howbeit they alwaies wear and marre their teeth who eat of them: and yet I assure you they wil polish Iuorie, which is nothing els but the Elephants tooth. * Between a Vine and a Radish, there is by nature a secret enmitie and exceeding great hatred, inasmuch as if Radishes be sowed neere vnto her, she will writh and turne away sensibly from them.

* 11 Cal. Iun.
or as some
think, 13 Cal.
Iun. i. the 20
or 22 day of
May. This feast
was named
also *Lugria*.

* Here *Pliny*
forgetteth
himselfe as
gaine: for this
is verified of
the Colewort,
and not of the
Radish.
* Some call
these Mad-
rips.

Touching other sorts of cartilage or pulpos plants in the garden, wherof I haue before spoken, they be all giuen to run much to pith, and to be of a more woodie substance. A man would maruell therefore that they should all tast so strong and sharpe as they doe. Of which there is one kind of wild Parsnep growing of it selfe, which in Greek is * called *Staphylinas*. A second sort is set of a plant with the root and sowed of seed, either in the prime of spring, or els in Autumne: howsoeuer *Hysmus* would haue them to be put into the ground in Februarie, August, C 3 September,

September, and October; and that the plot where they are to grow, should be digged and del-
 ued very deep. This root beginneth to be good at the first yeres end, but better it is if it be two
 yeres old: howbeit both the one and the other, is counted wholsommer in Autumn than at any
 other season of the year, especially boiled and serued vp betweene two platters, and yet dresse
 them so well as you can, they will not be rid of that strong, ranke, and churlish smacke which it
 hath. As for * Hibiscum, it differeth from the Parsnip aforesaid onely in this, That it is more
 slender and smaller, rejected altogether from the table, and condemned for no good meat, how-
 beit medicinable, and vsed much by the Physitian. A fourth kind there is beside, resembling al-
 so the Parsnip, which our countrymen the Latines name the French Parsnip, but the Greekes
 Daucus, [i. the yellow Douke or Carot] which they haue subdiuided into foure speciall sorts.
 The * Skirwirt root or white Parsnip, (which indeed would be written among other Physicke
 plants) was likewise in great name and credit by the means of the foresaid Emperour Tyberius
 who was very earnest to haue them yearly brought out of Germanie, and euer he would cal for
 them at his own table. And indeed about Gelduba (a castle situat vpon the riuer Rhene in Ger-
 manie) there was an excellent kind of them that grew to be passing faire, from whence he was
 serued, whereby it appeareth, that this plant loueth cold regions well. These roots haue a string
 in manner of a pith or sinew, running all the length thereof, which the cooke vseth to take forth
 after they be sodden; yet for all that there remaineth still in them a great deale of bitteresse:
 howbeit being wel tempered & delaiued with a sauce of mead or honyed wine, and so eaten with
 it, euen the same bitteresse turneth to a good and pleasant tast. The greater Parsnip Pastinaca,
 hath the like nerue or string aforesaid (such only I mean as are a yere old.) The right season to
 sow the Skirwirt or Parsnip Sifer, is in these moneths, to wit, Februarie, March, Aprill, August,
 September, and October.

* Some take it
 for *Althaea* or
 the marsh
 Mallow.

* Sifer.

* *Inula*.

The * Elecampane hath a root shorter than the Skirwirts or Parsnips aforesaid, but more
 musculous and fuller as it were of brawn; bitterer also: in which regards, if it be taken simply a-
 lone, it is aduerse and contrarie to the stomach; but joined & confected with some sweet things
 among, it is very holsum. And many deuises haue bin practised with it to take away that harsh
 and vntoward bitteresse which it hath, whereby it is become toothsome and pleasant enough:
 for some there be who stamp it drie and so reduce it into a powder: then they mix it with some
 sweet liquid fyrrup, and being thus tempered, serue it vp. Others seeth it in water and vinegre
 mingled together, and so keepe it condite. Infused also it is many waies, and afterwards either
 preferred in cuir, or incorporat with hony in manner of a conserue, or els with dried Raisons of
 the Sun, or last of all with faire and fat Dates. Moreover, diuers there be, who after another sort
 make a confection therof, namely with Quinces, with Sornises, or Plums, mixing therewith one
 while Pepper, another while Thym. And I assure you this root thus confected (as is aforesaid)
 is singular good for faintings, and especially quickneth the dulnes and defect of the stomach.
 The Empreisse *Tulia Augusta* passed not a day without eating the Elecampane root thus confe-
 cted and condite: and therupon came it to be in so great name and bruit as it is. The seed ther-
 of is needlesse and good for nothing: therefore to maintaine and increafe this plant, gardeners
 vse commonly to set the joints cut from the root, after the order as they doe Reeds and Canes.
 The manner is to plant them as well as Parsnips, Skirwirts, and Carrots, at both times of seed.
 nes, to wit, the Spring and the Fall: but there would be a good distance betweene euery seed or
 plant, at least three foot, because they spread and braunch very much, and therewith take vp a
 deale of ground. As for the Skirwirt or Parsnip Sifer, it will do the better if it be remoued and
 replanted.

* *Cariotis*, some
 reade *Cariot*,
 i. Figs.

It remaineth now to speak in the next place of plants, with bulbous or onion roots and their
 nature, which *Cato* recommendeth to Gardeners, and he would haue them to be fer and sowed
 aboue all others: among which, he most esteemeth them of Megara. Howbeit, of all this bul-
 bous kind, the Sea-onion Squilla is reputed chiefe and principall, notwithstanding there is no
 vse of it but in Physick, and for to quicken vinegre. As there is none that groweth with a bigger
 head at the root, so there is not any more agre and biting than it. Of these Sea-onions, there
 be two kinds medicinable; the male, with the white leafe, the female, with the blacke. There is
 a third sort also of Squilla, which is good for to be eaten: the leaues whereof be narrower, and
 not so rough and sharp as the other, and this they cal Epimenidium. All the sort of these squil-
 les are plentiful in seed: howbeit they come vp sooner if they be set of cloues or bulbos which
 grow

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A grow about their sides. And if a man would haue the head of the root wax big, the leaues which
 vsually be broad and large, ought to be bended downe into the earth round about, and so coue-
 red with mould; for by this means all the sap and nourishment is diuerted from the leafe and
 runneth backe into the root. These Squils or sea-onions grow in exceeding great abundance
 within the Balear Islands and Ebusus, as also throughout all Spaine. *Pythagoras* the Philoso-
 pher wrote one entire volume of these onions, wherein he collected their medicinable vertues
 and properties, which I meane to deliuer in the next booke.

As touching other bulbous plants, there be sundry kinds of them, differing all in colour,
 quantity, and sweetnesse of tast: for some there bee of them good to be eaten raw, as those of
 Cherrhonesus Taurica. Next vnto them, are they of Barbary, and most commended for good-
 nesse, and then those that grow in Apulia. The Greeks haue set downe their distinct kinds in
 these terms, Bulbine, Seranios, Pythios, Acrocorios, * *Egylops*, and Sifyrinchios. But strange
 it is of this Sifyrinchios last named, how the foot and bottom of the root will grow downe still in
 winter, but in the Spring when the Violets appeare, the same diminisheth and gathereth short
 vpward, by which meanes the head indeed of the root feedeth and thrieth the better. In this
 rank of bulbous plants, is to be set that, which in Egypt they call Aron, [i. Wake Robin:] for
 bignesse of the head it commeth next to Squilla before said: the leaues resemble the herb Pati-
 ence or garden Dock: it riseth vp with a streight stem or stalke two cubits high, as thicke as a
 good round cudgell. As touching the root, it is of a soft and tender substance, and may be eaten
 raw. If you would haue good of these bulbous roots, you had need to dig them out of the ground
 before the spring, for if you passe that time, they will presently be the worse. You shall know
 when they be ripe and in their perfection by the leaues; for they will begin to wither at the bot-
 tom. If they be elder, or if their roots grow small and long, they are rejected as nothing worth.
 Contrariwise, the ruddy root, the rounder and the biggest withall, are most commended: know
 this moreover, That the bitteresse of the root in most of them, lyeth in the crowne (as it were)
 or top of the head; for the middle parts be sweet. The antient writers held opinion, That none
 of these bulbous plants would grow, but of seed only: howbeit, both in the pastures and fields
 about Preneste, they come vp of themselves: and also among the corn lands and arable grounds
 of the Rhenians, they grow beyond all measure.

* rather, *Heme-*
rocure.

D

CHAP. VI.

¶ Of the roots, leaues, floures, and colours of Garden-herbes.

ALL Garden plants ordinarily, put out but one single root apiece; as for example, the Ra-
 dish, Beet, Parsley, and Mallow: howbeit the greatest and largest of all others is the root
 of the herb Patience or garden Docks, which is knowne to run downe into the ground
 three cubits deep. In the wild of this kind (which is the common docks) the roots be smaller,
 yet plumpe and swelled; whereby, after they be digged vp and laied aboue ground, they will liue
 a long time. Some there be of them that haue hairy strings or beards hanging to the roots, as
 namely Parsley or Ach, and Mallows. Others there be againe, which haue branching roots, as
 the Basill. As the roots of some be carnosous and fleshy altogether, and namely of the Beet, but
 especially of Saffron; so in others they consist of rind and carnositie both, as we may see in Ra-
 dishes and Rapes or Turneps. And ye shall haue of them that be knotty and full of ioints, as for
 example, the root of the Quoich grasse or Dent-de-chien. Such hearbs as haue no streight and
 direct root, run immediately into hairie threds, as we may see plainly in the Orach and Blect: as
 for the sea Onion Squilla, and such bulbous plants, the garden Onions also and Garlicke, they
 put forth their roots streight, and neuer otherwise. Many hearbes there be, which spring of their
 own accord without setting or sowing, and of such many there be that branch more & cloue in
 root than in leafe, as we may see in Aspalax, * *Parietarie* of the wall, and Saffron. Moreover, a
 man shall see these hearbes floure at once together with the Ash, namely, the running or cree-
 ping Thyme, Southernwood, Naphewes, Radishes, Mints, and Rue; and by that time as others
 begin to blow, they are ready to shed their floures: whereas Basill putteth forth floures by par-
 cels one after another, beginning first beneath and so going vpward by Ieisure: which is the
 cause that of all others it is longest in the floure. The same is to be seene in the herb Heliotro-
 pium (i. Ruds or Turnsol.) In some the floures be white, in others yellow, and in others purple.

* *Pardicium*.

As

Gethyam.

As touching the leaues of herbes, some are apt to fall from their heads or tops, as in Origan and Elecampane, yea, and otherwhiles in Rue, if some iniurie be done vnto it. Of all other herbes, the blades of Onions and * Chibbols be most hollow. Where by the way I cannot ouerpasse the foolish superstition of the Egyptians, who vse to sweare by Garlick and Onions, calling them towitnesse in taking their othes, as if they were no lesse than some gods. Of Onions the Greeks haue deuised sundry kinds, to wit, the Sardinian, Samothracian, Alsidian, Setanian, Schista [i. the clouen Onion] and Afcalonian [i. little onions or Scalions] taking that name of Afcalon a city in Iury. They haue all of them this propertie besides, to make ones eyes water, and to ferch out teares, being smelled to, especially they of Cypros: but the Gnidian onions least of all others cause one to weep. In all kinds of them the body of the root consisteth of a certaine fatty pulp or cartilage. For quantity the Setanian be least, except the Tusculane: howbeit such are sweet. The clouen onions & the scalions aforesaid are proper for to make sauce of. As touching that kind of them called Schista, gardeners leaue them all winter in the ground with their leaues or head standing: in the spring they pluck off the said leaues, and then shal you see spring forth others vnderneath, according to the same clifts and diuisions, whereupon they tooke the name Schista. After which example, the like practise in all other kindes is prescribed, namely, to pull the leaues off, that they should grow rather big in root, than run vp to feed. The Afcalonian onions haue a proper nature & qualitie by themselves; for they be barren as it were, from the root, and therefore the Greeks would haue them to be sowed of seed, and not otherwise to be set of heads. Besides, that they should be translated & replanted again late, about the spring, at what time as they put forth blade: for by this vsage (say they) you shal haue them burnish and grow thicke, yea, and then make haist for amends of the former time foreslipped. These must be gathered betimes, for after they be once ripe, quickly will they rot in the earth, if you make not the better haist to pluck them vp. If you set or plant their heads, a stalke they wil put forth and feed vpon it, but the onion it selfe will consume and come to nothing. Moreouer, there is a difference obserued in the colour of onions; for they that grow in Samos and Sardis, be most white: those also of Candy be much esteemed; and some there be who doubt whether they be the same that the Afcalonian, or no: for that if they be sowed of seed, their heads or roots will grow big: set them, they will be all stem and feed, and no head at all. As for the relifish or taste that onions haue there is no great diuersitie, but that some are sweeter than other. Our onions here in Italy be all of two sorts principally: the one which serue for sauce to season our meats, which the Greeks call Gethyon Chibbols; but our countrymen the Latines, Pallacana: these are sowne commonly in March, April, and May: the other is the great headed onion; and these be put into the ground either after the Equinox in Autumne, or els after mid-February, when the West wind Favonius is aloft. Moreouer, onions are diuided into sundry sorts, according to the degrees of their pleasant or vnpleasant and harsh tast; to wit, the African, French, Tusculan, and Amiternium. But euermore the best are the roundest. Item, the red onion is more keen and angry than the white: the dry, and that which hath lien, is more eage and sharp than the green newly drawn: the raw also more than the sodden: and finally, the dry by it selfe more than that which is condite and preserued in some liquor for sauce. The Amiternium onion is planted in cold & moist grounds: and this alone would be set of a head in maner of garlick cloues, where-as the rest will come of seed. Onions, the next summer following after they be sowne, put forth no feed, but head only, which groweth, and the leafe or stem drieth and dieth. But the next yere after, by way of interchange, it bringeth forth seed, and then the head rotteth. And therefore euery yere they vse to sow onion seed apart in one bed by it selfe, for to haue onions: & set onions for seed in other, by themselves. The best way to keep onions, is in corn, chaf, and such like pugs. As for the Chibbol, it hath in maner no distinct head at all, but only a long neck, & therefore it runs in maner all to a green blade; the order is to cut and sheare it often in maner of porret or leeks; which is the cause that they sow it also of seed, and do not set it. Ouer and besides, before we sow onion seed, the plot, by mens saying, ought to haue three diggings, for to kill and rid out of the ground the roots of hurtful weeds: and ten pound of seed ordinarily wil sow an acre. Here and there amongst would be Sauerie sowne, for the better will the Onions like and prosper with the companie of that hearbe. Also, after the ground is sowne, it requieth weeding, farcling, or raking, foure times at the least, if not oftner. Our neighbours in Italie sow the Afcalonian Onion in the moneth of Februarie: whose manner is also to gather Onion feed

A feed when it beginneth once to wax black, before it fall to wither.

Seeing now that I am entred thus far into a discourse of Onions, I shal not do amisse to treat of Leeks also, in regard of the neare affinitie betweene them: and the rather, for that it is not long since, that the Porret kind which is often kept downe with clipping and cutting, came into great name and credit, by occasion of the Emperor Nero, who vsed for certaine daies in euery moneth for to scoure his throat, and cleare his voice, and to take it with oile, on which daies he did eat nothing els, not so much as bread. Wee vse to sow them of seed, after the Equinox in September: and if we meane to make cut Leeks thereof, the seed would be sowed the thicker. These Leeks are kept downe with clipping and shearing still vntill the root faile, without removing them out of the same bed where they were sown: and alwaies they must be plied with dung. But before they be cut, nourished they ought to be, vntill they haue gotten a good head. When they are wel grown, they are to be translated into another bed or quarter, & there replanted: hauing their vppermost leaues lightly shriged off, without comming to the heart or marrow which is their body next to their roots: and their heads set deeper downward, yea, and their vtmost pellicles and skins sluied from them. In old time they vsed to put vnder their root a broad flint stone, or els a tile, which did dilate their heads within the ground, and make them spread the better. This they practised also in other bulbous plants, as Onions, &c. thereby to haue the fairer heads. But now in these daies the maner is, lightly to barbe & pluck off with a farcling hook, the beards or strings of the root, that being thus nipped and lipped (as it were) they might nourish the body of the plant, & not distract and suck away the humor, which is the nutriment of the whole. This is notable and wonderfull in the Porret, that ioying & liking as it doth in muck and fat ground, yet it cannot abide watery places. Howbeit, in these we must be ruled by the property of the ground, which is al in all: the principal leeks be in Egypt: the next are those of Ortia & Aricia. Of the cut Porret or vnset Leeks be two kinds: the one runneth mightily into a green blade, and the leafe thereof hath very conspicuous & euident cuts; & this is that the Apothecaries vse so much: the other hath a more pleasant and yellowish leafe, and the same rounder, the gashes or cuts whereof are smaller, & not so apparent to the eie. The voice goeth, & generally it is reported, That Mela a knight or gentleman of Rome by his place, & Procurator vnder Tiberius the Emperor, being for some misgouernment in that office, brought into question and accused, & thereupon sent for peremptorily to make his personal apparance, despairing utterly of life, tooke the weight of three Roman siluer deniers in the iuice of Leeks, and dranke it off: whereupon he died incontinently without any paine or torment at all. It is commonly said, That if a man take a greater dose or receipt thereof, it will do no harm, nor any danger will insue thereupon.

As touching Garlick, it is held for certain, That it is a soueraigne medicine for many griefs and maladies; especially such as are incident to the country peasants and rusticall people, who hold it to be as good as a Treacle. The Garlike head is couered and clad all ouer with certaine very fine and thin pellicles or membranes, which may be parted and diuided one from another, vnder which you shall see it compact and ioined (as it were) together of many cloues in maner of kernels, and those also inclosed each one apart within their leuerrall skins. Of a sharp and biting tast it is. The more keen and eage also you shall find it, as it hath more of those cloues aforesaid in one head. The aire that comes from it, is as offensive as that of the onion, & maketh their breath as strong who eat it: howbeit, sodden if it be, it is euery way harmles: the difference and diuersity of Garlick ariseth first, from the circumstance of the time, whereby you shall see a kind of hasty Garlick, that in 60 daies will be ripe and come to perfection: then, in quantity, for some grow bigger in the head than other. And of this sort is that which wee call in Latine Vlpicum: and the Greeks, some the Cyprian Garlick, others, * Aphroscorodon: so much commended in Africke, that it is held for the most principall dish of meat that a Husbandman of the country can eat: and bigger it is than our common Garlick. Being brused and braied in a mortar together with oile and vineger, it is wonderfull to see what a fume and froth will arise thereof, and to what an height it wil swell thereby. Some gardeners there are, who forbid to set either this Vlpicum, or the common Garlick in any euen, flat, and leuell bed; but to put them in little hillocks [in maner of hop hills] raised in forme of castles or turrets, three foot distant one from another. Now, wherefoeuer these cloues be set in hill or plain, they ought to lie foure fingers breadth asunder. And this would not be forgotten, That so soon as they shew three leaues once,

once, they would be sarded, and the mould raised from about them: for the oftner they be thus serued and laid bare, the fairer heads they will bring. When they begin to grow big and come to their full maturity, the stalks that they run vp vnto, must be troden downe and moulded ouer: and this is to preuent, that they should not be ouer-rank in blade. In cold countries it is thought better and more profitable to set them during the spring, than at the fall of the lease. Moreouer, if you would haue Garlick, Onions, and such like, not to smel strong and stink so as they do, the common opinion & rule is, that they should not be set or sown, but when the moon is vnder the earth, nor yet be gathered and taken vp but in her coniunction with the Sun, which is the change. But *Menander*, a Greeke writer saith, That there needs none of all these ceremonies for the matter: for if a man would not haue his breath stink with eating of Garlick, let him, do no more (quoth he) but take a Beet root roasted in the embers, and eat it after, it shall extinguish that hot and strong sauer, and cause the breath to continue sweet. There be who thinke with that the fittest time of setting both the common Garlick, & also the greater kind named *Vlpi-* that the fittest time of setting both the common Garlick, & also the greater kind named *Vlpi-* cum, is between the two set and ordinary feasts * *Compitalia* & * *Saturnalia*. As for the vulgar Garlick, it commeth vp also of seed, but slowly, and late it will be first ere it attaine to the full prooffe: for the first yere it getteth a head no thicker than Leeks; the next yere after, it begins to diuide into cloues; and in the third it is consummate and grown to perfection: and such vn-set Garlick, some are of opinion to be fairer and better than the rest. Howbeit, Garlick indeed should not be suffered to bol and run vp to seed, and therefore the blade therof ought to be wreathed, that it may gather more and stronger in the head, and that the cloues afterwards might be set in stead of seed for increase. Now if a man haue a desire that both Garlick and Onions may be kept long for his prouision, their heads must be dipped and wel plunged in salt water, warm; by this means indeed last they will longer without spurtting, and be better for any vse wee shall put them to, saue only to be set and replanted in the ground; for barren will they be, and neuer prosper. And yet diuers there are, who thinke it sufficient at the first to hang them in the smoke ouer quick and burning coles; as being perswaded, that this will serue wel enough to keep them from growing; for certaine it is, that both Garlick and Onions will put forth blade aboue ground, and when they haue so done, come to nought themselves, as hauing spent all their substance and vertue. Some are of this mind, that the best preseruing of Garlick as well as of Onions, is within chaffe.

* 11. Calend. IANUAR.
* 14. Calend. IANUAR. Between the 18. & 21 of December.

There is a kind of Garlick growing wild in the fields of the own accord, which they call in Latine *Alum* [i. Crow Garlick] which being boiled that it should not grow, they commonly throw forth in corn fields for the shrewd and vnhappy foules which lie vpon the lands, and eat vp the seed new sown: for presently as any of those birds tast thereof, they wil be so drunke and astonied therewith, that a man may easily take them with his hand: yea, and if one stay a little, he shall see them fall asleep therewith. Finally, there is another kind of sauge or wild Garlick called *Vrsinum* [i. Beare Garlick] the head whereof is very small, the blade or leaues great and large, and the sauer or sent mild and gentle, in comparision of the rest.

CHAP. VII.

In how many daies euery herbe that is sowed will come vp and appeare aboue ground. The nature of seedes. The manner of sowing any of them Which they be, whereof there is but one single kind: and which haue many sorts.

AMong all the herbes sowne in a garden, these come vp soonest, to wit, Bassill, Beets, Navews or Turneps, and Rocket: for by the third day the seed will breake and spurt. Dill seed will chit within foure daies, Lettuce in fise, Radish in fixe, Cucumbers and gourds in a seuen-night, but the Cucumber first. Cresses and Mustard seed in fise daies, Beets in six by Summer time, and by winter in ten. Orach in eight daies, Onions in 19 or 20 at the farthest, Chibols in ten or twelue at the most. Coriander seed is more stubborne, and will not shew so soone. Saue-rie and Origan seed lieth thirty daies ere it come: but of all others Parsley seed is latest ere it spring; for when it commeth vp soonest, it is forty daies first: but for the most part it lieth fifty daies before it appeare. Something there is also in the age of the seed: for the newer that the seed is either of Leeks, or Chibols, Cucumbers & gourds, the more hast it maketh to be aboue ground: contrariwise, Parsely, Beets, garden Cresses, Sauery, Origan, and Coriander, grow sooner

A ne r of old seed. But the Beet seed hath a strange and wonderful quality aboue the rest: for it will not come vp all in one and the same yere. But some in the first, others in the second, and the rest in the third. And therefore sow as much seed as you will, yet shall you haue it grow but indifferently. There be herbes which wil grow and beare but one yere and no more: and there be other again which will continue many yeares together, as for example, Parsely, Porret, & Chibbols. For, so these but once in a garden, they will beare from yere to yere from the same root, or els sow themselves. The most part of herbes do beare round seed, in some the seeds are long; in few, broad and flat in manner of a leafe, as in Orach. You shall haue seed also narrow & chamfered, like a gutter tile, as that of Cumin. Moreouer, there is a difference in colour, for some seeds be white, others black: in hardnesse also and softnesse; for some be harder or softer than others.

B Some seeds at every branch of the plant, are contained within cods or bladders, as we may see in Raddish, Senuie, and Turneps or Rapes. The seeds of Parsely, Coriander, Dill, Fenell, & Cumin, grow naked & bare. But that of the Bleet, the Beet, Orach and Basil, is inclosed in a huske or hull. Lettuce seed lieth within a downe. As touching Bassill afore said, nothing fructifieth more than it: & to the end that it may come vp in more plenty & abundance, they say it should be sowed with maledictions and ill words; for the more that it is cursed, the better it wil speed and prosper: yea, and when it is sowed, the mould of the bed must be parted and rammed down in manner of a pauement. And more particularly, they that sow Cumin, pray to God that it may neuer come vp. Such seeds as lie within an husk, hardly come to be dry and ripe therein: but Basil seed especially, and Gith or *Nigella Romana*. But they must be all thoroughly dried before they be seedow and fruitfull. This is general in all herbes throughout, that they wil thrive and grow the better, if their seede bee sowed by heapes one vpon another, than scattering. And certainly both Leeks seed is sown & Garlick cloues set in that wise, namely, bound vp & tied together in some clouts or ragges wherein they be lapped. As for Parsely seed, against it should be sown, there would be an hole made with a little wooden dibil or pin, & therein it must be put with some dung after it. Furthermore, all garden herbes come vp either of seed and cloues set, or els of slips pulled from the mother-plant. Some grow of seeds and sprigs both, as Rue, Origan, & Basil; for euen this herb also last named will abide cutting when it is come to be one handbreadth, or a span high; and those cuttings will grow if they be planted. There be that are maintained by root and seed both, as Onions, garlick, and those which haue bulbous roots: like wife, all such as when they haue born yere, leaue a root behind them stil in strength & vertue. Of such as grow of roots replanted, their roots continue long & branch much, as we may see in the bulbs, in Chibbols, & sea onions. Others put out branches sufficient, but not from the head or root, as Parsely and Beets. All herbes for the most part, do spring & shute again, if their stalke be cut off; vnlesse it be those that haue a smooth stem. And this is most seen in Basil, Raddish, & Lettuce, the stems whereof are cut for many purposes. And as for Lettuce, men hold, that the later spring thereof, when the first is gon, is the sweeter. Certainly, Raddishes eat the more pleasantly, if their leaues be ctopt off before the master stem or spire be growne big. And this also we obserue in Rapes or Turneps; for if you strip them also from their leaues & couer them ouer head with earth, yet will they grow all winter and continue till Summer following. Touching

E Bassill, Sorrel, red Porret or Bleet, garden Cresses, Rocket, Orach, Coriander, they are all of one sort, & singular in their kind: for sow them where you wil, they be the same stil, neither are they better in one place than in another. It is a common receiued opinion, that Rue wil grow the better if it be filched out of another mans garden: and it is as ordinary a saying, that stolen Bees wil thrive worst. Some herbes there be which come without sowing or setting, as wild Mint, Nep, Endiue, and Penirol. But howsoeuer there be but one single kind of those before rehearsed, yet on the contrary side, there be many sorts of others, which wee haue already spoken of, and will write more hereafter, and principally of Ach or Parsely.

CHAP. VIII.

Of Garden herbes which serue for to season our meats: their diuers natures, their sundry kinds and seuerall histories related, to the number of 36.

F Or, that kind of Ach which groweth of it selfe in moist grounds with * one leafe, and is not rough, but smooth and plaine, is called in Greeke *Helcoselinon*, i. Smallach. Again, there is ano-

*variegation 2 for so it should seem that Pliny read it in Theophrastus: whereas indeed it is *hantzianum*, i. with leaues growing thin*

* For some
resemblance
of Parsley.

three kinds of them: the first, that stretcheth out broad leaues at ful, and carieth a big stem, the second, with a crisped and frizled leafe, the which he calleth *Apiana: the third is smooth, plain, and tender in leafe, and hath but a little stalke; and these are of no reckoning at all with *Cato*. Moreover, like as Coleworts may be cut at all times of the yeare for our vie, so may they be sown & set at the yere long: & yet the most appropriat season is after the *Æquinox* in Autumne. Transplanted they be when they haue once gotten fixe leaues. The tender crops called *Cymæ* after the first cutting, they yeeld the Spring next following: now are these *Cymæ* nothing else but the yong delicate tops or daintier tendrils of the maine stem. And as pleasant and sweet as these crops were thought to other men, yet *Apicius* (that notable glutton) tooke a loathing of them; and by his example *Drusus Caesar* also careth not for them, but thought them a base and homely meat; for which nice and dainty tooth of his, he was well checked and shent by his father *Tiberius* the Emperour: after this first crop or head is gone, there grow out of the same colewort other fine colliflories (if I may so say) or tendrils, in Summer, in the fall of the leafe; and wort other fine colliflories (if I may so say) or tendrils, in Summer, in the fall of the leafe; and after them, in winter: and then a second spring of the foresaid *Cymæ* or tops against the Spring following, as the yeare before; so as there is no hearb in that regard, so fruitfull, vntill in the end her owne fertility is her death; for in this manner of bearing she spends her heart, her selfe and all. There is a third top-spring also at mid-summer to be set in summer time; but in case it be ouer-drie, any thing moist) affoordeth yong plants to be set in summer time; but in case it be ouer-drie, against Autumne. If there be want of moisture and skant of muck, the better taste Coleworts haue: if there be plenty and to spare of both, the more fruitfull and ranke they are. The onely muck & that which agreeth best with Coleworts or Cabbages, is Asles dung. I am content to stand the longer vpon this Garden-wort, because it is in so great request in the kitchen, and among our riotous gluttons. Would you haue speciall and principal Coleworts, both for sweet tast and also for great and faire cabbage: first and foremost, let the seed be sowne in a ground thoroughly digged more than once or twice, and wel manured; secondly, see you cut off the tender springs and yong stalkes that seem to put out far from the ground; or such as you perceiue mounting too ranke and ouer-high from the earth: thirdly, be sure to raise other mould in manner of a bank vp to them, so as there peep no more without the ground, than the very top: these kind of Coleworts be fitly called *Tritiana*, for the threefold hand and trauell about them; but surely the gaine will pay double for all the cost and toile both. Many more kindes there be of them, to wit, that of *Cumes*, which beareth leaues spreading flat along the ground, and opening in the head. Those of *Aricia*, be for heighth no taller than they, but rather more in number than for substance thinner and smaller: this kind is taken for the best and most gainfull, because vnto euery main leafe in manner, it putteth forth other yong tendrils or buds by themselves, which are good to be eaten. The Colewort Pompeianum (so called of the towne Pompeij) is taller than the rest, rising vp with a smal stem from the root; howbeit among the leaues it groweth to more thicknesse. These leaues branch out but here and there, and are in comparison of others narrower; howbeit much set by for their speciall tenderneffe, whereby they are soon sodden and dressed; and yet cold weather they cannot indure; whereas on the other side, the Coleworts of *Bruzze* or *Calabria*, like the best in winter, and be nourished with the hard season: leaues they haue exceeding great and large, but their stalks are but small; and as for tast, they be sharp and fower. The *Sabellian* Coles, what curled and ruffed leaues they carry, it is a wonder to see: so thick they are besides, that they rob the very stem of their nutriment, which thereby is the smaller: howbeit of al others they be reputed the sweetest. Long it is not since there came from out of the vale of *Aricia* (where somtimes there was a lake, and a tower standing vpon it, remaining yet at this day to be seene) a kind of Cabbage-cole, with a mightie great head and an infinite number of leaues, which gather and close round together, and these Coles we in Latin call *Lan-curres*, of the place from whence they come. Some Coleworts there be, which stretch out in-curres, of the place from whence they come. Some Coleworts there be, which stretch out in-curres, to a roundle; others againe extend in breadth, and be very full of fleshy brawns. None, cabbage, more than these, setting aside the *Tritian* Coleworts before named; that are known otherwile to bear a head a foot thick, and yet none putteth forth their *Cymes* or tender buds more than they. Moreover, this would be noted, That howfoeuer all kinds of Coleworts eat much sweeter for being bitten with the frost, yet if there be not good heed taken in cutting off their head or tender crops and buds, so that the wound come not neere the heart and pith, (and namely, by cutting them aslope and byas in manner of a Goats foot) they will take much harme thereby. Such

A Such as be referred to beare seed, ought not to be cut at all. They also are not without their grace and commendation, which neuer passe the bignesse of a green and ordinary plant, & such small coles are called *Halmyridia*, for that they grow not elsewhere but vpon the sea coasts: and because they will keep greene, prouision is made of such for to serue in long voiaiges at sea: for so soon as they be cut vp, before they touch the ground, they be put vp into barrels where lately oile hath been, and those newly dried against the time, and stopped vp close that no aire at all may enter in, and therein be they preferred. Some there be, who in removing the yong plants, lay vnder their roots, Rick and Sea-weeds, or els bruised and powdered nitre; as much as a man may take vp with three fingers, imagining thereby that they will the sooner come to maturity. Others againe take the seed of *Trifolie* and Nitre stamped together, which they strew vpon the leaues for the same purpose. [And as for Nitre, it is of this nature, to make them look greene still although they were sodden:] or els they vse to boile them after *Apicius* his fashion, namely, to steep them wel in oile and salt mingled together, before they be set vpon the fire for to be sodden.

B Moreover, there is a way to graffe herbs also as well as trees, namely, by cutting off the yong sions that spring out of the stalk, and therein to inoculate as it were the seed of another plant, within the pith or marow thereof. This also may be practised vpon wild Cucumbers.ouer and besides, there is a kind of wild Woorts growing in the fields, called *Lapfana*, much named and renowned by occasion of the sonets & carols chanted in the solemnities of *Iulius Caesar* the Emperours triumph, and especially of the merry rimes and licentious broad yeasts tossed by his soldiers, who at euery second verse cast in his teeth, that in *Dynrhachium* they liued of nothing els but of those Woorts: noting indeed by way of cauill and reproch, his nigardise in rewarding them so sleightly for their good seruice: now was this *Lapfana* a kind of wild Colewort, which they did eat of instead of the fine and dainty tendrils and buds of the garden Coles.

C As touching *Sperages*, there is not an herb in the garden, whereof there is so great regard and care taken, as of them. Concerning their first original & beginning, I haue spoken at large in the treatise, Of the maner how to order the *wild of that kind, and to entertain them in our gardens: as also how *Cato* willed vs to sow and plant them in plots of Reeds and Canes. Now there is a middle sort of these *Sperages*, not so ciuill and gentle as the *Asparagi* of the garden, and yet more kind and mild than the *Corradæ* of the field: these grow euery where abroad vpon the mountains; and the champion countrey of high *A' main* is ouerspred and full of them: whereof there goes a pleasant speech and merry conceit of *Tyberius Caesar* the Emperour, namely, that there grew an herb in *Almain* very like to the garden *Sperage*: for as touching that which commeth vp of it selfe in *Nefis*, an Island of *Campaîne*, it is thought the best simply of all others, without comparifon. The garden *Sperages* be planted from the knots bunching together within the ground, named *Spongia*, which easily may be replanted; for surely an hearb it is that carrieth a mighty head or cluster as it were of roots, and the same putteth forth spurns euery way from it of a great depth into the ground. They send out at first certaine greene spurts or buds peeping forth of the ground, which growing to a stem in processe of time rise sharpe in the top, and then are they chamfered & diuided into certaine musculous branches that spread abroad. This hearbe may be sowne also of seed. *Cato* tooke not more paines about any other hearbe, nor imploied greater diligence in the description thereof, than he did in it. It is the very last thing that he treateth of in his booke, whereby it may appeare, that the man came all vpon a sudden and newly to the knowledge of that hearbe, and the ordering of it. He giueth order, *Imprimis*, That the plot wherein they are to sowne, be moist, fat, and well digged. *Item*, That they be set half a foot euery way asunder one from another, & in no wise the place troden down with ones foot; moreover, that two or three seeds be put together in a hole, made before with a dibble directly by a line: for in those daies they set them onely of seed. *Item*, That this would be done about mid-March, which is the proper season therefore. *Item*, That they haue their fill of dung; That they be kept cleane with often weeding: but in any case, That great heed be taken in plucking vp the weeds, that the tender buds or croppes new knit and appearing aboue ground, be not knapt off. For the first yeare, hee would haue them in winter time to be covered with straw and litter, and so defended against the frost and cold weather: also during the spring ensuing, to be opened at the root, farced and well weeded. In the third yeare, by his rule, they ought to be burned in the spring time; and the sooner that the ground is thus burned, the better

D z

will

will they come vp againe and in greater plenty: which is the cause, that they like and prosper best in plots set with Canes and Reeds: for such desire to be burnt betimes in the yere. Moreover, he giueth another precept, that they must not be farled, nor haue the earth opened & laid hollow about them, before their buds or tops be about ground to be seen, for feare least in the farling, the roots take harm thereby, either by raising or shaking them vntill they be loose. From which time forward, if a man would gather any of the said buds or yong springs, for salad or other vse, they ought to be plucked and slipped from the roots; for otherwise, if they be broken and knapt off in the mids, the root will presently put forth many vnprofitable sprouts, which will suck away all the heart and kill it in the end. Silue and pluck it you may in manner aforesaid, vntill it spinde and run to feed, which commonly beginneth to be ripe in the Spring, & then it must be set on fire, as is before said: and then once againe, so soon as new buds and tendrons appeare about ground from the root, they must be farled, bared, and dunged afresh. Now after it hath grown in this manner nine yerres, so as by this time it is waxen old, the roots must be taken vp, and then replanted againe in a piece of ground well digged and as thoroughly dunged. Then (I say) ought the smal roots called Spongie in Latine, to be set againe, a foot distant one from another. Furthermore, *Cato* ordaineth expressly by name, That sheeps dung should be vsed for that purpose, because any other would breed store of weeds. And verily there was neuer knowne any other thing practised or assayed afterwards, to more gain and benefit about this Garden-herb, vnlesse it were this. That about the Ides or mids of February, some haue let the seeds of Speragie lie well soked in dung, and then sowed the same by heaps in little trenches or holes made for the purpose: after which, when the roots are wouen and knit one within another into a knot, the spurns shooting from them they plant after the *Æquinox* in Autumne following, a foot asunder: by which means they wil continue bearing plenteously for ten yerres together. For to breed and maintaine these garden Sperages, there is no better soile than the gardens of Rauenna, from whence we haue the fairest of all other. As for the herb named in Latine *Corruda*, I haue written heretofore of it: and I vnderstand thereby, the wild Sperage, which the Greekes call *Orminum* and *Myacanthion*: howbeit there be, who giue it other names. Finally, I reade of certaine Sperages which will engender and grow of Rams hornes beaten or stamped, and then put into the ground.

A man would thinke that I had discoursed already of all such Garden herbes as were of any price and regard: but that there remaineth one thing yet behind, whereof the greatest gaine of all other is raised, and yet me thinks I cannot write thereof, but be abashed to range it amongst the good herbes of the garden; and that forsooth is our Thistle: howbeit this is certaine (to the shame be it spoken of our wanton and wasting gluttons) that the Thistles about Carthage the great, & Corduba especially, cost vs ordinarily six thousand thousand Sesterces, to speak within compasse. See how vaine and prodigal we be, to bring into our kitchen and serue vp at our table, the monstrousities of other nations, and cannot forbear so much as these Thistles, which the very asses and other fourfooted beasts, haue wit enough to auoid & refuse for pricking their lips and muzzles. Well, since they be grown into so great request, I must not ouer-passe the gardening to them belonging, and namely, how they be ordered two maner of waies, to wit, replanted of yong sets or roots in Autumne, and sowed of seed before the nones of March. As for the plants before said, they ought to be slipped from it, and set before the Ides or mids of Nouember in any hand; or els if the ground be cold, we must stay vntill February, and then be doing with them about the rising of the Western wind *Faunonius*. Manured ywis it ought to be & dunged, (I would not els) so faire and goodly an herbe it is; and so forsooth (and it please you) they prosper the better and come on trimly. They are condite also and preserued in vineger (or els all were mard) in delicate life honey, seasoned also and bespiced (I may say to you) with the costly root of the plant *Laserwort*, yea and with *Cumin*; because wee would not be a day without Thistles, but haue them as an ordinary dish all the yeare long.

As for the rest of Garden-herbs behind, they need no long discourse, but a light running ouer them may serue well enough. First and foremost men say, That the best sowing of Basil, is at the feast * *Pasilia*: but some are of mind, that Autumne is as good: and they that would haue it done in winter, giue order to infuse and soke the seed first in vineger. Rocket also and garden Cresses, are not dainty to grow, but be it winter or Summer, they will soon come vp & prosper at all times. But Rocket of the twain, stands more at defiance with winter, and scorns at his frowning

This is meant
of Artichokes.

* i. Cal. May,
22 of April.

A ning looks and cold weather; as being of a contrary nature to *Leauce*, for it stirreth vp fleshy lust: and therefore commonly it is ioined with *Leauce* in sallads, & both are eaten together; that the exceeding heat of the one mixt with the extreme coldnes of the other, might make a good marriage and temperatire. Cresses tooke the name in Latine * *Nasturtium*, a *narium tormento*, as a man would say, Note-wring, because it will make onewith and shrink vp his nostrils: which is the reason, that the word is grown into a prouerb, when we would signifie a thing which will put life into one that is dull and vnlusty. In Arabia, the Cresses (by report) proue to a wonderful bignes. Rue also is sowed vsually in February when the Western wind *Faunonius* bloweth, and soon after the *Æquinox* in Autumne. It cannot away with winter, for it brooketh not cold or rain, nor moist ground, neither will it abide muck: it liketh well to grow in dry places, and such as lie faire vpon the Sun-shine; but a clay ground which is good for bricke and tile, that is alone for it and best of all other: it delighteth in ashes, and therewith is it fed and nourished; infomuch as they vse to blend ashes & the seed together, for to keep away the canker worm and such like. Certes we find, that in old time Rue was in some great account, and especiall reckoning about other herbes: for I reade in ancient Histories, That *Cornelius Cethegus*, at what time as he was chosen Consul with *Quintus Flaminius*, presently vpon the late election gaue a largesse to the people of new wine aromatized with Rue. The fig-tree and Rue are in a great league & amitie; infomuch as this herbe, sow and set it when and where you will, in no place prospereth better than vnder that tree: for planted it may be of a slip or sprig. Now if the same be put into a bean which hath a hole pierced or bored through, it will do far better, by reason that the bean clasping the set close, and vniting thereunto her own sap and moisture, cherisheth it therewith and makes it come apace: moreover, it will propagat and set it owne selfe, for let the top of any of her branches be bent downward, so as it may but touch the ground, it will presently take root. Of the same nature it is, that Basil, but that Rue is somewhat later ere it come vp, & groweth not so fast. When Rue is come to be of any strength, there is vntoward farling and weeding of it; for if it be handled, it will raise blisters vpon a mans fingers, vnlesse the hands be well gloued, or defended with oile. The leaues also of Rue are kept and preserued, being made vp into little knitches or bunches.

Now as touching Ach or Parsley, the manner is to sow it immediatly after the spring *Equinox* in March, but the seed would be first brused & beaten a little in a mortar: for some are persuaded, that by this means it groweth thicker and more crispe or curled: which it will doe likewise, in case after a bed be sowed therewith, it be troden vpon with mens feet, or beaten downe with a roller or cylinder. This peculiar property hath Parsley, that it will change the colour. It was an ancient custome in *Achaia*, to do honour vnto this herbe, by crowning those that went away with victory and wan the prize in the solemne tournays and sacred games *Nemei*, with a chaplet of Parsley. As for Mint, men vse to set it at the same time, of a young plant, so soone as they see it is spurt and come vp: but if it haue not sprung, yet they let not to plant the spurns of the root, knotted into an head within the ground in manner of the Spongie in Sperage before said. This herb taketh no great ioy in moist grounds. All Summer it looketh greene and fresh, but in winter it hath a hempen hew. A wild kind there is of Mint, named in Latine *Mentastrium*, which will increase by propagation or couching in the ground, as well as vine branches, and so willing it is to take, that it makes no matter which end of a slip be set downward; for at the wrong end it wil come as well as at the other. Mint in the Greeke tongue hath changed the old name, by occasion of the sweet * *smell* that it carieth, whereas before time it was called *Mintha*, whereof we in Latine deriued our name *Mentha*. A pleasant herb this is, and delectable to smell vnto, infomuch as you shal not see a husbandmans boud in the country, but all the meats from one end to the other be seasoned with mints. If it be once set or sown, & haue taken to a ground, it will continue there a long time. It resembleth much the herb *Peny-roiall*, the nature whereof (as I haue often shewed) is to blow her floures againe (vpon the shortest day of the yere) euen as it hangeth prickt vpon flesh in the butchery. Much after one sort are kept and preserued for sauce (as if they were of the same kind) Mint, *Peny-roiall*, and *Nep*: but aboue all, to a weake and peeuish stomach, *Cumin* agreeth most and is the best to get an appetite. It hath a qualitie to grow with root very eh, and fearfully taketh any hold of the earth, couering to be aloft. In hot grounds and such especially as be rotten & mellow, it would be sown in the mids of the spring. There is a second sort thereof growing wild, which some call *Cumin Rustick*, others *Thebaick*, which

* Tr. Greek also
Nasturtium
quia caput tenet
because it
troubleth the
head with ex-
cessive heat:
vel potius. Non
Nasturtium qui
cordatos &
prudenter faci-
at: therefore
there went a
by-word or
proverbe in
Greek, appli-
ed to a dull,
foolish, and
blockheaded
fellow, Nasta-
rium id est: G. ear
some Cresses,
leau more wis

* i. *Nasturtium*,
i. odoriferous
or sweet-sen-
ting.

which being bruised or beaten into powder, and drunk in water, is singular good for the pain of the stomach. The best Cumin in our part of the world, which is Europe, cometh from Carpetania; for otherwise the greatest name goeth of that in Æthiopia and Africk. And yet some here be who prefer the Cumin of Egypt before all.

* A corrupt word from *O-lus atrum*: as if one would say, *O-lus atrum*. Some take this for *L. ouach*. * *Iuxta macerian*, whereupon some Apothecaries name it *Macerianum*.

But * *Alifanders*, which some Greekes call *Hippocelium*, others *Smyrneum*, is of a strange and wonderfull nature about all other herbes: for it will grow of the very liquor or juice issuing forth of the stalk. It may be set also of a root: and indeed, they that gather the foresaid juice, vse to say, that it hath the very tast and relish of Myrrhe: & by *Theophrastus* his saying, it came first of Myrrh set into the ground. The old writers ordained, that *Alifanders* should be set or sowed in stony grounds, without tending or looking to, neer to some * mud wall. But now in our daies it is planted in places digged & delued ouer, once or twice: yea, and at any time from the blowing of the western wind *Fauonius* in Februarie, vntill the later *Æquinox* in September be past.

Capers likewise are set & sowed in dry places specially: but the bed must be digged in some low ground and laid hollow, inuironed round about with banks, and those raised with a ground-fell of stone worke, otherwise it would be ranging abroad and ouerspread whole fields, & make the ground barren and vnfruitfull. It flourisheth in Summer, and continueth green vntill the occultation or setting of the Brood-hen star *Virgilæ*; and sandy ground is most familiar and agreeable to it. Touching the defects and imperfections of that kinde which groweth beyond sea, I haue said enough among the shrubs and plants that be strangers.

The Caraway also is a stranger, as may appeare by the name of *Caria*, the native country thereof; it beareth one of the principal feeds that cometh into the kitchen. It careth not much where it is sown or planted, for it will grow in any ground, as well as the *Alifanders* beforenamed: howbeit, the best cometh out of *Caria*, the next to it in goodnes, we haue from *Phrygia*.

As for *Loueach* or *Liuih*, it is by nature wild and sauage, and loueth alone to grow of it self among the mountains of *Liguria*, whereof it cometh to haue the name *Ligusticum*, as being the naturall place best agreeing to the nature of it. Set or sowed it may be in any place where-soeuer: howbeit, this that is thus ordred by mans hand hath not the like vertue as the other, although it be in tast more pleasant, & some call it *Panax* or *Panace*: howbeit, *Creticus* a Greeke writer, calleth the wild *Origan* or *Cunila* *Bubula*, by that name. But all others in manner, attribute the name of *Conyza* or *Conyzoides* to *Cunilago*, *Fleabane* *Mullet*: and of *Thymbra*, *winter Sauory*, to *Cunila*, *garden Sauory*, which among vs hath another name in Latin, to wit, *K Satureia*, much vsed in sauces and seasoning of our meats.

This *Sauory* is commonly sown in the month of February, and hath no smal resemblance of *Origan*, in so much, as they are neuer both vsed at once in sauce or fallads, their vertues & operations be so like. And yet the Egyptian *Origanum* is preferred before the said *Sauory*.

To come now to *Lepidium*, *Dittander* or *Pepperwort*, it was sometime a stranger also with vs here in Italy. It is vsually sown after mid-February when the Western wind *Fauonius* hath plaid his part: afterwards when it hath put forth branches, it is cut downe close to the ground, and then it is laid bare and farcled, & the superfluous roots cut away, & so in the end cherished with muck. Thus must it be serued the two first yeres. For afterwards they vse the same in branches at all times, if the cruell and bitter winter kill them not; for surely this herb is most impatient of cold. It groweth a good cubit in heighth, bearing leaues like to *Lawrel*; & the same soft and tender. But neuer is it vsed in meat without milke.

Now for *Gith* or *Nigella Romana*, as it is an herb that groweth for the pastrie, to fit the Bakers hand; so *Annise* and *Dill* are as appropriat to the kitchen for Cooks, as the Apothecaries shop for the Physician.

Sacopenium likewise is an herb growing verily in gardens, but is vsed in Physicke onely. Certain herbes there be that accompany others for good fellowship, and grow with them, as namely *Poppy*; for commonly sowne it is with *Coleworts*, *Purcellane*, *Rocket*, and *Lectuce*.

Of garden *Poppies* there be three kinds, first the white: whereof the * seeds in old time being made into *Biskets* or *Comfits* with hony, were serued vp as a banketting dish. The rustical peasants of the country were wont to guild or glaze (as it were) the vppermost crust of their loaves of bread with yolks of eggs, and then to bestrew it with *Poppy* seed, which would cleaue fast to it, hauing first vnderlaied the bottome crust with * *Ammi*, or *Annise* seed and *Gith*: & then they put them into the oven beeing thus seasoned, which gaue a commendable taste to their bread when

* This Yunket or conceit was called *coctum* by *Tertullian* and *Festus*.

A when it was baked. There is a second kinde of *Poppie* called *Blacke*: out of the heads or bolles whereof, a white juice or liquor issueth by way of incision, like milk, and many receiue & referue it carefully. The third kind, which the Greekes name * *Rhœas*, our countrymen in Latin call the wandering or wild *Poppie*. It cometh vp verily of the owne accord, but in corne fields among Barly especially, like vnto *Rocket*, a cubite high, with a red floure that soon wil shed and fall off, whereupon it tooke that name of *Rhœas* in Greeke. Touching other kinds of *Poppie* growing of themselves, I purpose to speake in the treatise of physicke and medicinable herbes. Mean while this cannot be forgotten, that *Poppies* haue alwaies, time out of mind, been highly regarded and honoured among the Romanes; witnesse *Tarquine* the Proud, the last king of Rome, who when his sonnes Embassadors were come to him for to vnderstand his aduise, how to compasse the seignorie ouer the *Gabians*, drew them into his garden, and there by circumstance of topping the heads of the highest *Poppies* there growing, without any answer parole, dispatched them away, sufficiently furnished by this demonstration, with a double design, euen to fetch off the greatest mens heads of the citie, the readiest means to effect his purpose.

Againe, there is another sort of hearbs, that loue for companie to be set or sowne together about the *Æquinox* in Autumne, namely, *Coriander*, *Dill*, *Orach*, *Mallows*, *Garden dockes* or *Patience*, *Cheruell* (which the Greekes call *Pæderos*) and *Senuie*, which is of a most biting and stinging tast, of a fierie effect, but nathelesse very good and wholesome for mans bodie: this hearb will come of it self without the hand of man, howbeit proue it will the better if the plant be removed and set elsewhere. And yet, sow a ground once withall, you shall hardly rid the place of it cleane: for the seed no sooner sheddeth vpon the ground, but a man shall see it greene about ground. It serues also to make a pretty dish of meat to be eaten, being boiled or stewed between two little dishes in some conuenient liquor, in such sort, as a man shal not feele it to bite at the tongues end, nor complaine of any eagernes that it hath. The leaues besides vse to be sodden like as other pot-herbes. Now there be of this *Senuie*, three kinds: the first beareth small and slender leaues, the second is leaved like *Rapes* or *Turneps*, the third resembleth *Rocket*. The best Mustard seed cometh out of *Ægypt*. The Athenians were wont to call it *Napy*, some *Thlaspi*, and others *Saurion*.

To conclude, as touching the running wild *Thyme*, and *Sisymbrium*, *Horfe-mint* or *Water-mint*, most hills are replenished and tapissed as it were therewith: and especially in *Thracia*, where a man shall see a mighty quantity of wild *Thyme* branches, which the mountain waters or land floods carrie away and bring it downe with their streame to riuers sides, and then folke plant them. Semblably, at *Sicyon* there grows great store, conueighed thither from the mountains neere adjoining: and lastly, at *Athens*, brought thither out of the hill *Hymettus*. In like manner also the foresaid *water-mint* cometh from the hills with a sudden dash of rain, and is replanted accordingly. It groweth rankest and prospereth best in the brinks and sides of pits or wells, also about fish-ponds and standing pooles.

CHAP. IX.

¶ Of Finkle or Fennell, and Hempe.

E I remaineth now among garden hearbes to speake of those that be of the *Ferule* kind, and namely of *Fennell* in particular, a hearb wherein Snakes and such serpents take exceeding great delight, as heretofore I haue declared: and which being dried, is singular good to commend many meats out of the kitchen into the hall.

There is a plant resembleth it much, named *Thapsia*, whereof because I haue already written among other foraine herbes, I will proceed forward to *Hemp*, which is so profitable and good for to make cordage. This plant must be sowed of seed after the western wind *Fauonius* bloweth in Februarie. The thicker that it groweth, the slenderer and finer it is. When the seed thereof is ripe, namely, after the *Æquinox* in Autumne, folke vse to rub it out and then drie it either in the Sunne, the wind, or smoke. But the stalke or stem of the *Hemp* it selfe, they pluck out of the ground after Vintage: and it is the husbandmans nightwork by candle light to pill and cleane it. The best *Hempe* cometh from *Alabanda*, especially for to make nets and toile, where bee three kinds thereof. That part of the *Hempe* which is next to the rind or pilling, as also to the inner part within is worst: the principal of it lieth in the middest, and called it is *Mesa*. Next to the

the Alabandian Hempe for goodnesse, is that of Mylasium. But if you goe to the talnesse, there is about Rosea in the Sabines cuntry, Hempe as high as trees.

As touching the 2 kinds of Ferula, I haue spoken of them in my discourse of forraign plants. the seed of Ferula or Fennell-geant, is counted good meat in Italie: for it is put vp in pots of earth well stopped, and will continue a whole yeare. And of 2 sorts is this preferred Compost, to wit, the stalks, and the Bunches whiles they be knit round and not broken & spread abroad. And as they cal these knobs which they doe condite and keep, Corymbi; so that Ferula, which is suffered to rise vp in stem for to beare such heads, they tearme Corymbias.

CHAP. X.

¶ The maladies incident to Garden hearbes, The remedies against Pismires, Canker-wormes, and Gnats.

THE hearbes of the garden be subject to diuerse accidents, and namely, diseases, as well as corne and other fruits of the earth. For not onely Basill by age degenerats from the owne nature into wild creeping Thyme, but Sisymbrium also into Calaminth. The seed of an old Cole-wort will bring forth Turneps: and contrariwise, sow the seed of an old Rape & Turnep you shall haue Coleworts come vp of it. Cumin, if it be not kept neat and trim with much cleansing, will begin to decay at one side of the stalk beneath, and dy. Now hath Cumin but one onely stalk, and a root bulbous in manner of an Onion, it groweth not but in a light and leane soile. Otherwise, the peculiar disease appropriat to Cumin, is a kind of skurf or scab. Also Basill, toward the rising of the Dog-star, waxeth wan and pale. And generally, there is not an hearb but will turne yellow, if a woman come neere vnto it whiles she hath her monthly sicknesse vpon her.

Moreouer, there be diuerse sorts of little beasts or vermine engendred in the garden among the good hearbes. And namely, vpon the Nauewes, you shall haue gnats or flies: in radish Roots cankerwormes, and other little grubs: likewise, in Lettuce and * beet leaues. And as for these Beetworts last named, you shall see them haunted with snails, as well naked as in shels. In Leeks moreouer or Porret there settle other speciall vermine that be noisome to them feuerally, but such are very soone caught by throwing vpon those hearbes a little dung, for it will they gather to shroud and hide themselves. Furthermore, *Sabynus Tyro* in his booke intituled * *Cepuricon* which he dedicated to *Mecenas*, writeth, That it is not good to touch with knife or hooke, Rue, Winter Sauerie, Mint, and Basill. The same Author also hath taught vs a remedy against Em-mets (that do not the least mischiefe to gardens, when they lie nor to haue water at command) and that is this, to take sea mud or oose and ashes together, to temper a mortar of them both, and therewith to stop their holes. But the most forcible and effectuall thing to kill them, is the hearb called Ruds or Turn-sol. Some are of opinion, that the onely meane to chase these ants away, is, with water wherein the powder of a semi-brick or halfe-baked tile is mingled. And particularly, for to preferue Nauewes, it is a singular medicine for them to haue Feni-greek sowed among, as also for Beets to do the like with Cich pease: for this deuise wil drine away the Cankerworm. But say, that this practise was forgotten, & that the foresaid hearbes be already come vp, what remedie then? Mary, euen to seeth Wormwood and Housleek (which the Latines call Sedum, the Greekes Aiezoon) and sprinkle the decoction or broth thereof among them. Now what manner of hearbe this Housleek is, I haue shewed you already. It is a common speech, that if a man take the seed of Beets and other pot-hearbes, and wet them in the iuice of Housleek, otherwise called Sea-green, those hearbes shall be secured against all these hurtfull creatures whatsoeuer. And generally, no Cankerwormes shall do harme to any herbage in the garden, if a man pitch vpon the pales about a garden the bones of a Mares head; but he must be sure it was of a Mare, for a horse head will not serue. It is a common saying also, that if a riuier Crab or Craifish be hung vp in the mids of a garden, it is singular for that purpose. Some there be who make no more but touch those plants which they would preferue from the said vermin, only with twigs of the Dogge berie tree, and they hold them warished and safe ynough. Gnats keep a foule stir in gardens where water runneth through especially, and wherein there be some small trees growing; but these are soone chased away by burning a little Galbanum.

CHAP.

CHAP. XI.

¶ What garden seeds be stronger, which be weaker than others. Also what plants prosper better with salt water.

NOW as touching the change and alteration in seeds, occasioned by age and long keeping: some there be that are firme and fast, which hold their owne wel, as namely, the seeds of Coriander, Beets, Leeks, garden Cresses, Sennie or Mustard seed, Rocket, Sauerie, and in one word, all such as be hot and bite at the tongues end. Contrariwise, of a weaker nature are the seeds of Orach, Basill, Gourds, and Cucumbers. Generally, all summer seeds last longer than winter: and the Chibbol seed least of any other will abide age. But take the strongest and hardiest that may be, you shall haue none good after foure yeares, I mean only for to sow. And yet I must needs say, that Sauerie seed wil remain in force aboute that time. Radishes, Beets, Rue, and Sauerie find much good by being watered with salt water; for to these especially it is hol-some physick against many infirmities: and besides, it is thought to giue them a pleasant and commendable tast, yea, and it causeth them to be more fruitful. As for all other hearbes, they find benefit rather by fresh water. And since we are light vpon the mention of waters, those are thought best for this purpose which are coldest and sweetest to be drunk. Standing waters out of some pond, such also as are conueyed into gardens by trenches and gutters, are not good for a garden, because they bring in with them the seeds of many a weed. But aboute all other, raine waters comming in white shoures from heauen, be they that nourish a garden best, for these shoures kill the vermin also which are breeding therein.

CHAP. XII.

¶ The manner of watering Gardens. What Herbs will proue the better by removing and replanting. Of the iuices and saours that garden Herbes affoord.

THE best time of the day to water gardens is morning & euening, to the end that the water should not be ouerheat with the Sunne. Basill only would be watered also at noon. And moreouer some think, that when it is new sown, it will make haste to come vp very speedily, if it be sprinkled at the first with hot water. Generally, all herbs proue better, and grow to be greater, when they be transplanted, but principally Leeks and Nauews: nay this removing and replanting of them is the proper cure of many forances, for from that time forward, subiect they will not be to those iniuries that vse to infect them; and namely Chibbols, Porret, or Leeks, Radish, Parsly, Lettuce, Rapes or Turneps, and Cucumbers. All herbs which by nature grow wild, lightly haue smaller leaues and slenderer stalks, in tast also they be more biting and cagre, than such of that kinde as grow in gardens: as wee may see in Sauerie, Origan, and Rue. Howbeit, of all others the wild Dock is better than the garden Sorrell, which the Latines call Rumex. This garden Sorrell or foure docke is the stoutest and hardiest of all that grow: for if the seed haue once taken in a place, it wil by folks saying continue euer there: neither can it be killed, do what you will to the earth, especially if it grow neere the water side. If it be vsed with meats, vnlesse it be taken with Prifane, or husked Barly alone, it giueth a more pleasant & commendable tast thereto, and besides maketh it lighter of digestion. The wild Dock or Sorrell is good in many medicines. But that you may know how diligent and curious men haue been to search into the secrets of euerie thing, I will tell you what I haue found contriued in certaine verses of a Poet: namely, That if a man take the round treddles of a goat, and make in euerie one of them a little hole, putting therein the seed either of Leeks, Rocket, Lettuce, Parsly, Endiue, or garden Cresses, and close them vp, and so put them into the ground, it is wonderfull how they will prosper, and what faire plants will come thereof.ouer and besides, this would be noted, that all herbs wil be drier and more keen than the tame of the same kind. For this place requireth, that I should set downe the difference also of their iuice and tastes which they yeeld, and rather indeed than of Apples and such like fruits of trees. The tast or smack of Sauerie, Origan, Cresses, and Sennie, is hot and biting: of Wormwood and Centaury, bitter: of Cucum-ber, Gourds, and Lettuce, waterish. Of Majoram it is sharp only: but of Parsly, Dill, and Fennell,

* For some
Philosophers
held opinion,
That the tast
of herbs con-
sisted of a Ter-
rene substance
and a Watene
mixed toge-
ther: others (as
Democritus)
ascribed it to
their formes
and figures:
which Plinie
thinketh ridi-
culous.

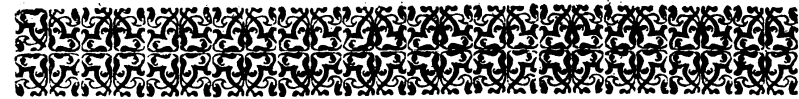
nell, sharpe, and yet odorant withall. Of all smacks, the salt tast only is not naturall. And yet otherwhiles a kinde of salt fetleth like dust, or in manner of roundles or circles of water vpon herbs: howbeit soon it passeth away, and continueth no longer than many such vanities * and foolish opinions in this world. As for Panax, it tasteth much like pepper: but Siliquastrum or Indish Pepper more than it, and therefore no maruel if it were called Piperitis. Libanotis smelleth like Frankincense: Myrrhis of Myrrh. As touching Panace, sufficient hath been spoken already. Libanotis commeth naturally of feed in rotten grounds, lean & subiect to dews: it hath a root like to Alifanders, differing little or nothing in smell from Frankincense. The vse of it after it be one yeare old is most wholsome for the stomacke. Some terme it by another name, Rosemary. Also Alifanders, named in Greeke Smyrneum, loueth to grow in the same places that Rosemary doth, and the root resembleth Myrrh in tast. Indish Pepper likewise delighteth to be sowed in the same manner. The rest differ from others both in smell and tast, as Dil. Finally, so great is the diuersitie and force in things, that not only one changeth the naturall taste of another, but also drowneth it altogether. With Parsly the Cooks know how to take away the fourenesse and bitteresse in many meats: with the same also our Vintners haue a cast for to rid wine of the strong smell that is offensiuē; but they let it hang in certain bags within the vessels.

Thus much may serue concerning garden herbs, such I mean onely as be vsed in the kitchen about meats. It remaineth now to speake of the chiefe work of Nature contained in them: for all this while we haue discoursed of their increase, and the gain that may come thereof: and indeed treated we haue summarily of some plants and in generall termes. But forasmuch as the true vertues and properties of each herb cannot thoroughly and perfectly be knowne, but by their operations in physick, I must needs conclude, that therein lieth a mighty piece of work, to find out that secret and diuine power, lying hidden and inclosed within: and such a piece of worke, as I wot not whether there can be found any greater. For mine own part, good reason I had, not to set down and anex these medicinable vertues to euery herb; which were to mingle Agriculture with Physicke, and Physicke with Cookerie, and so to make a mish-mash and confusion of all things. For this I wist full well, that some men were desirous only to know what effects they had in curing maladies, as a study pertinent to their profession; who no doubt should haue lost a great deale of time before they had come to that which they looked for in running thorough the discourses of both the other, in case wee had handled altogether. But now, seeing euery thing is digested & ranged in their feuerall ranks, as well pertaining to the fields, as the kitchen, and the Apothecaries shop; an easie matter it will be for them that are willing and so disposed, to sort out each thing, and fit himselfe to his owne purpose, yea, and ioine them all at his pleasure.



THE

A



THE TWENTIETH BOOKE OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIUS SECVNDVS.

The Proeme.

SINCE we are come thus far, as to treat of the greatest and principall work of Nature, we will begin from hence forward at the very meats which men put into their mouthes, and conuey into their stomacks, and urge them to confesse a truth, That hitherto they haue not well knowne those ordinarie means whereby they liue. And let no man in the mean time thinke this to be a simple or small piece of knowledge and learning, going by the base title & bare name that it carries; for so he may be soon deccied. For in the pursuit and discourse of this argument we shall take occasion to enter into a large field as touching the peace and war in Nature; we shall handle (I say) a deep secret, euen the naturall hatred and enmitie of dumbe, deafe, and senselesse creatures. And verily, the main point of this th came, and which may rauish vs to a greater wonder & admiration of the thing, lieth herin, That this mutual affection, which the Greeks call *sympathia*, whereupon the frame of this world dependeth, and whereby the course of all things doth stand, tendereth to the vse and benefit of man alone. For to what end else is it, that the element of Water quencheth fire? For what purpose doth the Sun suck and drink up the water, as it were to coole his heat and allay his thirst? and the Moon contrariwise breed humors, and engender moist vapors? and both Planets eclipse and abridge the light one of the other? But to leaue the heauen and those celestiall Bodies in their maiestie. What is the cause, that as the Magnet or loadstone draweth iron vnto it: so there is another * stone abhorreth the same, and driueth iron from it? What should the reason be of the Diamond, that peerlesse stone, the chiefe iewel wherein our rich worldlings repose their greatest ioy and delight, a stone otherwise * inuincible, and which no force and violence besides can conquer, but that it remaineth still insfrangible; and yet that the simple blood of a poore Goat is able to burst it in pieces? Besides many other secrets in nature, as strange, yea and more miraculous. All which we purpose to reserve vnto their seuerall places, and will speake of them in order. Meane while may it please the Reader to pardon vs, and to take in good part the manner of our entrance into this matter: for albeit we shall deale in the beginning with the smallest and basest things of all others, yet such they be as are wholsome, and concerne much the health of man and the maintenance of his life. And first will we set in hand with the garden, and the herbes that wee finde there.

CHAP. I.

Of the wilde Cucumber, and the iuice thereof, Elaterium.

THIS wild Cucumber, as we haue said heretofore, is far lesse than that of the Garden. Out of the * fruit hereof there is a medicinable iuice drawne, which the Physitians call Elaterium. For to get this iuice, men must not stay vntill the * Cucumber be fully ripe: for vnles it be taken betimes and cut down the sooner, it wil leap & flurt in the handling from the stele whereto it hangeth, against their faces, with no smal danger of their eye-sight. Now when it is once gathered, they keepe it so one whole night. The next morrow they make an incision and slit it with the edge of a cane. They vse to strew ashes also thereupon, to restrain and keep down the liquor which

* Theamedes, cap. 16. lib. 16.

* Whereupon it is called *Adamm*.

* Semen pui siu cu anisue.

* Whereupon it is called *Tough me not*.

which issueth forth in such abundance: which done, they presse the said juice forth, and receiue it in raine water, wherein it ferleth: and afterwards, when it is dried in the Sunne, they make it vp into Trochisques. And certaine these Trochisques are soueraigne for many purposes, to the great good and benefit of mankind: For first and foremost, it cureth the dimnesse and other defects or imperfections of the eyes: it healeth also the vlcers of the eye lids. It is said moreover, that if a man rub neuer so little of this juice vpon vine roots, there will no birds come neere to pecke or once touch the grapes that shall hang thereon.

The root of this wild Cucumber, if it be boiled in vinegre and made into a liniment, and so applied, is singular good for all kinds of gout; but the juice of the said root helpeth the tooth-ach. The root being dried and incorporat with rosin, cureth the ringworme, tetter, & wild scab or skurf, which some call Psora and Lichenes: it discuffeth and healeth the swelling kernels behind the eare; the angrie pushes also and biles in other Emunctories called Pani: and reduceth the stools or skars left after any sore, and other skarres, to their fresh and natie colour againe. The juice of the leaues dopped with vinegre into the eares, is a remedie for deafenesse. As for the liquor concrete of this cucumber, named elaterium, the right season of making it, is in autumn: neither is there a drug that the Apothecaries hath, which lasteth longer than it doth: howbeit, before it be three yerres old, it begins not to be in force for any purpose that a man shall vse it: and yet if one would occupie it fresh and new before that time, he must correct the foresaid Troch with vinegre, dissoluing them therein ouer a soft fire, in a new earthen pot neuer occupied before: but the elder they be, the better and more effectual they are; in so much as (by the report of *Theophrastus*) Elaterium hath bin kept and continued good 200 yerres. And for fiftie yerres, it is so strong & full of vertue, that it wil put out the light of a candle or lamp: for this is the triall and prooffe of good Elaterium, it being set neer thereto, before that it puts out the light, it cause the candle to sparkle vpward and downward. That which is pale of color and smooth, is better than that which is of a greenish grasse color, & rough in hand; the same also is somewhat bitter withall. Moreover, it is said, that if a woman desire to haue children, & do cary about her the fruit of this wild Cucumber fast tied to her bodie, she shall the sooner conceiue and proue with child; prouided alwaies that in the gathering, the said Cucumber touched not the ground in any case. Also if it be lapped within the wooll of a Ram, & be bound to the loins of a woman in trauell of childbirth, so that she be not her selfware therof, she shall haue the better speed and easier deliuerance: but then, so soon as the infant & the mother be parted, the said Cucumber must be had out of the house in all hast, where the woman lieth. Those writers who magnifie these wild Cucumbers, and set great store by them, affirm, That the best kind of them groweth in Arabia; and the next about Cyrenæ: but others say, That the principall be in Arcadia; That the plant resemblith Turnsol; That betwene the leaues and branches thereof there groweth the fruit, as big as a Wallnut, with a white taile turning vp backward in manner of a Scorpions taile: whereupon some there bee, who giue it the name of the Scorpion Cucumber. True it is indeed, that as wel the fruit it selfe as the juice therof called Elaterium be most effectual against the pricke or sting of the Scorpion, as also that it is a medicine purgatiue of the bellie; but especially cleaseth the wombe or matrice of women. The ordinarie dose is from half an Obulus to a Solid [i. an obole or half a scruple] according to the strength of the patient. A greater receipt than one Obulus, killeth him or her that taketh it: but being taken within that quantitie aboue named, in some broth or conuenient liquor, it is passing good for the dropfie, yea, and to euacuat those filthie humors that engender the lowfe diseaf. Being tempered with honey and old oile, and so reduced into a thin ointment or liniment, it cureth the Squinancie, and such diseases incident to the windpipes.

CHAP. II.

¶ Of the Serpentine Cucumber, called otherwise the Wandering Cucumber: also of the Garden Cucumbers, Melons or Pompions.

Many there be of opinion, that the Serpentine Cucumber among vs, which others call the wandering Cucumber, is the same that the former Cucumber which yeeldeth Elaterium. The decoction whereof is of that vertue, that whatsoever is besprinkled therewith, no myce wil come neer to touch it. The same being sodden in vinegre and brought to the consistence

A consistence of an ointment, is a present remedie to allay the pains of gout, as wel in feet, hands, knees and armes, as in any other joint whatsoeuer. Also, if the seed thereof, or the fruit alone, dried in the Sun and beaten to powder, be drunke to the weight of 30 deniers (Romane) in one hemine or wine pint of water, it assuageth the pain of the reines and the loins. Tempered with womans milke, it resolueth all sodain tumors & swellings, being applied to the grieved place. But to come againe to Elaterium, it mundifieth the matrice and naturall parts of women; but if they be with child, they must take heed how they meddle with it, for it bringeth them to a shift, yea and hastneth abortiue or vntimely birth. Good it is for al them that be short winded. As for the yellow iaudise, it cureth it, if it be but snuffed vp into the nose. Anoint or bath the face with it in the Sun, it taketh away pimples & other spots there. Many attribute al the same properties and effects to the Garden cucumbers: And in very deed, this fruit would not be despised, in regard of the use thereof in Physicke: for first and foremost, Take Cucumber seeds as many as three fingers will receiue, stampe them with Cumin, and giue the powder in wine to them that haue the cough, for to drinke, you shall see present helpe. The same seeds taken in powder with breast-milke, cureth those that be lunaticke and phranticke. Also, the weight of one * Acetabulum, [i. much about two ounces] cureth them that haue the Dysentery or bloody flux. Moreover, being taken with a like poise or quantity of Cumin seed in mead or honyed water, it is singular good for them that reach vp filthy matter from their lungs; as also for those who haue * weake and diseased liuers. If one drinke the same with some sweet wine, it prouokes vrine: and being injected by a Clystire together with Cumin, it caseth the paine in the kidnies and reines.

C As for the fruit called Pompions or Melons, being eaten as meat, they cool the body mightily and make it soluble. The fleshy substance of them applied to the eyes, assuageth their pain and restraineth their waterish and rheumatick flux. Their root healeth the * wens or vlcers gathered in manner of hony-combs: which swellings some call Cerio. Being dried, it staieth vomits, so it be brought into powder and giuen to the weight of * foure Oboli in honyed water: but the Patient when he hath drunke it, must walke presently vp on it half a mile. The same powder is deterfiue and scouring, and therefore put into sope and washing-balls. As for the rind or barke thereof, it procureth vomit indeed, but it cleaseth the skin as wel as the other. The same doe the leaues of any domesticall or garden Cucumbers or Melons, if they be made into a liniment. The said leaues also stamped with honey and brought to the forme of a cataplasme, cure the bloody, fals or night-blains, but tempered with wine, they heale the bitings of dogs, as also, of the Millepede, which the Greeks call Seps, a long worm with hairy feet, doing much harme to cattaille especially; for look where it biteth, the place presently swelleth and putrifieth. The very Cucumber it selfe is of a comfortable odor, and recouereth the faintings of the heart, and those that swoone. Finally, if you would make a delicate sallad of Cucumbers, boile them first then pill from them their rind, serue them vp with oile, vinegre, and honey: certain it is, they are by this meanes far sweeter and pleasanter than otherwise.

CHAP. III.

¶ Of the wild Gourd, and the Rape or Turnep,

T Here is a kind of wild * Gourd which the Greeks call Somphos, as one would say, hollow and emptie (for thereupon it tooke that name) a finger thicke, growing nowhere else but among rocks and stony grounds. If a man chew this Gourd and suck out the juice thereof he shall find it very comfortable to the stomach. There is another wild gourd called Colocynthis, but that is full within, and lesse than that of the Garden. The pale of this kind is the better, for such be vsed in Physicke: and yet that of grasse greene colour when it is dried, if it be taken alone, doth purge & euacuat the belly. Also being infused into the bodie by way of clystire, it cureth all diseases of the guts, flanks, reines, and loines: it helpeth the palfie likewise, or the resolution of the sinews. After the seeds be taken forth, some fill the place with honyed water, & so seeth all together, vntill half be consumed, and giue of this decoction the quantitie of foure Oboli, with good successe to those that be troubled with a cough: the powder therof dryd & incorporat with sodden hony & so reduced into pills and swallowed, is good for the stomach: the seeds be singular to cure the lamie; but the party must drinke honyed water presently after it.

E

The

Obolus.
i. halfe a
Scrippelle or
scruple

* Phreniticke;
some read Ne-
phriticke, and
then it signifi-
eth those that
haue the stone
or paine of the
kidnies.
* 15. drama.
* Iocinerofe.

* Adietivides;
* two scruples;

* This is not
Colocynthis.

The fleshe pulpe within mixed with wormwood and honey, takes away the tooth-ach & a colution made with the iuice thereof and vinegre hot, confirmeth and fasteneth the teeth that be loose in the head. Moreouer, if with it and oile together, one rub the backe bone, the loines and the haunches or huckle, it will immediatly rid them of their pain and ach. But I will tell you a strange and wonderfull effect indeed: If a man take their seeds of * euen number & hang them either about the necke or armes of them that haue the ague, they will driue the accesse or fit away; be it any of those intermittent feuers which the Greekes call Periodicall. Thus much for the wild Gourd, Colocynthis.

As for the domesticall Gourd of the Garden, after it is scraped and pilled, take the iuice thereof, and distill it warme into the eares, it will ease the paine. The inner flesh or pulp cleansed from the seed, is passing good for to be applied to the agnells or corns of the feet: also to be laid vnto those impostumes or swellings, that grow to an head or suppuration [which the Greekes call Apoftemata.] The liquor or decoction of the Gourd, foddenn al whole as it is, with rind, seed, and pulpe, doth strengthen the loose teeth, and stineth their ach. Wine wherein it is boiled, is a singular decoction to bath the eies, for to repress and stay the fluxe or theume that falleth vpon them. The leaues of it, together with the fresh leaues of the Cypresse tree newly gathered, being stamped and applied to wounds, be excellent to heal them. The Gourd it selfe enclosed within clay, and so baked or roasted vnder the embers, and then stamped and incorporate with goose grease, hath the like effect. Moreouer, the scrapings or shauings of the rind, mightily cooleth the heat of the gout, if it be not inueterat and old: the heats also of the head and especially the * burning therein, which troubleth little infants. The said parings being incorporate with the filth rubbed or curried from mens bodies in baines & stouues after they haue sweated, and so laid vpon any part that hath *S. Anthonies* fire, allaieth the heat and bringeth the place into temper: so doe the seeds also, vsed in like manner. The iuice or liquor drawne out of the said parings, being mingled with oile of roses and vinegre, and then made into a liniment, doth mitigate the extreme heat of burning feauers. The ashes of Gourd parings burnt & strewed drie vpon any part of the bodie that is burnt or skalded, healeth them wonderfully. *C. hyrsippus* the Physician condemned Gourds, and forbad men to eat of them. Howbeit, all Physicians doe resolutely agree in this, That they be passing good for the stomacke: as also for the exulcerations of the guts and bladder.

As for Rapes or Turneps, they likewise are medicinable, and haue their vse in Physick, for to begin withall, if one lay them very hot to kibe or humbled heeles, they wil cure them. Also, if the feet be frozen and benumbed with cold, lay them thereto foddenn in water, and this fomentation will restore them to their former heat. The hot decoction or broth of Rapes, is passing good for to bath the goutie members, yea if it were a cold gout. The Rape or Turnep root, raw as it grew, brayed in a mortar with salt, is a remedie for all diseases of the feet, bee they cornes, kibes, bloody falls, swellings of cold, or any other infirmities whatsoeuer. Rape seed bruised to a liniment drunken also with wine, is reported to be a soueraign medicine against the stinging of serpents, and any other poison: Howbeit many think, that it is a preseruatiue & countrepoyson, when it is taken in wine and oile. *Democritus* banished turneps altogether from the board, by reason of the ventosities or windinesse that it engender. But *Diocles* on the other side extolled and praised them as much, and affirmeth, That they will pricke forward to *Venus*. The like doth *Dionysius* report of them, and the rather (saith he) if they be condite with Rocket. He writeth moreouer, That if they be roasted or baked vnder the ashes, and so incorporate with grease, will make a notable good cataplasm for the gout and joynt-ach. The wild rape or turnep groweth commonly euery where among corne fields: it brancheth much, carieth a white seed, twise as big as that of the Poppie. This being incorporate with wine of equall quantity, is much vsed to take away riuils, and so smooth the skin both of the face and also of the whole body besides. To conclude, the roots of Eruiile, Barley, Wheat, and Lupines, be good for nothing at all.

CHAP. IIII.

¶ The diuers sorts of Nauues: of the wild Radish of the Garden Radish, and the Parsnep.

The Greek writers obserue two kinds of Nauues, which are good for Physick. The first ariseth vpon with * a cornered and edged stalk, beareth leaues r... Parsely, and putteth out floures

* It may be the meaneth a number respectiue to the type of the ague, that is to say, 3 in a tertian, 4 in a quartan, 5 in a quintan, &c.

* Scirius.

* *Angulifera caulibus, foliis pinnatis, flore albo.* Ex Dioscoride;

A floures like Dil: this they call Bunion: the decoction whereof being drunken with honied water, or with a dram weight of the owne iuyce, is counted soueraigne for the purgations that follow women for the defects of the bladder and vrine. The seed parched and beaten to powder, and so taken in a draught of hot water, to the quantitie of foure * cyathes, cureth the bloody flux: but it stoppeth vrine, vnlesse the patient drink Linefeed withall. The second kind is named Bunias, and resembleth both Rape and Radish: the seed of it is excellent good against poyson; and therefore in antidotes and preseruatiues it is much vsed. That there be Radishes wilde, we haue shewed heretofore. The most commended about all others is that which groweth in Arcadia: although there are of them in other countries, and those counted better, only for to prouoke vrine. Otherwise they purge choler, and namely their rindes infused in wine do the same.

Now ouer and besides their vertues and properties related heretofore, they discharge and cleanse the stomack, cut and extenuate flegme, and withall be diureticall and procure vrine.

There is a kind of garden Radish in Italy which they name *Armoracia*, vsed also in physick: the decoction whereof if a man take a draught of it in the morning, to the quantitie of a cyath, doth fret, break, and expell the stone by way of grauell. Boile the same in water and Vinegre, therewith bathe or anoint the place stung with any serpent, and it will heale it vp. Radish taken with hony in a morning next ones heart tasting, is good for the cough. The seed parched, and so chewed alone without any thing els, asswageth the pain of the smal guts, * in the flanks and hypocondriall parts. The decoction of Radish leaues foddenn in water and so drunk, or the very iuice of the root it selfe as much as two cyathes, is thought to be a singular medicine against the breeding of body-lice. Radishes stamped in a mortar, and brought into the forme of a liniment, are thought to be excellent good for hot inflammations: the rind also stamped together with hony, and laid to any bruised place that looketh black and blew after a fresh stripe, dissolueth that cluttered blood, and reduceth the former color. The chewing of the quickest & most biting Radishes keeps them awake that are giuen to ouermuch drowsinesse, & inclined to the lethargie. The seed parched and afterwards stamped and incorporate with hony, cureth them that take their wind short. The same is also held for a countrepoyson. A defensatiue also the Radish is against scorpions, and resisteth their poisoned sting: for let a man rub his hands well either with the iuyce of the root, or the seeds, he may handle scorpions safely. Do but lay a Radish vpon a scorpon he will presently die. Moreouer, *Nicander* affirmes, that Radishes be passing good for them that haue eaten either venomous Mushromes or Henbane. The two *Apollodores* prescribe Radish to be giuen to them who suspect themselves to be poysoned with the viscus gum of the white Chamæleon root called *Ixias*, but taken diuersly, for the one of them surnamed *Citicius*, giueth the seed stamped, and so to drink it in water: the other *Apollodorus*, of Tarentum, ordains the iuice of Radish for this effect and purpose. Moreouer, radishes are thought good to diminish and extenuate the swelling spleen: they are wholesome for the liuer, & mitigate the pain of the loins. Being taken with Vineger and Senvy, they helpe them that are in a drop-sie, or false into a lethargie. *Praxagoras* is of iudgement, That Radishes should be giuen for to eat, to them that are troubled with the black passion, to wit, the paine and ringing of the small guts. And *Plinios* appointeth them to be eaten of those that be troubled with a continuall flux, by reason of a feeble stomack, called thereupon *Cœliaci*. They heale the Dysenterie or exulceration of the guts: they euacuate also and rid away the filthy matter and corruption of impostumes gathered about the midriffe and principal parts, if they be eaten with honey. But some for this purpose would haue them luted or bedawbed with clay, and so roasted or baked them afterwards vnder the ashes; and being thus prepared, they are effectually to bring down womens termes. Being taken with vinegre and hony in maner of an oxymel, they chase worms out of the guts and belly. If they be foddenn to the thirds, and their decoction giuen to drink with wine, they do much good to them who haue a rupture, and their guts fallen downe into the burse of their cods: and in this wise they rid and scoure away the cluttered & offensive blood gathered in the guts and sent thither from any other part. *Medius* the physitian prescribeth them to be boiled and giuen to the same purpose; as also to those that spit and reach vp blood: yea and to women in childbed newly laid, for to increase their milk. *Hippocrates* counselleth women whose haire is giuen to shed much, for to rub their heads with radish roots: also to apply them bruised in manner of a cataplasm vnto the nauill, when they be tormented with the paines of the matrice. They will bring to the natie & liuely colour the parts that are cicatrized or newly skarred.

* Cyathis ten drams.

Eugenoporus

* *Illece, Her. 2 mol. fomerad illece, & them it significeth.* Parturice.

red. The seed bruised and tempered with water, and so laid as a cataplasme, stayeth the running of cancerous or eating vlcers, which the Greekes call Phagedæne. *Democritus* is of opinion, That much feeding vpon Radishes, stirreth vp lust and maketh folk amorous; which peradventure is the reason, that some haue thought they be hurtfull to the voice. The leaues of those radishes onely that haue the longer roots, are said to quicken the eye-sight: but if a man perceiue that he hath either inwardly taken for a medicine, or applied outwardly, a radish root which is ouer strong, he must presently haue Hyssope giuen him: for this Antipathy and natural contrarietie there is betwene these two hearbs, That the one correcteth the other. For them that be hard of hearing, Physicians vse to infill the iuice of the Radish by drop-meale into the eares. And for them that would perbreake or vomit, the best way to take it, is at the end of a meale with the last meat.

* *Summo cibo*, although *Dioclesides* saith *primo cibum* and himselfe in the former booke *teitani*.

As touching Hibiscum, like it is to the Parsnep: some call it Moloche Agria, others Pistolochia: it cureth the sores and vlcers that be in gristles, and knitteth broken bones. The leaues thereof drunke with water, loosen the belly, and chase away Serpents. Applied in a liniment or otherwise rubbed vpon a place stung with Bee, Waspe, or Hornet, they are a present remedie. The roots therof digged out of the ground before Sun-rising, & enfolded or wrapped in wooll as it grew vpon the sheepes backe, without any other artificiall colour, and namely of an ewe, which hath yeaned likewise an ewe lambe, is thought to be a singular thing for to be bound vnto the swelling kernels called the Kings euill, yea although they were exulcerat and ran. But some are of this mind, That for to doe this deed, it should be gotten vp with an instrument of gold; and great heed should be taken, that after it is once vp, it touch not the earth againe. Finally, *Celsus* giueth counsell, to lay the root thereof foddren in wine to the gouty joynts that are without tumor and shew no swelling.

CHAP. V.

¶ Of *Staphylinus*, or the Parsnep. Of *Cheruell*, the Skirwort: of *Seseli*, *Elecampane*, and Onions.

There is a second kind of Parsnep, named *Staphylinus*, which commonly men call the Wandering Parsnep. The seed bruised and drunke in wine, is singular good for them that haue swolne bellies, the rising or suffocation of the mother in women, with the torments and pains thereto incident, it cureth, in so much as it reduceth the matrice into the right place: being applied also as a liniment with wine cuit, it helps the wrings and throwes of their belly. It is not amisse also for men to take it, for the seed being stamped together with bread crums, of each a like portion, and so drunke with wine, cures the belly-ach with them also. It prouoketh vrine: and being applied fresh and new with honey, it represseth the spreading of fretting and running vlcers. The powder thereof also being drie and strewed thereupon, hath the like effect. *Diocles* aduiseeth to giue the root therof in honied water, against the infirmities of liuer, spleene, flanks, small guts, loines, and reins. *Cleophrastus* saith, that it wil helpe (in that manner taken) an old bloudie flux, which hath continued a long time. *Philistio* boileth the root in milke, and giueth 4 ounces thereof to them who are troubled with the strangury, or pisse by drop-meale: but with water, he giueth it for the droppe, to those also that with a cricke or cramp haue their necks drawne backward, for the pleurisie, and epilepsie or falling sickness. Moreouer, it is commonly said, that whosoever hath this root about them, are safe enough for being stung with any Serpent: nay if they doe but tast thereof before-hand, they shal take no harme if they be either bitten or stung by them: and say they be already stung, let them apply it to the wounded place with hogs grease; and it will heale it vp. The leaues chewed help the indigestion & cruditie of the stomacke. *Orpheus* said moreouer, That this root had an amatorious propertie to win loue, haply because much feeding therof (as it is well knowne) doth sollicit vnto the game of loue, and maketh folke amorous: which is the reason also that some haue put down in writing, That it will helpe women to conceiue. As for the Garden Parsneps they are in many other respects of great force and very powerfull; but the wild is more effectuell, and principally that which groweth in stonie grounds. The seed of the Garden Parsnep also, being drunke in wine, or vinegre and wine together, sauerth those that are stung with Scorpions. If a man pick his teeth and rub them all about with a Parsnep root, he shall be eased of his tooth-ach.

The

A The Syrians are great Gardeners, they take exceeding paines and be most curious in gardening, whereupon arose the Prouerbe in Greeke, to this effect, *Many Worts and Pot-bearbes in Syria*. They vse to plant in their gardens a certaine hearb very like to a Parsnep, which some call *Ginidum*, & Tooth-picke *Cheruell*: more slender and smaller it is only, and therewith bitterer in tast, but it worketh the like effects. They vse to eat it both foddren and raw, and find it agree well with the stomacke: for it drieth vp all the superfluous humours and excrements which be bedded and deeply rooted within it.

As for the wild Skirwort that grows wandering euery where, it is like both in shape and operation to those of the garden. It stirreth vp the appetite and skoureth the stomack of those crudities which caused dulnesse therein, and loathing to meat. *Opion* is verily persuaded, that if one eat it with vinegre aromatized with *Laserpitium*, or take it with pepper & honied wine: or else with the pickle of fish named *Garum*, it prouokes vrine, and putteth him or her in mind of loue delights. Of the same opinion also is *Diocles*. Furthermore, that it is a cordiall, and doth mightily corroborat and strengthen the heart, vpon the recouerie of a long and dangerous sickness; and is besides singular good to stay the stomacke after much casting and vomiting. *Heracides* was wont to giue Skirworts to them who had drunk Quick-silver: so much also as were but cold & could not sufficiently perform the duties of mariage: finally, to them that being newly crept out of their beds after some grievous disease, had need of restoratiues. *Hicetius* was of this mind and said, they were good for the stomacke, because no man could possibly eat 3 Skirwort roots together: and yet he thinks that they would agree very well with those weak persons who were

C lately sick and newly walking abroad, against they should fall to their old drinking of wine again. But to come more particularly to the garden Skirwort, if the iuice therof be drunke with Goats milke, it stayeth the flux of the belly called the Laske. And thus much for the Skirwort, named in Latin *Sifer*. But forasmuch as the proximitie and likenes in many Greek names many a time confounds the memorie and deceiues them, causing them to mistake one thing for another, I wil for vicinitie and neighborhood sake annex vnto *Sifer*, the hearb *Sifer* or *Seseli*; for me thinks they will doe very well to stand together: but this is an hearb very common and well known. The best is that which comes from *Marfeils*, & is therupon named *Seseli Massiliense*: it hath a broad flat seed and a yellow. A second kind thereof is named *Aethiopicum*, with a blacker seed: but the third which is brought from *Candie*, and therefore termed *Creticum*, is of

D all other most odoriferous & smells sweetest. The root of *Seseli* or *Sifer*, casts a pleasant sauer: and as men say, the Vultures also or Geirs feed on the seed. If a man or woman drinke it with whitewine, it cures an old cough; it knits those who are brused bellied, or haue ruptures; and lastly, helps them that be much troubled with cramps or convulsions. Also if it be taken to the weight or quantitie of two or three * *Ligules*, it cures those who haue their necks drawn backward to their shoulders with the Spasme; it corrects the defects and faults of the liuer, it allaieth the wrings and torments of the guts; and bringeth them to pisse with ease and freely who are afflicted with the Strangurie. The very leaues of *Sifer* are also medicinable, for they procure easy childbirth: yea and in that respect the very dumb four-footed beast findeth the benefit therof: and that know the Hinds well enough by a secret instinct of nature, who being near their time

F and readie to calue, feed vpon this hearbe most of all others. Good it is against *S. Antonies fire*, applied to the place in manner of a liniment. Certes, if a man eat either the leafe or the seed of *Sifer*, presently after meat, or at the latter end of repast, it helpeth digestion. It staies the gurrie or running out of the belly in 4 footed beasts, whether it be giuen stamped by way of a trench and so injected, or chewed drie among their salt meat. If kine or oxen be sicke, stampe it and pour it down their throats, or els clysterize them with it. As for *Elecampane*, if it be chewed vpon an emptie stomacke fasting, it confirms the loose teeth, so that it be taken as it was digged forth of the earth before it touch the ground againe. Being confectioned or condite, it cures the cough. The iuice of the root foddren, expells the broad wormes bred in the guts. The powder of it dried in the shadow helpeth the cough, the stitch and cramp, dissolueth windines & is good for * the accidents incident to the throat and windpipes. It is a souerain medicine against the * *Arteries* pricks or stings of venomous beasts. The leaues applied as a liniment, with wine, appease the extreame pain of the loins. As for Onions, I cannot find that there be any of them grow wild. Those which are sown in gardens, I am sure, wil with their smell only cause the eyes to shed tears, & by that means clarify the sight: but if they be anointed with the iuice, they will mundifie the bet-

* *Ligula* may be taken for a spoonfull, a three drams and a scruple, somewhat vnder halfe an ounce, as a good spoone will doe, with vs.

ter. It is said that they will procure sleepe, and heale the cankers or vlcers of the mouth, beeing chewed with bread. Also greene Onions applied with vinegre to the plaec bitten with a [mad] dog, or els drie, and laid to with Honey and Wine, to the plaister or cataplasme be not remoued, in three daies cureth the hurt without danger. In this maner also they wil heal * galled places. Being roasted vnder the ashes, many vse to apply them with Barly floure or meale, as a pulstesse or cataplasme to the eies that be waterie or rheumaticke, as also to the vlcers of the priuy parts. The imunction of the eies, with the iuice therof, is thought to cleanse their cicatrises or * cloudines of the eies called the pin and web: as also to cure the pearle there breeding: moreover, the blood (hotting or red streaks, in the white, and the white spots appearing in the blacke circle about the apple. Moreover, it cureth bitings & stings of serpents, yea, and heales al vlcers, being emplastred with honey. Also the exulcerations or impostumes within the ears, are by it & womens milke cured. And for to amend the ringing and vnkind sound and noise therein, & to recover those that be hard of hearing, many haue vsed to droppe the iuice of Onions together with Goose grease or els hony. Furthermore, they giue it to be drunke with water, to those that suddenly become speechlesse and dumb. A collution also made with Onions, helps the tooth-ach. And being laid vpon wounds, made either with prick or bite of any venomous beast, and especially of Scorpions, it is thought to be a soueraign salub. Many are wont (to very good effect) for to bruse Onions, and therewith to rub those parts that be troubled with a skurfe and running mange, as also to recover haire where it is shed and gon. Being boiled, they are giuen for to be eaten, vnto those who are diseased with the blodie Flix or pain of the reins & loins. Their outward pilings burnt into ashes & mingled with vinegre, cure the bitings and stings of serpents, if the place be bathed or anointed therewith, yea, and the very Onion it selfe being applied with vinegre, cures the sting of that shrewd worme Milliped. As for all other vertues and properties of Onions, the Physicians are wonderful contrary one to another in their writings: for our moderne and late writers do hold and to haue deliuered in their books, That onions are hurtful to the parts about the heart, & other vitall members: as also, that they hinder digestion, breeding wind and ventosities, and causing drought or thirstinesse. *Asclepiades* and his sect or followers, contrariwise affirme, That onions are so wholesome, that they will make them well colored who vse to feed vpon them: and more than so, they say that if one in health every day eat of them fasting, he shall be sure to continue healthful, strong, & lusty: that they be good for the stomack, in this regard, that they cause risting and breaking of wind vward, which is a good exercise of the stomack: and withall, that they keepe the bodie loofe and laxatiue, yea, and open the Hæmorrhoid veins if they be put vp in maner of suppositories. Also, that the iuice of onions and Fennell together, be marvellous good to be taken in the beginning of a * dropisie. *Item*, That their iuice being incorporat with Rue and Hony, is soueraigne for the Squinace. As also that they will keep waking those who are fallen into a Lethargie. To conclude. *Varro* saith, That if Onions be braied with salt and vinegre, and then dried, no worms or vermine will come neere that composition.

CHAP. VI.

¶ Of cut Leekes or Porret: of bolled Leeks: and of Garlicke.

Porret, otherwise called Cut-Leekes or vnset Leeks, stancheth bleeding at the nose, in case it be stamped and put vp close into the nosethrills, or otherwise mingled with the powder of the Gall-nut, or Mints. Moreover, Porret staith the immoderat shift or fluxe of blood, that follows women vpon a slip or abortiue birth, if the iuice thereof be drunk in breast-milke. In the same manner it helps an old cough and al other diseases of breast and lungs. Burnes and scaldings are healed with a liniment made of Porret or Leek blades: likewise the Epinyctides, for so in this place I rearme that vicer, which in the lachrymal or corner of the eie runneth and watereth continually: some call it Syce, that is to say, a fig. And yet others there be who understand by that word [Epinyctides] the blackish or blew blistering wheals, the bloody fells I mean and angrie chilblanes, that in the night disquiet and trouble folk that haue them. But to come againe to our Porret: the blades thereof stamped and laid too, with Honie, healeth all sores and vlcers whatsoeuer. The biting of any venomous beast, the sting also of Serpents, are cured therewith. As for the impediments of the hearing and the ears, they be remedied with the iuice

A of Leeks and Goats gall, or els a like quantitie of honied wine instilled thereinto. And as for the whistlings or crashing noises that a man shall heare within head otherwhiles, they are dis-cussed with the iuice of Leeks and womans milke dropped into the ears. If the same be snuffed vp into the nosethrills, or otherwise conueighed that way vp into the head, it easeth head-ach: for which purpose also it is good to poure into the eares, when one goeth to bed and lieth to sleepe, two spoonfuls of the said iuice, and one of Honie. The iuice of Porret if it be giuen to drinke with good wine of the grape, against the sting of serpents, and namely, Scorpions: likewise fo taken with an * Hemine of wine, it cureth the pains of the loines or small of the back. Such as spit or reach vp blood, such as be diseased with the Phthisick or consumption of the lungs, such also as haue bin long troubled with the Pose, the Murre, Catarrhe, and other rheums, find great help by drinking the iuice of Porret, or eating Leeks with their meat. Moreover, Leeks are taken to be very good either for the jaundise or dropsie. Drinke the same with the decoction of husked Barley called Ptisane, to the quantity of one Acetabale, you shall find ease for the pains of the reins or kidnies. The same measure and quantity being taken with honey, muniteth the Matrice and naturall parts of women. Men vse to eat of Porrets or Leekes, when they doubt themselves to haue taken venomous Mushrooms. And a cataplasme therof cureth green wounds. Porret is a solicitour to wantonnesse and carnal pleasures: it allaieth thirstinesse, & dispatcheth those fumes that cause drunkenesse. But it is thought to breed dimnesse in the eie-sight, to ingender wind and ventosity, howbeit, not offensue to the stomack, for that withall it maketh the belly laxatiue. Finally, it scoureth the pipes & cleareth the voice: thus much of Porret in blade or cut Leeks vnset.

These headed Leeks that are bolled and replanted, are of the same operation, but more effectual than the vnset Leeks. The iuice therof giuen with the powder either of Gal-nuts, or * frankincense or els Acacia, cureth those that reject or reach vp blood. *Hippocrates* would haue the simple iuice therof giuen, without any thing els for that purpose: and hee is of opinion, that it will disopile the neck of the Matrice and the naturall parts of women, yea, and that they will proue fruitful and beare children the better, if they vse to eat Leeks. Being stamped and laid to filthie sores or vnclen vlcers with hony, it cleanseth them. Being taken in a broth made of Ptisane or husked barley, it cureth the cough, staith the rheume or catarrh, that distilleth into the chift or breast-parts: it scoureth the lungs and wind-pipe, and healeth their exulcerations. The like it doth if it be taken raw without bread, 3 bols or heads of them together each other day: and in this maner it will cure the patient, although he haught vp and spit out putrified and corrupt matter. After the same maner it cleareth the voice, & it inableth folk to the seruice of lady *Venus*, and auaieth much to procure sleep. If Leekes bols or heads be sodden in two waters, (i.) changing the water twice, and so eaten, they will stop the Lask, and stay all inueterat fluxes whatsoever. The pillings or skins of Leek heads if they be sodden, the decoction therof wil change the haire from gray to blacke, if they be washed or bathed therewith.

As touching Garlicke, it is singular good and of great force for those that change aire, and come to strange waters. The very sent thereof chaferth Serpents and Scorpions away. And as some haue reported in their writings, it healeth all bitings & stings of venomous beasts, either eaten as meat, taken in drinke, or annointed as a liniment: but principally it hath a special property against the Serpents called Hæmorrhoids, namely, if it be first eaten, and then cast vp again by vomit, and wine. Also, it is soueraigne against the poisonous biting of the mouse called Shrew: and no maruell, for why, it is of power to dull and kill the force of the venomous herb *Aconitum*, i. Libard bane, which by another name men call Pardalianches, because it strangeth or choketh Leopards, yea, it conquereth the soporiferous & deadly quality of Henbane: the bitings also of a mad dog it healeth, if it be applied vpon the hurt or wounded place with him. As for the sting of serpents verily, Garlick is exceeding effectual, if it be taken in drinke: but withal, you must not forget to make a liniment of it, the hairy strings or beard growing to the head, the skins also or tails and all, wherby it is bunched, tempered all together with oile, & laid vpon the grieved place: and thus also will it help any part of the body fretted or galled, yea, though it were risen vp to blisters. *Hippocrates* moreover was of this opinion, that a suffumigation made therewith, fetcheth downe the after-birth of women newly deliuered and brought to bed: who vsed also with the ashes of them burnt and reduced together with oile into the forme of a liniment, to annoint the running skulls of the head, and thereby cured and healed them vp. Some giue

* Sic & atritia samant.

* Regulus

* Hemine, is much about ten ounces.

* Called Man-na Terna.

* Hydrages, some read Hy-gochysis, i. Suffusians; out of Dioscorides, to wit, the Cataract.

In fco duplici.

* i. The wringings and torment of the vpper small guts.

Porrigenes, not prurigenes, out of Diolfe.

* A great desire to goe to the stooles, with doing little or nothing.

* Called Menagga.

Sarcogues, called otherwise S. Anthracis sic. Erysipelas.

* Contrary to Galien.

giue it boiled, others raw, to them that be short-winded. *Diocles* prescribeth it with Centaure to them who are in a droppe, he giue it also to purge the belly between, or in two figs. But green Garlick taken in good wine, together with Coriander, doth the deed more effectually. Some are wont to minister it to those that draw their wind short, being stamped and put into milke. *Praxagoras* the Physitian ordained to drinke it with wine, against the laundise: also against the black passion, in oile and thick *gruel. And in that sort he uied to annoint the swelling kernels called the kings euill. In old time the maner was to giue raw garlick to such as were bestraited or out of their wits. But *Diocles* appointed, that it should be boiled for phrentick persons. Certes, if it be bruised and so laid to the throat, or otherwise gargled with some conuenient liquor, it will do much good to them that haue the squinancie. Take three heads or cloues of Garlick, beat them well, and together with vinegre apply them to the teeth, they will mightily assuage the paine. Or do but make a collution with the broth wherein they were boiled, and hold it in your mouth, and afterwards put some of the Garlicke it selfe within the hollow teeth, you shall see much ease in iue thereupon. The iuice of Garlick together with goos-grease, is passing good to be dropped into the ears, to assuage their paine, and bring the hearing again. Being taken in drink, it clenseth the head from dandruffe, and killeth lice: so doth it also, if it be stamped and applied to the place with vinegre and nitre. Seeth it in milke, or do but stamp it and mingle it with soft fresh cheefe, and so eat it, you shall see how it will repress and stay Catarishes and Rheumes: after which manner it will make them speake cleare that be hoarse, and haue a rusty voice. But let a man who hath the Phthisicke, and is fargone into a Consumption of the lungs, drink it in bean broth ordinarily, he shall recover or find great ease. Generally, Garlick is better, boiled or roasted, than raw: and yet of the twain, it is not so good roasted as sodden: for in that order must it be taken for to help the voice and make a cleare breath. Also, being boiled in honied vinegre or Oxymell, and so drunke, it driueth out the broad wormes and all other such like vermin forth of the guts. Being taken in a thicke broth or gruell, it cureth the disease * Tinef-mus. Being sodden to the consistence of an Vnguent, and so applied as a frontal to the temples of the head, it allaieth their paine. Boiled with hony, then stamped and reduced to a liniment, it represseth red pimples. Seeth it with good old seame or grease, or in milk, it is singular for the Cough. See you one to reach vp bloud, or to spit filthy matter? Roast Garlick vnder the hot embers, and giue it the party to eat, with equall quantity of hony. Being taken with salt and oile, it is a soveraign remedy for them that be bursten or Spasmatike, that is to say, vexed with the Crampe. Applied with the fat or grease of an hog, it cureth all tumors and suppurious imposthumes. Being emplastred with brimstone and rosin, vpon Fistulaes or such hollow and blind vlcers, it draweth out all the filth and corruption that lieth rankling and festering within. But lay it to a sore with pitch, you shall see it fetch out spils and ends of broken arrowes sticking still within the flesh. The Leprosie, the running and dangerous *rettar, the red pimples also rising in the skin, Garlick doth first ete and exulcerate; but afterwards, with Origanum, it cureth and healeth the same. Yea, the very ashes of Garlick burnt, and so tempered with oile and the pickle, [Garum] that it may take the form of a liniment, doth the like. The wild fire also, or shingles, that hath gotten to a place, if it be annointed therewith, will be extinguished. Be any place of the body grown black and blew by stripes or blows, a liniment made of Garlick burnt to ashes and tempered with hony, will bring the natue and fresh colour again quickly. There is a deepe and fetled opinion among men, that if a man or woman do ordinarily take garlick with meat & drink, they shal find remedy thereby for the falling sicknesse. Also, that one head of Garlick taken in some styptick & harsh raw wine, with Lascerpitium, to the weight of one Obolus, driues away the Quartan ague for euer. But after another sort, if it be vsed; to wit, boiled with brused Beanes, and so eaten ordinarily with meat; there is no cough so rough, no vicer within the brest so foule and filthy, but it will stay the one, and cleanse, yea, and heale the other, so as the patient shall recover perfect health. Garlick maketh folk to sleep well, and giue it a good, fresh, and ruddy colour to the whole body. Garlick stamped with green Coriander, and drunken with strong wine, increaseth the heat of lust, and prouoketh to Lecherie. But as many good properties as Garlick hath, it is not without some bad qualities for them againe. It maketh the eies dim, it breedeth windinesse and ventositie, it hurteth the stomack, ouer liberally taken, & *causeth thirst; but let me not forget among other vertues which it hath: namely, that if it be giuen to Hens, Cockes, and other Pulleine, among their corne, it will keepe them from the pip.

As

A As for Horses, Mares, Asses, and such like beasts that cannot stale, or be groud and wrong in the bellie: stampe Garlick, and therewith rub the shap and naturall parts; it will prouoke the one, and ease the other.

CHAP. VII.

¶ Of wild Lettuce, as well that called *Caprina* as *Efopus*. Of *Isatis* and Garden Lettuce.

The first kind of Lettuce that groweth wild of it selfe without mans hand, is that which is commonly called *Caprina*, i. Goats Lettuce. This hearbe hath a propertie, that if it be thrown into the sea, it will presently kil all the fishes that approach neere vnto it. The milkie iuice of this Lettuce being turned thick, and soon after mixed with vinegre, to the weight of two Oboli, and one Cyath of water put thereto, is giuen with good successe to those that haue the Drop sic. The stalks and leaues stamped, with some salt strewed among, and so applied as a cataplasme, do heale vp the sinews that be cut or wounded. The same herb being brused together with vinegre, preferueth a man from the tooth-ach, if he vse two mornings euery moneth to wash his mouth with a collution made thereof.

A second kind there is of wild Lettuce, which the Greeks name *Efopus*. The leaues thereof being beaten in a mortar and with barly floure, applied as a pulsette, heale all vlcers: this groweth ordinarily in corn fields.

A third sort comming vp in the woods, is named otherwise * *Isatis*. The leaues wherof being likewise beaten together with Barley-meale or floure aforesaid, cureth green wounds.

A fourth kind there is besides of wild Lettuce, named *Glastrum*, i. Woad, wherewith diuers vse to colour their wooll. It might be likened to the wild Dock for the leaues, but that they be more in number, and of a blacker green withall. This hearb stancheth bloud. It represseth and cureth the fierie and eating tetter, the cankerous and filthy vlcers also which run and spread ouer the whole and sound parts: also it dissolueth swellings before they gather to an head, & tend to supuration. The root or leaues thereof be good against *S. Anthonies* fire, applied in a cataplasme or liniment. It is a singular remedy also for the swelled & puffed spleene; and thus much for their properties in particular, respectiue to each feuerall kind: but to speak generally of them all that grow wild, they agree all in this, that they be white, that their stem growes otherwhiles to the height of a cubit; that both it and the leaues be rough in handling. Of these wilde Lettuces, That which hath round and short leaues, some there be who call *Hieracia*; because that Faulcons and such like Haukes are wont to scrape and scratch this herb to get forth the iuice, wherewith they annoint and rub their eies, and thereby recover their sight, when they perceiue it to be darkened or dim. All the sort of them are full of a white iuice: & the same of the like vertue as is the iuice of Poppies. Ordinarily is this iuice gathered in haruest by incision of the stalk: put vp it is in new earthen pots neuer occupied, and so reserued for many excellent effects that it hath. For first and formost, being applied with womans milk, it healeth all maladies that the eies be subiect vnto, as namely, it riddeth away the cloudy webs therein, the cicatrices and scars: all filthy sores with a burnt roofover them, and principally disparetheth the mist and dimnesse that troubleth the eie-sight. It is vsually also laid with a locke of wooll to the eies, for to repress and stay the waterish humor that hath found a way thither: the same iuice, if one drink it, to the weight of 2 Oboli, in vinegre and water, is a good purgation. Being taken in wine, it cureth the venomous stinging of serpents. To which purpose, the leaues being parched & dried against the fire, their tender stems also being brused, are drunk with vinegre. A liniment made of them, is passing good against the prickling of scorpions, but peculiarly for the sting of the venomous spiders *Phalangia*, there must be wine and vinegre mixt therewith. Soueraigne defence, ties also these wilde Lettuces be, against other poisons; saue those that kill by strangling and suffocation, or such as haue a special spight to the bladder; neither are they of any power against

Ceruse or white lead. A cataplasme made thereof with hony and vinegre, & so laid to the belly, purgeth the rotten humors, & expelleth the worms therof bred: their iuice is singular good for them that pisse with pain and difficulty. *Cratogeomys* prescribeth to giue the weight of 2 Oboli of the said iuice, in one Cyath of wine, to those that be in a Drop sic. Some there be who draw the iuice out of the garden Lettuce also for the same purpose, but not with like effect. The peculiar propertie

It should seeme he meant here the *Tithymalus*, which be *Lactariae*.

* *Pliny* should seeme here to be deceived: for *Isatis* is the same that *Glastrum*, i. Woad, and the wilde therof indeed is leaved like Lettuce which was the occasion of his error.

properties of which Lettuces, I haue partly written of heretofore, & namely, how they procure sleep, abate fleshy lust, coole intemperat heats, cleanse and strengthen the stomacke, and finally, increase blood.ouer and besides, they haue other properties not a few, for they resolute and dissolue ventosities, they breake winde vpward, and make one rift and belch sweet, and finally help digestion, and of themselves cause no crudity in the stomack. Certes, I cannot say of any thing else but it, that being eaten, both giueth an edge to appetite, and also dulceth the same: and all according as it is taken, more or lesse. By the same reason also, if a man eat liberally of them, they will make the belly soluble: if in a meane, they will stay a Laske, and bring the bodie to costiuenesse. They cut and dissolue the grosse viscositie of slimie fleame: and as some Physiti- ans haue written, do clarify the senses. Moreouer, if a mans stomacke be quite gone, so that hee neither desireth to receiue any thing into it, nor can hold and keepe that which it receiueeth, he shall find notable comfort by eating of garden Lettuce. But for this purpose they must be ta- ken vnwasht, with some sharpe sauce made with vineger, to the quantitie of a certaine Oboli, yet so, as that the tart and harsh taste thereof be tempered with some wine cuit or other sweet liquour for to dip into. Moreouer, this regard ought to be had, that if the fleame lying in the stomacke, be very tough and grosse, the Lettuce would be eaten with vineger of Squilla or the sea-Onion, or else with Worme-wood Wine: and if the Cough bee also busie, then Hy- scope Wine would be mingled withall. In case there bee a fluxe occasioned by febleness of the stomacke, then would Garden Lettuce be eaten together with wilde Endiue or Cicho- rie: and so are they good also for the hardness and swelling in the mid-riffe and about the heart.

White Lettuce eaten in good quantitie, helpeth the infirmities of the Bladder, and agree-
very well with those who be troubled in their brains, and ouercharged with melancholy. *Praxa-*
goras aduised also, That they should be eaten for to helpe the bloody flux. Moreouer, if they be
laid presently (in manner of a liniment, with salt) vpon a burne or scald, while it is new, and be-
fore the place blister, they will fetch out the fire and do very much good. They keepe downe
and repress cancerous vlcers, that would be running and eating into the flesh, if they bee ap-
plied at the beginning with salt. petre, and afterwards with wine. Being brused into a liniment
they heale *S. Ambrosius* fire, if the place be annointed therewith. If their stalkes or stemmes bee
stamped with drie grout or Barley meale, and laid too as a cataplasme with cold water, they mi-
tigate the pains that follow dislocations or lims out of ioint, they affwage also dolorous cramps
and convulsions. Being applied in manner of a pulsette with wine and dry Barley groats, they
do allay the grieue of red and angry wheales. Moreouer, they were wont in times past to boile
them betweene two platters, and so giue them for the disease Cholera, wherein choler is so out-
ragious, that it purgeth vncessantly both vward and downward. But for this purpose, there
would be choise made of the fairest and greatest stemmes, such also as are bitter, for they bee
best. Some to the same effect, make a decoction of them in milke, and so minister it vnto the
patient in a clyster. These stalkes being well and thoroughly boiled, are said to be very whole-
some for the stomacke also: like as, for to procure sleepe, the garden Lettuce is thought most
effectuall, namely, that which is bitter and yeeldeth store of milke, which hertofore we haue ter-
med *Meconis*. This milke Physicians prescribe with very good successe for to clarifie the eie-
fight, namely, if it be mingled with womans milke, and the forehead annointed therewith in good
season and betimes. After the same manner it helpeth the infirmities and diseases of the eyes,
proceeding from cold causes. Other vertues and commendable properties besides I finde in
Lettuce, of strange and wonderfull operations. And namely, that it cureth the diseases of the
breast, as well as Sothern-wood doth, if it be taken with the best hony of Athens. *Item*, That if a-
ny women do eat thereof, they shall haue their monthly sicknesse come orderly. Also, that the
feed of garden Lettuce is giuen to very great purpose against the pricke or sting of any veno-
mous Scorpion. Moreouer, That if the seed be stamped and taken in wine, it secureth one from
the imaginarie fantasies of *Venus* delights, in sleepe, and the pollutions also that thereof do insue.
Finally, that certain waters which vse to intoxicate and trouble the braine, shall neuer hurt them
that eat any Lettuce. Howbeit, some are of opinion, that the ouermuch vse of Lettuce at meat
enfeebleth the eies, and impaireth their cleare sight.

¶ *Of Beets and their sundrie kinds. Of Endive. Divers sorts of Cichorie. Of garden Endive, and two kinds thereof.*

THe Beets of both sorts are not without their medicinable vertues : for be it the white or the blacke, if one take the root thereof fresh and new out of the ground, wet it thoroughly, and soke it well in water, and then carry it about him hanging by a string or lace, it is a soveraigne preservative against the biting of serpents. The white Beet boiled and eaten with raw Garlick, expelleth the broad wormes in the belly. The roots of the black, sodden after the same manner in water, rid away the dandruffe or unseemly skales within the haire of head or beard. **B** And indeed generally for any vse, the black Beet is more effectuell than the white. The iuice thereof is singular good for an old and fetled head-ach. For the dizziennes or swimming in the head. Also, it riddeth away the singing and ringing in the eares, if it be dropped into them. It procureth vrine : being injected by a clyster, it cureth the bloody flux : it helpeth also the laun-
C
pise. Moreover, the said iuice appeaseth the intolerable pain of tooth-ach, if the teeth be rubbed or annointed therewith. Singular it is, against the stinging of serpents : but then it must be drawne from the root only. And make a decoction of the said root, it helpeth kided heeles. As for the iuice of the white Beets, it staieth the rheume or waterish humor that falleth into the eies, if the forehead be therewith annointed. And put but a little Allum thereto, it is an excellent remedy against *S. Anthonies* fire. White Beets only stamped, although there come no oile vnto them, healeth any burne or scalding, if the place be therewith annointed. Moreover, against the breaking out into red and angry pimples, the same is very good. But seeth Beets, and make thereof a liniment, it represseth the vlcers that run and spread abroad. The same being raw, rubbed vpon the bare places, where the haire is shed, recouereth haire, yea, and staieth the running skales of the head. The iuice of these Beets tempered with honey, and snuffed vp into the head by the nostrils, clenseth the braine. There is a certain meat made with * Beets & Lentils boiled together, which commonly is eaten with vineger for to make the body laxatiue. The same being ouerfodden to a thicke consistence, staieth both the turning of the stomacke, and flux of the belly.

D There is a kind of wild Beet, which some name Limonion, others Neuroides: it hath leaues much lesse and tenderer than the other, howbeit, growing thicker, & rifest vp many times with eluen stalks. The leaues of this Beet are very good for burnes and scalds: they restraine and stay all Fluxes by drop meale, which breed the Gout. The seed being taken to the quantity of one Acetabulum, cureth the bloody flux, & healeth the vlcer of the guts that causeth the same. Some say, that if this Beet be sodden in water, the decoction will scoure and take out any stain in cloth, euen the very iron-mole: likewise it will wash away any spots in parchment.

Now as touching Endiue or garden Cichorie, furnished also it is with many properties effectuall in Physicke. The iuice thereof mingled with oile Rosat and vineger, allaieth the paine in the head. The same if it be drunk with wine, is good for the liuer and bladder. Also, if it be laid to the eies, it stoppeth the humor that hath taken a course thither. The wild Cichorie, that groweth wandering here and there abroad, some of our Latin writers name * Ambugia. In Ægypt they cal the wild Endiue, Cichoreum; & the tame garden Endiue, Seris: the which indeed is lesse than the other, fuller also of ribs and veines, As for the wild, which is Cichorie, it hath a cooling nature, being eaten as meat; but applied in forme of a liniment, it is good against the collection of humors that ingender imposthumes. The iuice of it foddren, doth loosen the belly. Wholesome it is for the Liuer, the Kidnies, and the Stomack. Likewise, if it be boiled in vineger, it resoluth the painfull torments occasioned by the stopping or difficulty of vrine, and openeth passage to make water at ease. Moreover, if the iuice or decoction thereof be drunk with honied wine, it cureth the Iaundise, so it be without a feuer. It is comfortable also & helpfull to the bladder. Boiled in water, it is so powerfull to bring downe womens termes, that it is of force to send out the child, if it be dead in the mothers belly. The Magitians say moreover, that whosoeuer annoint their bodies all ouer with the iuice of this herb and oile together, they shal be right amiable, and win the grace and fauor of all men, so as they shal the more easily obtain whatsoeuer their heart stands vnto. And verily, for that it is so singular and wholesome to mans body, some giue it the name of *ἰατρικὴ*, others of *καταπρατική*.

* For that being eaten with meat, it maketh the breath sweet.

As for another wild kind, some call it *Hedynois, & that hath a broader leafe than the rest. Being sodden, it is astringent and will strengthen a weak stomach: and eaten raw, it bindeth the belly and staith the lask. Hotesome it is for such as haue the bloody flux, the rather if it be taken with Lentils. In sum, as well raw as sodden, both kinds, the one & the other, help those that haue cramps and ruptures. Comfortable it is likewise to such as vpon occasion of debility or sicknesse, haue their nature or seed run from them against their wills.

Touching Cichory of the garden, which is very like vnto the Lectuce, there be two kindes thereof, but the green that seemeth to be of a wilde and savage nature, is the better: of a more brown and dusky colour it is, and a Summer herb only. The other indeed is whiter and continueth all winter, howbeit worse of the twaine: and yet both the one and the other, are right comfortable to the stomach, especially when it is ouercharged with waterish humors. Beeing eaten in a salad with vinegre at meat, they refresh and coole mightily: so do they also in forme of a liniment, and by that means resolute other humors besides those in the stomach. Generally the roots of all wild Cichories being sodden with barley grouts to a gruel, and so supped off do comfort a weak stomach. Being reduced into a liniment, & applied to the region of the heart about the left pap, with vineger, they cure the trembling thereof, and the faint cold sweats that break out vpon weaknesse. All the sort of these Cichories as well tame as wild, being taken in broth each other day, be good for gouty persons, for such also as reach and cast vp blood, shed their sperm or haue the running of the reins. Howbeit *Petronius Diodotus* in his booke intituled *Contradictions, utterly condemned the garden Endiue Seris, and alledged many reasons and arguments to confirme that position of his; howbeit the whole colledge of all Physicians besides stand against him.

CHAP. IX.

¶ Of Garden Coleworts, *Lappas*, Sea Coleworts, or *Soldanella*; of *Squilla*; of other bulbous roots, as the Potatoes: and of *Bulbium*.

THE commendable proprieties of the Colewoort are so many, that it were a long labor to decipher them all, considering that both *Chrysippus* and *Diocles*, two Physitians, haue compiled each of them a booke particularly of this herbe, wherein they haue collected their virtues, as they be appropriat and respectiue to euery part of mans body; yea and before all others, *Pythagoras*, and after him *Cato*, haue as amply set out the praises thereof. As for *Catoes* opinion and judgement of the said herb, I am the more willing in this place to set downe and follow diligently, because it might be knowne what simples and what drugs they were which the old Romans vsed for their Physicke * 600 yeres after the foundation of the city. The Greeke writers of greatest antiquity, haue made three kinds of Coleworts; to wit, the crisped or ruffed cole, which they called *Selinas* or *Selinoides*, for the resemblance that the leaues haue to Parsley: these Coleworts be good for the stomach, and gently loosen the belly. The second sort is named in Greeke * *Lea*, with broad leaues springing forth from a great stem: whereupon some haue giuen it the name of * *Caulodes*: these woorts are to no vse at all for Physicke. The third is properly called by the name of *Crambe*; very well stored with leaues this is, but those are smaller than the rest, simple also & plain: bitterer besides this Cole is in comparison of others; but most effectually in Physick. Howbeit, *Cato* preferreth before all, that which is crisp and frizled: next vnto it, the smooth Cole, with the large leaf & big stalk. He commendeth the Colewoort (stamped raw together with vineger, honey, Coriander, Rue, Mints, and the root of *Laser*) to be singular good for the head-ach, the mist and dimnesse of the eyes, the appearance of sparkling mores before them, the stomach and precordiall parts; if a man take fasting 2 Acetables of this composition. And he saith moreover, that this confection is so soveraign, that they who do but bray and beat the ingredients, shall sensibly find themselves mightily comforted and fortified thereby. And he concludeth withall, that Coleworts may be either stamped together with the foresaid species, and so taken in a supping; or els be eaten, first dipped and soked in the forenamed liquor: as also that a liniment made of them, together with Rue, a little Coriander, some few corns of salt, and barley meale, is soveraigne to assuage the paines of any gout, be it in feet, hands, or any other joint whatsoeuer. Moreover, that a decoction made thereof, doth wonderfully comfort and fortifie the sinewes, yea and mitigate the arthriticall griefes or ioint-ach, if

* For about that time *Cato* liued.

* i. Smooth

and plain.

* i. The stem-mic Cole.

A if the parts be tormented therewith.ouer and besides, a fomentation made therewith, is singular for all fresh wounds, old vlcers, yea and cankers, which could not possibly be repressed or healed by any other medicines: but he appointeth first that they be bathed in hot water, and then a cataplasme of the said worts to be laid vpon the afflicted place, and the same to be refreshed twice a day. By which manner of cure, he saith, that fistulous sores may be healed; dislocations set straight, swellings and imposthumes drawn outward to an head; or otherwise where need is, discussed & resolved, before they tend to suppuration. He addeth moreover & saith, that whosoever eat good store of sodden Coleworts, together with oile and salt fasting in a morning, shall fall to sleep again in the night if they were before ouercharged with watching, & in their sleep shall not be troubled with dreams or other vnquiet fancies and imaginations. Furthermore he affirmeth, that worts twice boiled, are excellent good for the torments and wrings of the belly, so there be ioyned to the second decoction, oyle, salt, cumin, and barley groats; and thus beeing eaten without bread, they are the better among other effects that these Coleworts do work, this is not to be forgotten, that they purge cholerick humors, being taken with sweet grosse wine. More than that, he auoucheth, That if his urine, who vse to feed of Colewoorts, be reserved, it is singular good for the sinews, if the grieved part be bathed therein after it is made hot again. But because you should fully vnderstand his meaning, I care not much to set downe his very words for to expresse the same the better. If (quoth he) you wash little children with the said vris prepared in manner aforesaid, they will neuer beweak and feeble in their limbs. He aduise th moreover, to drop the juice of Colewoorts warme into the eares with wine, and assureth vs that it is good for them that be hard of hearing. Finally, that ringworms, nettars, itch, and dry scabs (such as be not exulcerat) are healed thereby.

Now concerning the opinion of the Greeks also, as touching Coleworts, I thinke it meet to set them down for *Catoes* sake, I mean touching those points only that he ouerpassed and omitted. First and formost therefore, the Greeks hold, that the Colewoort being not thoroughly sodden, purgeth choler & keeps the body soluble; howbeit twise sodden, it bindeth the belly. Item, That it is contrary to wine, and a very enemy to vines. And more particularly, if it be taken fasting, or in the beginning of a meale before other meat, it preferueth a man from drunkennesse, and eaten after meat when a man is drunken indeed, it riddeth away the fumes in the brain and bringeth him to be sober. Also, that it is a meat appropriate to the eyes, and cleareth the sight very much; in so much as the iuce of it raw is passing soveraigne for that purpose, in case it be mingled with the pure Atticke hony into an eie-salue, and therewith the corners of the eyes be but touched only. Moreover, that it is passing light of digestion, and clarifieth all the senses, if it be ordinarily eaten. *Erasistratus* and all his schoole, doth ring and resound again with one voice and open mouth, That there is nothing in the world better for the stomacke, nothing more wholsome for the sinews; and therefore with one accord they prescribe the vse thereof, for those that haue the palse or resolution of the nerues; for as many as be troubled with the trembling and shaking of their limbs, to such also as reach & cast vp blood. *Hippocrates* giueth counsel to them that be afflicted with the bloody flux or exulceration of the guts; to those likewise who be subiect to the flux proceeding from the weaknesse of the stomacke, for to eat it twise sodden with salt. Also he prescribeth it in the cure of *Tinesmos* (which is a prouocation or extraordinary appetite to leage, without doing any thing;) and of the paine in the back or reins. And he is of this judgement, That women in childbed shall be good nourses and haue plentie of milke, if they eat of Cabbages or Coleworts; yea and women in generall, by feeding thereupon, shall see their monthly termes duly. As for the Cole it selfe, if it be chewed raw, it is (by his saying) of force to expell a dead infant in the wombe. *Apollodorus* holdeth resolutely, That either the seed or iuce thereof taken in drinke, is a singular remedy for them who suspect that they haue eaten venomous mushrooms. *Philistion* giueth the iuce thereof in Goats milke, together with salt and honey, vnto such as haue a cricke or cramp drawing their necks backward, that they are not able to turne their heads. I find moreover, that by eating Coleworts at meat ordinarily, and by drinking the decoction thereof, many haue been deliuered from the gout. It is an vsual medicine and approved by experience, to giue it with salt for the fainting sweats & trembling of the heart, as also for the falling euill. Such as be troubled with the spleene, finde much ease thereby, if they continue drinking the iuce thereof in white wine at their meals forty daies together; like as those that be sped with the yellow jaunise, or in fits of frensie, be cured with

with gargling & drinking juice of Cole-roots raw. But against the Hocquet or Yex, there is a notable medicine made with it, together with Coriander, Dill, hony, pepper, and vineger. If the pitch of the stomacke be annointed therewith, the Patient shall evidently perceiue, that it will dissolue the wind and puffing ventosities therein. Also, the very water of the decoction incorporate together with barley-meale, vnto a liniment, is singular good for the stinging of Serpents, and mundifieth filthie old vlcers: to which purpose also serueth the juice thereof, applied with vineger and Foenigreek. After the same manner, some make a cataplasme, and apply it to goutic joints. The bloody, falls and blistering chilblanes, and generally all humors that ouer-run the body and fret the skin, are allayed by the application aforesaid. In like manner, the sudden mists and dimmes which commeth ouer the eie-sight, is dissolued & dispatched clean, in case one do no more but chaw this herb in vineger. A liniment made with it and * brimstone together, helpeth the black and blew spots of dead brused blood lying vnder the skin, and reduceth them to their owne colour. But if round alume and vineger be joined therewith, it cureth the white leprosie, and dry scab [called of some *S. Magnus euill.*] And in that manner prepared, it keepeth the haire fast that is ready to shed. *Epicharmus* saith, That this herb is foueraigne good to be implastred vpon those tumors and swellings that be incident to the priuy members, and the rather, if the said implaster be made with bean meale. The same being applied with Rue, is good for convulsions or crampes. Moreouer, there is a medicine prescribed to bee made of Coleworts and Rue-seed, against the extreme heat of feuers ardent, as also for the defects and infirmities of the stomack, and to send out the after-birth in women newly laid. The powder of Colewort leaues dry, doth expell or euacuate one way or other, the venome left behind by the biting of the hardy shrew-mouse. Of all kinds of Coleworts, the sweetest and most pleasant to the tast, is the * Col-flory, although it be counted good for nothing in Physick, and besides vn-wholsome, as being hard of digestion and an enemy to the kidnies.ouer and besides, I must not forget this one thing of Coleworts, That the broth or decoction thereof (so highly praysed for many good vses that it is put vnto) if it be poured on the ground, hath but a stinking smel with it. Wort-stocks being dried and burnt into ashes, is thought to be a caustick medicine or potentiall cautery. The same ashes mingled with old greafe and reduced into a cataplasme, helpeth the pain of the Sciatica: but with Lafer and vineger, it is a depilatory, (.) keepeth the hayre from growing againe where it was once fetched vp by the roots. The sayd Colestocke ashes set ouer the fire vntill it suer only, or haue one walme at the most, and so drunk with oyle, or otherwise foddren, and the decoction taken alone without oyle, is good for Spasmes and crampes, for inward bruises, and for such as are false from some high place. Lo, what a number of prayse-worthy vertues are recounted of Coleworts! And is there (I pray you) no fault to be found with them: are they blamelesse? ywis no: for euen those writers who extolled them so highly, note them for making a stinking breath, and for hurting the teeth and gums: insomuch as in Egypt, they be in so bad a name for their bitternesse & vnpleasant tast, that no man knoweth how to eat them. But to come again vnto *Cato*, he commendeth the effects of the wilde or wandering Colewort infinitely aboue the rest; insomuch as he affirmeth, that the powder of it dried, being gathered and incorporat with some conuenient liquor into the forme of a pomander, or otherwise strewed vpon any posie or nosegay, so as it may be receiued and drawn vp into the head by the nostrils, cureth the * filthy vlcers growing therein, and the stinking smel that commeth from them. This Cole-wort, others call *Petraea*, and this is that which of all the rest is most aduerse and the greatest enemy to wine; this is it that the vine (by a secret Antipathie in nature) doth especially auoid, if it haue room to decline from it; but in case she cannot shift from it, she dieth for very griefe. This plant hath the leaues growing two by two together, and those small, round, smooth, and liker indeed to the young plants of * Beets than to other Coleworts; whiter also it is, and more rougher clad with a mossie downe, than is the garden Colewort. *Chrysippus* writeth, That it is a foueraigne medicine for flatuosities, and such as be oppressed with melancholy: that it is a singular salue for fresh wounds, being applied with hony; but with this charge, That the plaster be not taken off in seuen daies. Also, if it be stamped and applied with water, it is an excellent cataplasme for the Kings euill, and fistulous inward vlcers. Other Chirurgions and Physitians do affirm, that it represseth running & corrosiue sores which eat into the flesh, such as the Greeks name *Nomus*. *Item*, that it doth extenuate and resolue all excrecence of proud, ranke, or dead flesh; yea, and it doth incarnat, heale vp, and skin very faire without

*Cum Sulphure illita.

*Gyma.

*Some call it Petraea.

*Oleria.

A without skar, by their saying. Moreouer, if it be chewed, or the juice thereof gargarised with hony, so that the herb were fouden before, it cureth the sores in the mouth called cankers, as also the mumps and inflammation of the kernels in the throat, called amygdales, or almonds. Semblably, if a man take three parts of this herbe, with twaine of alume, and together with Vinegre make a liniment thereof, it will cleanse the inueterate dry scab, and the mortified leprosie. *Epicharmus* is of opinion, That for the biting of a mad dog, a man need doe no more but lay to the fore a cataplasme of this herb alone: but surer it were (saith he) and more effectual, if Lafer and strong sharp vinegre were ioyned thereto. He addeth moreouer and saith, That if it be giuen to dogs with some piece of fleish it will kill them. And yet the seed being parched is a remedie against the sting of serpents, and a countre-poison to venomous Mushrooms and Buls blood. The leaues boiled and giuen with meat, or otherwise raw and made into a liniment together with brimstone and nitre, help those that be diseased in the splene. The same liniment mollifies the hard swellings of womens breasts. The ashes of the root being burnt, cure the vula, or swelling of the wezil in the throat, if it be but touched therewith. Also a liniment thereof with hony applied to the inflamed kernels behind the eares, represseth them, yea and healeth the stinging of serpents. I haue not yet done with the Colewort and the vertues thereof; but one instance more I will giue you, to proue the wonderfull force and effect that it worketh. If any brasie pot caldron, or such like vessel wherein we vse to seeth water ouer the fire, haue gathered in continuance of time a fur or crust baked within, such as by no washing or scouring can be rid away, bee the same neuer so hard, deep settled, and inueterate; boile but a cabbage or Colewort in it, and the same will pill and go from the pot sides.

Among wild worts we may place *Lapsana*, a plant growing to the height of a cubit, bearing a furred or hairy leafe, like for all the world to the Navey, but that the floure is whiter. This herb is commonly foddren and eaten in pottage; and so taken it moderately loosneth the belly.

The sea Colewort [otherwise named *Soldanella*] of all others purgeth most forcibly: in regard of which acrimonie that it hath to stir the belly, Cookes vse to seeth it with fat meat, and yet is it most contrary to the stomack.

Touching Squills of Sea-Onions, Physitians hold that the white is the male, and the blacke the female: but the whitest of them be euer best and of most vse. The maner of preparing and dressing them is after this sort: First, the dry tunicles or skins being pilled off, the rest, which is quick and fresh vnderneath, must be cut into slices, & so infiled vpon a thred along, with a pretty distance between euery one, and hanged vp to dry: afterward, when the morcels be sufficiently dried, they are to be put, hanging still as they did by a string, into a barel or vessel of the strongest and quickest vineger that can be gotten, and therein they must hang so as they touch no part of the said vessel: but this would be set in hand with 48 daies before the summer solstice. Which done, the barrel of Vineger before said being well luted and stopped close with plastre, must be set vnder a rooffe of tiles, to receiue the heate of the Sun all the day long from morning to night. Now when it hath bin thus sunned so many days as are before named, the vessel is removed from vnder the case of tiles, the Squilla taken forth, and the vinegre poured out into another vessel. This vinegre clarifieth their eie-sight who vse it: comfortable it is to the stomack and sides, and asswageth their paine, if it be taken in small quantitie once in two daies: for if a man should dring ouer-liberally of it, so forcible it is that it would take away his breath, and cause him to seem dead for the time. Squilla chewed alone by it selfe is wholsome for the gums and teeth. Being drunk with vineger and hony, it chafeth out of the belly the long flat worms and all other such like vermin. If it be but held vnder the tongue while it is greene and fresh, it allaieth thirsting in the dropic, and causeth that the Patient shall desire no drink. The boiling of Squilla or the sea-onion is after many sorts: for some, after they haue either well luted, or els greased it all ouer with fat, put it into a pot of earth, and then set it into an ouen or Furnace to be baked. Others slice it into gobbets, and so seeth it between two platters. Some take it green and dry it, then they cut it in pieces and boile it in vineger; and being thus vfed and

F prepared, apply it to the places which be stung with serpents. Others againe rost it first in the embres, and after they haue cleansed it from the vtmost pilling, take the best of it onely in the mids, and seeth the same again in water. Being thus baked and sod both, it serueth to be giuen in a dropic. And if it be drunk to the quantitie of three Oboles with hony and vinegre, it prouoketh vrine with ease. In like maner, this composition is good for those that be troubled with

the spleene, or haue weak and feeble stomacks, or be troubled with gnawing and pain there, such also as cannot hold their meat, but it will flote aboue and come vp again: provided alwaies, that there be no vicer within the body. Moreouer, it is excellent good for the wringing in the guts, the jaunise, the old cough, with shortnesse of wind. The leaues emplaistred resolue the wens or swelling kernels in the neck, commonly called the Kings euil, but they must lie foune daies before they be removed. Being sodden in oile and reduced to a liniment, and so applied, it murthereth the skurfe or dandruffe of the head, the running skalls likewise that are bred there. It is vsed also (boiled vp with hony into a certain confection) taken with meat for to helpe digestion, and in that sort it purgeth the intrals. Sodden in oile and tempered with rosin, it heales the chaps and clifts in the feet. The seed of Squilla implastered with hony vpon the reines of the back or the loins, ease the pains. *Pythagoras* was of opinion, and so reported, that if the Squilla or Sea-onion were hanged vp in the entry of any dore, it kept out all charms, enchantments, or forceries. And thus much of Squilla.

Moreouer, the plants called Bulbs, being applied in form of a liniment, with brimstone and vinegar, do cure the wounds of the visage: and stamped by themselves alone, and so laid to, they help the contraction or shrinking of sinues: and if there be wine added thereto, it clenseth the dandruffe in head, beard, and eye-browes: but applied with honey it cureth the biting of mad dogs: howbeit *Erastophanes* taketh pitch in stead of hony for the said purpose: who writeth besides, That a cataplasme of them and hony together, stancheth blood in a green wound: but others ioyne Coriander and corn-meale to the rest, properly for bleeding at the nose. *Theodorus* cureth wild tetter and ring-wormes therewith, being applied with vinegar: and with stypticke harsh wine, or an egg, he vseth it for the breaking out in the head. Moreouer, a liniment made of Bulbs he applieth about the rheumaticke humors that fall to the eies, and by that means cureth those that be bleere eyed. Semblably, the red of this kinde especially reduced into a liniment, and first incorporat with hony and nitre, taketh away all the spots and blemishes that disfigure the face, if they be anointed with it in the sun: but with wine and Cucumber sodden they rid away also the red pimples. They be wonderfull good of themselves alone for green wounds; or with honied wine (according to the practise of *Damian*) so they be not removed in fūe dayes; and he was wont therewith to cure cracked eares also, and the flatuous flegmaticke tumours of the cods. Others there be who apply them with meale mingled among, to assuage the pain of the gout. Sodden in wine, and so applied as a liniment to the belly, they mollifie the hardnesse in the precordial parts and midriffe: and for the bloody fluxe, a drinke made thereof, together with raine water and wine, is a singular remedy. Being taken in pills as big as beanes, with Silphium, they are souveraine for the contraction of nerues or inward crampes within the bodie. Stamped into a liniment, they restrain immoderat sweats that be diaphoreticall. Comfortable they be to the nerues, and therefore they are prescribed and giuen in case of the palsie. Those with the red roots being made into a cataplasme with salt and hony, doth speedily cure the dislocations of the feet that be out of ioynt. The bulbs of Megara especially do prouoke lust. As for those that be called Hortensij, taken with Cuit wine or Bastard, make speedy deliuerance of the child out of the mothers belly. The wild bulbs brought into the form of pills, with Lascipitium, and so swallowed downe, do heale inward wounds and other maladies of the intrals. The seed of the garden Bulbes in wine, is a good potion against the sting of the spiders called Phalangia: and the roots with vinegre serue for a liniment against the stings of other serpents. The ancient physicians in times past were wont to giue the seed in drinke to them that were out of their wits. The floure of these Bulbes being bruised into a Cataplasme taketh away the red daped spots in their legs who haue sit neere the fire and burnt their shins. But *Diocles* is of opinion, that all these bulbous plants do dim the eie-sight: who saith moreouer, That they are not so good boiled as roasted: and yet be they all (saith he) hard of digestion more or lesse, according to the nature of each one that eateth them.

There is an herb which the Greekes call Bulbine, with a red bulbous root, and leaues resembling Porret: of which there is a singular good salve made for to heale green wounds, but none els. To conclude, as touching the bulb called Vomitorius (of the effect that it hath to prouoke vomit) it hath blackish leaues, and those longer than the rest.

CHAP.

CHAP. X.

¶ Of Garden Sperages, and the wilde Sperage Corrua: of Lybicum and Hormenium.

Of all Garden herbs, the Sperages are (by report) the best meat to be eaten, and agree passing well with the stomach, and verily being taken with Cumin, they dissolve the ventosities in the stomach, and dispatch the wind cholick, and withall they cleare the sight passing well. Kindly do they mollifie the belly and keep it soluble. If they be sodden in water, and a little wine put thereto in the boiling, and so giuen to drinke, they are very good for the pain of the brest & the backbone, for the diseases also within the guts. If one take the weight of three Oboli of the seed, and as much of Cumin, and so drinke it in some conuenient liquor, hee shall find a singular remedy for the pain of the reins, hanch, and loines. Garden Sperages sollicit vnto the game of loue, and procure good deliuerance of vrine; for which they had no fellow, but for feare that they will fret and exulcerate the bladder. Most Physicians doe highly commend their roots bruised and taken in white-wine, for to expell the stone and grauell; as also to allay the pains of the reins, flanks, and loins. Some there be, who giue to drinke in some sweet wine the said root, for the gricuous pains of the matrice: and the same being well and thoroughly boiled in vineger, is a souveraine remedy for the leprosie, to as many as will vse to drinke the said decoction. If a man be anointed with Asparagus or garden-Sperage, stamped together with oile and so made into a liniment, there will not (by report) a Bee come neere for to sting him.

The wild Sperage, some name it Corrua, others Lybicum, but the Athenians call it Hormenium: this herb is more effectually in all those matters aboue rehearsed than the former, & the whiter that it is, the greater force it hath. The jaundice it doth dissipate and driue away. When it is sodden in water, the decoction thereof to the quantity of a * wine pint or somewhat lesse, is vsually prescribed to them that desire to performe the act of generation lustily. For the same purpose also, the seed thereof and Dill, of each three oboli, is counted very good beeing taken in drinke. The iuice thereof boiled, is giuen against the stinging of serpents. The root of it and Fennell together, is thought to be most singular and of greatest efficacy in that case: for pissing blood, *Chrysippus* prescribeth to giue in two cyaths of wine for fūe daies together, three oboli of the seed of Asparagus, Parsley, and Cumin; but he saith withall, That this medicine is nothing good for the dropsie, notwithstanding that it is diuretical and prouoketh vrine. Also that it is aduerse and contrary to the delights of *Venus*, yea and to the bladder, vnlesse the same ingredients be sodden; and yet will that decoction kill dogs if it be giuen to them. To conclude, the iuice drawne out of the root thereof, being first boiled, and so held in the mouth, is good for the teeth.

CHAP. XI.

¶ Of Parsley, wild Ach, of Smallach, and Ach of the mountains.

Parsley is in great request, and no man lightly there is but loueth it: for nothing is there more ordinary, than to see large branches of Parsley good store, swimming in their potage: and commonly you haue not a sallad or sauce serued to the boord, you see not a piece of meat farced or seasoned, but Parsley carrieth therein a great stroke, and contenteth euery body.ouer and besides, if it be applied as a liniment, together with honey vnto the eies, so that they be fomented also ouer and anon with the hot iuice of Parsley boiled, it is a singular remedy for the humours distilling thither. Also, if it be stamped by it selfe alone, or els with bread or barley groats, it wonderfully helpeth the defluction falling vpon any other part, if the same be laid vpon the place afflicted in maner of a cataplasme. Moreouer, if a man perceiue that the fish in any pond or stew do mislike and grow sickly, it is a common practise to giue them green parsley to scoure and refresh them. Howbeit, for all that Parsley is so good, there is not an herb growing vpon the face of the earth, that learned men varie and disagree in opinion more about, than they do in it; & yet they hold all, that there is a distinct difference therein by the sex: for of Parsley there is both male & female; many which is the one & which the other, they accord not. *Chrysippus* saith, That the female hath more crispe & curled leaues than the male, and those boistrous & hard; that the stalk is thick, & the tast of the herb biting & hot. *Dionysius* describes it

to be more blackish, hauing a more stubbed & short root, & that it is apt to breed little worms. Both of them jump in this, that it is not to be admitted to the table, nay, they forbid to eat of it at all. Making a matter of conscience once to touch it as a meat, and why for because, forsooth, it is one of the viands ordained to be serued vp at funerall feasts. Our and besides, Parsley is thought to be an enemy to the eyes, and to trouble the sight. Also that the stem of the female ingendreth grubs & such like wormes; and so, whoeuer eateth thereof, man or woman, shall thereby become barren. Moreouer, they affirm, that if women newly deliuered, or such as nurse children, do eat of Parsley, the babes that suck and draw their breasts, shall be subiect to the falling sicknesse. And yet of the two, the male is lesse hurtfull: which is the very reason that it is not condemned among the forbidden herbs and such as be held vnlawfull to be eaten. Parsley being laid as a cataplasme to womens breasts, doth mollifie their hardnesse, & break the kernills. It giueth a pleasant tast to any water wherein it is sodden: the juice of this herb, & especially of the root being taken in wine, doth mitigate the pains in the loins and flanks: and being dropped into the ears, cureth the hardnesse of hearing. The seed of Parsley moueth vrine, draweth downe womens floures, and fetcheth away the after-birth. Seeth the said seed, and with the decoction bath the black and blew marks remaining after stripes or drie blows, it wil bring them to their own colour again. The same being laid as a liniment with the gleire or white of an egge vnto the reines of the backe, or being sodden in water, and the broth drunken, easeth their paines and strengthneth them. Being bruised & vsed in cold water by way of a collution, it cureth the cankers or vicers in the mouth: the seed drunk with wine, breaketh the stone of the bladder: so doth the root of it also if it be giuen in old wine. Also the said seed in white wine cureth the jaunise.

* It seemeth
thathc meaneth
by *Apiastrum* a kind of
Ranunculus,
i. Crow-foot,
called *Flammula*, out
Specere-wort,
or *apium risu*.

As touching our wild Ach, which we call in Latine * *Apiastrum*, *Hyginus* verily nameth it *Melissophyllon*. A venomous herb this is in Sardinia, and by all writers confession vtterly condemned: for surely I cannot chuse but range together in one rank al such as seem to depend vpon one name in Greeke.

But *Alifanders*, which the Greeks terme *Hipposelinum* is a good counterpoison against the biting of Scorpions. If the seed be taken in drink, it cureth the wrings & torments of the guts. The same being boiled and drunk with honied wine, helpeth the Strangurie and difficulty of making water. The root sodden in wine, expelleth stone and grauell by vrine: it putteth away also the paine of the loins, flanks, and sides. Taken in drinke, or applied as a liniment, it healeth the biting of a mad dog. The iuice thereof in drinke, heateth them that are ready to chill and be frozen with cold.

* Whereby,
some read *Orthoselinum*.

A fourth kind of Ach or Parsley some haue made that, which the Greeks call *Oreoselinum*. A plant this is, growing to the height of a span, and * vpright. The seed resembleth *Cumin*, and is found effectually to procure vrine and prouoke womens termes. Finally, as *Smallage* hath a propertie and vertue by it selfe to heale the pricke or sting of the venomous Spiders: so this mountaine Ach or Parsley of the hill, being taken in wine, is as effectually to bring downe the naturall purgation of women.

CHAP. XII.

¶ Of *Stone-Parsley*, named *Petroselinum*: and of *Basil*.

There is another kind of Ach or Parsley growing vpon rocks, which some call *Petroselinum*. An excellent herb for soule imposthumes and botches, vsed in this manner: take 2 spoonfulls of the iuice thereof, put it into a Cyathe of the juice of Horehound, and mingle all together in three Cyathis of water, and so drink it hot. Some haue set in the range of these *Aches*, that which is called *Buselinon*; which differeth from the garden Parsley, in that it hath a shorter stalk, and a root of red colour: but of the same operation and effect it is. For both taken in drinke, and applied as a liniment, it is of great power against the stinging of serpents.

Also, *Chrysippus* mightily crieth out vpon *Basil*, as being hurtfull to the stomach, suppressing vrine, and an enemy to a cleare sight. Moreouer, he saith, that it troubleth the brains, and putteth folk besides their wits: that it bringeth the Lithargie vpon as many as vse it, and breedeth opilations and diseases in the liuer. In which regard he saith, That Goats by a secret in Nature doe refuse and eschew it; concluding thereupon, that men also should take heed thereof and auoyd it. Some there be who haue not done with it so: but adde moreouer and say, That if *Basil* be

stam.

- A stamped and put vnder a stone, it will breed to a serpent: if it be chewed in ones mouth and layd abroad in the Sun, it wil ingender wormes and magots. The people of Africk are verily perswaded, and so they giue out, That if one be stung with a scorpion the same day that he hath eaten *Basil*, it is vnpossible for to scape with life. Likewise some hold opinion and would beare vs in hand, That if a man stamp a bunch or handfull of *Basil*, together with ten sea crabs, or as many crafishes of the fresh water, all the Scorpions thereabout will meet and gather together about that bait. Finally, *Diodorus* in his Empiricks or book of approued receits and medicines, saith, That the eating of *Basil* ingendreth lice. Contrariwise, the later writers and modern phisitions defend & maintain the vse of *Basil* as stoutly as the other blamed it: for first they auouch constantly, That Goats vse to feed therupon. Secondly, That no man was euer known to go beside himselfe who did eat thereof. Thirdly, That *Basil* taken in wine, with a little vineger put thereto, cureth as wel the sting of land scorpions, as the venom of those in the sea. Moreouer, they asseme vpon their knowledge by experience, That a perfume made of *Basil* and vinegre is singular good to recouer and fetch them again that be gon in a swoond. Also, that in the same maner prepared, it rouseth and wakeneth those that be in a lethargie and sleep continually; yea, and mightily cooleth and refretheth them that be inflamed & in a burning heat. A liniment made with *Basil*, oile *Rosat*, or oile of Myrtles in stead thereof, with vineger, aslwageth the paine of the head. Moreouer, being laied to the eyes with wine, it staith the waterish rheume that runs thither. Furthermore, comfortable it is to the stomach (as they say) for being taken with Vinegre, it dissolueth ventosities, and breaketh wind by rising vpward. Being applied outwardly, it bindeth and staith the running out or flux of the belly, and yet it causeth free passe of vrine in abundance. After the same maner it doth good in case of Jaunise and dropsie. It represseth the rage of choler that moueth both vpward and downward, yea, and staith all defluxions from the stomach. And therefore *Philistio* knew what he did well enough, when he gaue it to those that were troubled with the stomachical flux. As also *Plistonius* was well aduised, in ministering it sodden, for the bloody flux, the exulceration of the guts, and the Collicke. Some there be who giue it in wine to them who run euer and anon to the clofe stoole, sit downe and do nothing: to those that reach and cast vp blood; yea, and to mollifie the hardnesse of the precordiall parts. Being laied as a liniment to the nurses paps, it restraineth the abundance of milk, yea and drieth it vp. There is not a better thing in the world for to be dropped into the eares of little babes and sucking children, and namely with goose-grease. If the seed be bruised, and so snuffed or drawn vp into the nostrills, it prouoketh sneezing. The iuice moreouer laied as a liniment to the forehead, openeth the passages, that the rheumes or cold which lay in the head may breake away. Being taken at meat and dipped in vinegre, it mundifieth the matrice and natural parts of women. Mixed with Copperose or Vitriol, it taketh away warts. Finally it setteth folk forward to venerious pleasure; which is the reason that men vse to lay *Basil* vpon the shap of mares or she Asses at the time of their couering.

CHAP. XIII.

¶ Of * wild *Basil*, *Rocket*, *Cresses*, and *Rue*.

Wild *Basil* is endued with vertues and qualities seruing to all the purposes abouesaid: but the same is of better operation and more effectual. And these properties ouer and besides it hath by it selfe, namely, To cure the weaknesse of the stomach, and those accidents which come by often casting or immoderat vomits. The root thereof taken in wine, is singular good for the apstumes of the matrice, and against the biting of venomous beasts.

As touching *Rocket*, the seed cureth as well the venomous sting of Scorpions, as the biting of the hardy shrew. The same chaseth all vermin that be apt to ingender in mans body. A liniment made with it and hony together, taketh away all the spots that blemish the skinne of the face: and with vinegre represseth the red pimples whatsoeuer. The black or swert skars remaining after wound or sore, it reduceth to the former fair white, if it be applied with a beasts gal. It is said moreover, that a portion thereof made with wine, and giuen to those who are to receiue punishment by the whip, will harden them in such sort, that they shall feelee little or no smart at all by any scourging. And for seasoning of all kinde of viands, it hath such a pleasant grace in any sauce, that the Greekes thereupon haue giuen it the name of *Euzomos*. It is thought more-

* *Olymides*,
Dioscor.

moreouer, that a fomentation of Rocket, brused and stamped somewhat before, quickeneth and clarifieth the eye-sight: it easeth little children of the chin-cough. The root boiled in water, and so applied, draweth forth spils of broken bones. As touching the vertue that Rocket hath to procure the heat of lust, I haue spoken already: yet thus much more in particular I haue to say, that if one do gather three leaues of wild Rocket with his left hand, stamp them afterward, and so giue them to drink in honied water, this drink mightily prouoketh that way.

As for Cresses they haue a contrary operation, for they coole and dull the heat of the flesh, how soeuer otherwise they giue an edge to the wit and vnderstanding, as heretofore we haue declared. Of these Cresses there be two kinds. The white is purgatiue, and the * weight of a Roman denier taken in water doth euacuate cholerick humors. A liniment thereof together with bean flower applied vnto the hard kernils called the Kings euill, is a soueraigne remedie therefore, so that a Colewort leafe be laid thereupon. The other kinde is more blackish, and purgeth the head of ill humors. It cleneth the eyes and cleareth the sight. Taken in vineger it stayeth their brains that be troubled in mind: and drunk in wine, or eaten with a fig, it is singular good for the spleene. If a man take it fasting euery morning with hony, it cureth the cough. The seed drunke in wine expelleth all the wormes in the guts: which it doth more effectually if wilde Mints be ioyned withall. With Origanum and sweet wine it helpeth those that be short winded and troubled with the cough. The decoction thereof when it is foddren in goats milk, easeth the pains of the chest or breast. Laid to as a Cerot with pitch, it resolueth pushes and biles, yea and draweth forth pricks and thorns out of the body. A liniment applied with vineger, taketh off all spots and speckles of the visage: and if the white of an egg be put thereto, it cureth cancerous fores. Also being applied in forme of a soft vnguent to the spleene, it cureth the infirmities thereof: but if they be little infants that are troubled therewith, there must be honey also put thereto, and then is it excellent good. *Sextus* addeth moreouer and saith, that a perfume thereof burnt driueth away serpents, & resisteth the poison of scorpions: as also that being brused and applied with Senvie, it is a singular remedie for the head-ache, and to make haire grow againe where it was fallen off: also, being stamped into a cataplasme with a fig, and laid to the eares, it cureth the hardnesse of hearing. Likewise, if the juice thereof be infused or poured into the eares, it easeth the tooth-ach. Moreouer, a liniment made with it and goose-grease, scoures away the skales and dandruf, as also the scalls of the head. A cataplasme made of it and leuain, ripeneth fellons, bringeth carbuncles to suppuration, and breaketh them. With hony it mundifieth filthy corrosiue and cancerous vlcers that eat deepe into the flesh. A liniment thereof with barley gots and vineger is good for the Sciatica and the pains of the loins: in like manner it cureth ring-worms and tetrars: it mundifieth the roughnesse about the nailes, for it is of a caustick nature. The best Cresses are the Babylonian, and yet the wild are more effectuell than it in cases aboue named.

But Rue is an herb as medicinale as the best. That of the garden hath a broader leafe, and brancheth more than the wilde, which is more hot, vehement, and rigorous in all operations. There is a iuyce usually pressed out of it, being first stamped and sprinkled a little with water in the stamping, and then put vp into a box of copper or brasse, and there reserved for to be used as occasion serueth: this iuyce taken in a great quantity is a very poison and no better, especially that which is drawne out of the Rue which groweth in Macedony about the riuer Aliacmon. But wil you heare a strange and wonderful thing? the iuyce of Hemlock killeth this venomous qualitie of it. See how one poison is a countre-poison to another, inso much as if they annoint their hands with the iuyce of hemlock, who are to gather Rue, they shall not be inuened with it. And yet as venomous otherwise as Rue is, it goeth into the composition of those Antidotes which are giuen against poison, especially that Rue of Galatia. And to speak in general, there are none of these Rues, but the leaues both bruised alone and also taken in wine, serue for preseruatiues: and principally against the herb Aconite or Libard-bane, and the viscous gum of the herbe Chamæleon, which they call Ixias: likewise against deadly and venomous Mushromes taken at the mouth, whether it be by way of meat or drinke. In like maner it is singular good against the stinging of Serpents: for the very Weasels when they prepare themselves to combat with them, vse to eat this herbe before-hand for to be secured from their venome. Aunaleable it is also against the pricks of Scorpions and Hardi-shrewes, against the stings of Bees, hornets, and wasps, against the poison of the Cantharides and Salamanders, yea and the

biting

A biting of a mad dogge; if it be used in this wise, namely, to take a saucer full or acetable of the juice and so drink it with wine: also to stampe or champ in the mouth the leaues thereof, and to lay them vpon the grieved place with honey and salt, or else to seeth them with vinegre and pitch. Folke say moreouer, that whosoever is wel rubbed with the juice of Rue, or otherwise do but cary it about him, shall be sure ynough for being either pricked, stung, or bitten with any of those hurfull and venomous creatures abouenamed: furthermore, that Serpents naturally doe flie from the smoke or fume of Rue when it burnes, and will not come neer vnto it: but the most soueraigne of all other, and surest in operation is the root of the wild Rue, if it be drunke with wine. And the common speech goeth of it, that the greater and speedier effect will be seene, in case forsooth one drinke it without the house, in the open aire abroad. *Pythagoras* was of opinion, That there is a distinction of sexe in this hearbe, and namely, that the male hath smaller leaues, and those of a more darke and grasse green color than the female, whose leaues are both fuller and better fed, and also of a more pleasant and gaier hew. He was persuaded also that Rue is hurtfull to the eyes, but therein he was deceived. For well it is known, that engrauers, caruers and painters, doe ordinarily eat Rue alone for to preserve their eye-sight, they take it also with bread or Cresses, without any regard whether it be the wild or the gentle Rue of the garden: by report also, many haue used an inunction thereof to their eyes, with the best honey of Athens, and thereby cleared them quite of that muddines and mist which dimmed their sight, or else in stead of honey they haue taken breast-milke of a woman that lately bare a maiden-child: or no more but with the very pure juice of rue and nothing els they haue gently touched the corners of the eyes: others haue cured the waterie humor that hath taken a running thither, onely by applying the juice of Rue together with Barley groats. If a man drinke Rue with his wine, he shall find ease of his head-ach: or if he doe but annoint his temples and forehead therewith, beeing incorporat with vinegre and oile of Roses into the forme of a liniment. But if it be an old and inueterat pain of the head, then would there a frontale be made of the said juice, tempered with Barly flour and vinegre. Rue hath this vertue, to discusse and resolute all crudities and ventosities proceeding thereof, yea, and cureth the settled old paines of the stomack. It is of power to disopilate or open the matrice: to settle the Mother into the right place when it is loose & out of frame, in case a liniment be made thereof, and laid al ouer the region both of the womb and the breast. If Rue be eaten with figs, or foddren to the consumption of the one half-deale, & the decoction thereof taken in wine, it is good for the dropie. And in that maner they vse to drink it for the paines of the breast, sides, and loines: for coughs also and shortnesse of breath and generally for all griefes and maladies incident to the lights, liuer, and kidneies: and last of all, for the shaking cold fits in an intermitten ague. Is a man disposed to drink freely, and to sit square at it? let him before he beginne take a draught of the decoction of Rue leaues, he shall bear his drinke well, and withstand the fumes that might trouble and intoxicate his brains. In one word, used ordinarily at meat, either raw, foddren, or preserved and condite any way, it is singular good for the purposes aforesaid. Boiled with Hyssope and taken in wine, it is singular for to assuage the torments of the belly: and being so prepared, it restraineth the flux of bloud within the bodie: like as it stancheth bleeding at the nose, if it be stamped and put vp into the nostrils: and otherwise a collution thereof to wash the mouth withall, doth much good to the teeth. Semblably, the juice distilled into the eares, allaieth their pain; provided alwaies (as I haue often said already) that a mean and measure be kept. As for the juice of the wild Rue, if it be tempered either with oile of roses or of baies; or els mingled with Cumin & Honie, it helpeth those that are hard of hearing, & discusseth the ringing found in the eares. Moreouer, the juice of Rue stamped and drawne with vinegre, is excellent good to be infused or let drop from on high by way of Em brochation vpon the region of the brain and temples of the head, for the phrensie. Some put thereto wild running Thyme also and baies, therewith annointing the head and neck of the patient. Others haue prescribed it in case of Lethargie to those that can do no other but sleepe continually, for to smel vnto. And those haue giuen counsel also to them that be subiect to the falling sicknesse, for to drinke the juice thereof foddren in foure Cyaths of water, before the fit came on them: for to preuent and auoid the intollerable cold which they should endure: as also to those that be apt to * chill for cold, to be eaten with meat, raw Rue sends out euen the bloudie vrine, which is gathered into the bladder. And as *Hippocrates* is of opinion, if it be drunk with sweet thicke, and grosse wine, it causeth womens floures to come downe, it expelleth the after-

* Also, Some read *Alphios*, [out of *Disco-rid.*] that is, to them that are subiect to the white Mor-phew, which is a kind of Leprosie, or *S. Magnus* euil.

birth,

birth, yea, and the dead infant within the womb. And therefore he aduise women in trauel to haue those naturall parts annointed with Rue, yea, & to sit ouer a suffumigation made therof. *Diocles* maketh a cataplasme with Rue, Vinegre, Hony, & Barly floure, for faintings, cold sweats, and tremblings of the heart. Likewise, against the torments of the smal guts, commonly called the * Iliak passion, he appointeth to take the decoction thereof in Oile, and to receiue the same in lockes of wooll, and so to be applied vnto the vpper region of the belly. Many doe set downe two drams thereof drie, and one dram and a halfe of Brimstone, as an excellent receit to bee taken by those that reach and spit vp filthy and stinking matter: but if they cast or send vp blood, they should drinke the decoction of three branches thereof in wine. It is an ordinarie practise in case of the Dysenterie or bloudie Flix, to giue it stamped first with cheefe, in wine: but they mingle therewith Bitumen, and so crum or break it into their drink, against the difficultie of taking wind. Also three drams of the seed thereof is giuen in drinke to those that are fallen from a loft, for to dissolue the bruised and cluttered blood within them. *Item*, Take one ponnard or pint of oile, of wine one sextar or wine quart, seeth the leaues of Rue herin: that oile so prepared, is singular good for to annoint parts which are benumbed, and in manner mortified and blacke with cold. Moreover, considering that it is diuretical, as *Hippocrates* thinketh, and doth prouoke vrine; I cannot but wonder at some, who giue it as a thing that staith vrin, & therefore appoint it to be drunke by those that cannot hold their water. The innunction thereof with Allum and Hony, cleanseth the dry wild scab & leprosy. Likewise with Morel or Nightshade, hogs greafe and Bulls tallow, it scoureth the Morpheu, taketh away werts, discusseth and dispatcheth the Kings euil and such like tumors. In like manner it killeth the fretting hot humor called *S. Anthony's* fire, being applied to the place with vinegre, Honny, or Cerusse, i. white Lead: like as it cureth the Carbuncle laid too, with vinegre alone. Some there be who prescribe *Laserpithum* also to be joined with the rest in this liniment: but without it they cure the chilblanes & bloudy fals that be so angry in the night season. Many vse to boile Rue, & together with wax, reduce it into a Cerot, which they apply to the swollen breasts or paps of women, as also to the breaking out of phlegmatick pustules or wheales (much like to our measels or small pockes). Also being reduced into an vnguent with the tender sprigs or tops of Laurell, it is a singular remedy for the flux or fall of humors into the burse of the cods. And verily this Rue is counted so excellent an herbe in operation this waies, and so respectiue peculiarly to those parts, that it is commonly holden for a soveraign remedie to heale all ruptures, if a man take the wild of that kind and make a liniment of it and old Swines greafe together. Likewise, if any bones or lims be broken, a Cerot made with the seed of Rue and wax together, is able to foulder the fracture. The root of Rue being reduced into a liniment, cureth bloudshotten eies, and restoreth to the natie colour all skarres or spots that giue blemish to any part of the bodie. Among the other properties that be reported of Rue, this is one to be wondered at, considering how hot it is of nature (as all Physicians doe agree) That a bunch thereof being boiled in oile Roseate, and with one ounce of Aloe brought into the forme of an ointment, should repress their suet, who are annointed therewith. As also, that ordinarie vse thereof at meat should disabie folke aswel in the act of generation, as conception: In which regard it is prescribed vnto them that shed their seed: and vnto such as vse to dreame in their sleepe of amatoious matters and the delights of *Venus*. But women with child must beware how they eat Rue: they especially must forbear this herbe: for I find that it killeth the yong child conceiued within their bodies. Thus much for the effects that it worketh in men and women.ouer and besides all which, there is not an hearb growing in the garden that is so much vsed for the curing of 4 footed beasts, whether they be broken winded and pursue, or otherwise bitten & stung with venomous beasts; in which cases, there must be an injection made vp into the nostrils, of the juice of Rue in wine. Also, if it chance that a beast hath swallowed an Horseleech in drinking, let it be taken with vinegre. Finally, in euery accident of theirs, let Rue be prepared and ministred respectiue vnto each griefe, according to the manner set downe for men in the semblable case.

CHAP. XIII.

¶ Of wild Mint : of garden Mint : of Penyroiall : of Nep, and Cumin.

Wild Mint is called in Latin *Mentastrum*: it differeth from the other in the form of the leaues: * for shaped it is like Basil, how fouer in color it resembles Penniroyal, which

* All this agreeth to our Calaminthace, according to Dioscorides.

As the cause, that some name it the sauage Penyroiall. In the time of *Pompey* the Great, it was knowne by experience, that the leaues of wild Mint chewed and applied outwardly, cured the Leprosie: by occasion, that a certaine leper minding to disguise himselfe, that hee might not for very shame be knowne, chaunced to annoint and besmeare his face all ouer with the juice of wild Mints. But fortune was better mistresse vnto him than he expected, for beyond his expectation or intent, his good hap was to be rid of his Leprosie by that meanes. The same leaues serue for a liniment against the venome of Scolopendres, and the sting of Serpents: so doe they also, if one drinke two drams of the leaues in two Cyaths of wine. Also, for to cure the prickles of Scorpions, they bevsed with salt, oile, and vinegre. But against Scolopendres, commonly they drinke the juice or broth of the decoction. Moreover, the wiser sort of people saue the drie leaues of wild Mints to be reduced into a pouder, as a very coun trepoison against all venome whatsoeuer. For being strewed in the house, or burnt, the very air & perfume therof chafeth away Scorpions. A drink made therewith purgeth & putrifeth women passing well, such I mean as be newly deliuered of childbirth: but it killeth the fruit within the womb of as many as vse it while they go with child. There is not a medicine in the world so effectual, as it is for those who are so freight winded, that they cannot take their breath vnlesse they sit vpright: for such also as in the cholericke passion, neuer giue ouer casting vpward and purging downward. It appeaseth also the paine of the loines, and easeth the gout, if it be applied to the place affected. The juice thereof is good to be dropped into eares that haue worms within them. It is vsually taken in drinke for the launise. A liniment made thereof, helpeth the kings euil; besides, it is a singular remedie for them that by a strong imagination of *Venus* in their dreames, defile and pollute themselves in their sleep. If one drinke it with vinegre, it excludeth the flat broad in the bellie. To scoure away the fouled and druffe, an Embrochation of it ad vinegre vpo the head in the Sun is counted singular.

As touching garden Mint, as the very smell of it alone recouereth and refresheth the spirits: so the tast stirreth vp the appetite to meat, which is the cause, that it is so ordinarie in our sharp fauces wherein we vse to dip our meats. Being put into milk, it wil not suffer it to turn or sour, it keeps it from quailing and curding which is the reason, that they who vse ordinarily to drink milk, take Mints therewith, for fear it should coagulate or crudle in their stomack, & put them in danger of suffocation. Some, for the same effect vse to giue it in water or honied wine: and surely it is thought by that very propertie to hinder generation, in that it dissolueth the due consistence and thickenesse which is required in naturall seed. And yet it is a great stancher of blood indifferently in men and women: but more particularly it staith the immoderat flux of whites that many times followes women. Being taken with Amydum or starch pouder in water, it restrains the inordinate flux occasioned by the imbecility of the stomacke. *Syrion* the Physician vsed ordinarily to cure the apostumes and sores of the Matrice, with Mint. Also against the obstructions & other accidents of the liuer, he was wont to giue 3 Oboles thereof in honied wine. And for them that raught vp blood at the mouth, he prescribed to take Mints in a broth or supping. The skel that little children be troubled withal, it healeth wonderful well. It is singular to drie vp the humors that mollifie the gristly windpipe & the other instruments of the breath and voice, and when they are drie, knitteth and strengthneth them. Taken in water and honied wine, it clenseth the corrupt and putrified phlegmatick humors which be offensive to the throat and those parts. The juice of Mint is excellent for to scour the pipes & cleer the voice, being drunke a little before that a man is to strain himselfe either in the quier, or vpon the stage, or at the bar, and not otherwise. A gargarism of milk, wherein hath bin Rue & Coriander, besides mints, is passing good to bring down the swelling of the vula. Being vsed in that manner with some Allum, it restraineth the mumps or inflammation of the Amygdales: & with Hony it cureth the roughnes & furring of the tongue. Being vsed alone without any other addition, it is a proper medicin for inward convulsions, as also for the disease of the lungs. *Demonocrinus* saith, that to drinke it with the juice of a Pomegranat, is a readie means to stay the yex & vomiting. The juice of greene Mints, drawne vp with the wind into the nostrils, helpeth the stinking vlcers there. The herbe it selfe stamped, represseth the rage of choler that purge th both waies vncessantly, but it must be drunke with vinegre. And in that maner it restrains all internal fluxions of blood. But applied outwardly with Barly grots to the griued place, it easeth the intollerable paine of the Iliak passion: after the same sort if it be spread and emplaistered, it allaieth.

allaieth the swelling of womens breasts. In case of head-ach, a liniment thereof doth well to be applied to the temples. Inwardly it is taken with very good effect against the venomous Scorpions, the sea Scorpions, and other serpents. A liniment thereof staieth the waterish humors that haue taken a course to the eies, cures the skalls and breakings out of the head, and all accidents offensive to the tiwill or fundament. If one doe hold Mints in his hand, he shall not need to feare either chafing or galling in any part, vpon trauell. Beeing dropped into the eares with honied wine, it is very comfortable to that part. It is said moreover, that if a man come into a garden where Mints groweth, and bite the leaues vpon the very plant, without plucking or cropping it off, and continue this course 9 daies together, iterating euermore these words [*I doe this to cure the spleene*] he shall find remedy indeed for the infirmity of that part: moreover, let one take as much powdered mints dried as he can well contain with his 3 fingers ends, and drink the same as much powdered mints dried as he can well contain with his 3 fingers ends, and drink the same spiced with the said powder, it will driue out of the belly the wormes there engendred.

The branches of Mint and penniroiall both, are vsually put into glasse viols with vinegre, for to be infused therein: and a man would not thinke how good this vinegre is for faintings of the heart; so great is the societie that these two herbs haue one with the other in this behalfe. For which cause, I remember on a time when diuers learned physicians were met together to confer in my chamber, they resolved and concluded definitely, That a chaplet of Pennyroyall was without comparison far better for the giddinesse and swimming of the head, than one of roses, for a garland of Pennyroyall, if it be worn onely vpon the head, allaieth (by report) the ach thereof. More than it, it is said, That the very sent of Pennyroyall preferueth the brain from the offence that may come by the distemperature either of heat or cold, yea and from the inconuenience of thirstinesse, in so much as whoeuer haue two branches or sprigs of Pennyroyall put into his ears, shall feele no accessiue heat though they continued in the Sun all the day long. Pennyroyall being applied in form of a liniment, together with Barly groats and vinegre, assuageth all grievous paines whatsoever. Howbeit, the female of this kind is thought to be of greater operation euery way, than the male. Now hath this female a purple floure, that you may know it thereby from the other, for that of the male is white. The female Pennyroyall taken in a mash made with salt and barley groats in cold water, staieth a kecklish stomach, and keepeth it from the inordinat desire and many offers to cast. In the same manner also it easeth the paine of the breast and belly. Likewise the gnawings of the stomach it ceaseth, being taken in water; as also immoderate vomits it represseth, with vinegre and barley groats. Being sodden in hony with a little nitre among, it cureth the maladies of the guts. If one drinke it with wine, it causeth abundance of urine; and if the said wine be made of the Ammian grapes, it expelleth the stone and grauell, yea and all things els which may engender inward pains. If it be taken with honey and vinegre, it prouoketh womens termes, and quieteth them when they lie gnawing and fretting inwardly, yea and sendeth forth the after-burden. The same setleth the mother and reduceth it into the right place. It expelleth also the dead child within the mothers body. The seed of Pennyroyall if it be smelled vnto, is singular good to recouer their tongue againe who be speechlesse: for the falling sicknesse also, it is giuen in a cyath of vinegre. If it fortune that one must drink vnhole-some waters, the seed thereof reduced into powder and strewed therupon, correcteth all the mafe-lice thereof. If the same be taken in wine, it slaketh the itch in the bodie proceeding of hot and salt humors. The seed of Pennyroyall, mingled with salt, vinegre, and honey, if it be well rubbed into the bodie, comforteth the sinewes in case of cramps and convulsions: and particularly helpeth those who with a crieke are forced to carrie their necke much backward. The decoction thereof is a soueraigne drinke against the sting of Serpents; and particularly of Scorpions, if it be bruised and taken with wine: especially that which groweth in drie places. Moreover, Pennyroyall is held to be very soueraigne for the cankers or vlcers in the mouth, and as effectual to stay the cough. The floures of Pennyroyall that be fresh and new gathered, if they be burnt make a singular perfume to kill fleas. Among many good receipts that *Xenocrates* hath left vnto vs, we find this for one, namely, That a branch of Pennyroyall wrapped within wooll, and giuen to the patient for to smell vnto before the fit come of a tertian ague, driueth it away: as also if it be put vnder the couerlet of the bed, and the Patient laid vpon it, it doth no lesse. For these purposes abouenamed, the wild Pennyroyall is of most efficacie: This hearbe resembleth Origan, and hath smaller leaues than the Pennyroyall of the Garden: some giue it the name of *Dictamnus*. If it chance

A chance that either sheepe or goats do tast thereof, it prouoketh them presently to blea: wherupon certain authors, changing one letter for another in Greeke, call it * *Balsam*. This herb is so hot and ardent, that if any part of the body be rubbed or annointed therewith, it will rise into a blister. If one haue taken a through-cold, and thereby gotten a cough, Physicians haue prescribed to vse frictions therewith before the Patient go into the bain for to sweate. Also their direction is to do the like before the cold fits of agues: as also in case of the crampe and torments of the guts. Wonderful good it is in all kinds of gout. If it be taken in drinke with honey and salt, it is singular for those who be diseased in the liuer, as also for the lights: for it opens their pipes, and dischargeth them of the flegme that stuffed them, so as they may reach vp and voyd the same with ease. The decoction thereof with some salt is excellent good for the spleene and the bladder, yea and for all ventosities and shortnesse of breath. Semblably, the iuice prepared and dressed in maner aforesaid, bringeth the mother into the naturall place; and serueth as a countre-poison against the Scopolendre both of the sea and the land: as also for the pricke of the scorpion, & especially against the biting of man or woman. The root thereof being applied fresh and green, is marvellous good to repress rank vlcers, & to consume the proud flesh about them. The same being dry and so applied, reduceth skars to their fresh colour and beautie of the faire and whole skin. Thus much of Pennyroyall of the garden and the field.

Great conformitie there is in operation between Pennyroyal and * *Nep*, for being both boiled in water vnto the composition of a third part, they discusse and shake off the cold in Ague fits which causeth the Patient to shake; and besides are of validitie to bring downe womens C monthly sicknesse. In summer time they assuage the extremities of heat. *Nep* also is powerful against serpents, for the smoke and perfume of this herbe they cannot abide, but will fly from it: which is the cause that such as be afraid of serpents, strew *Nep* vnder them in the place where they mean to repose and sleepe. Being bruised and applied to the running fistulous vlcers between the nose and the greater corner of the eye, it is counted a soueraigne remedie. Also being fresh gathered, and mixed with a third part of bread, and so temperat and incorporat with vinegre to the form of a liniment, it cureth the head-ach. The iuice thereof being infused into the nostrils whiles the Patient lieth vpon his back, stancheth bleeding at the nose. The root also, together with Myrtle seed, in warm wine cuit, and so gargarised, helpeth the Squinancie. As touching wild Cumin, it is an herb exceeding small, putting forth foure or fise leaues, and not above, and those indented like a saw: but the garden Cumin is of singular vse in physicke, but principally for the pain in the stomach. It dispatcheth the grosse vapors arising from flegme; it dissolueth also ventosities, if it be either bruised and eaten with bread, or drunk with water and wine; in which sort it assuageth the wringing torments and other pains of the guts: howbeit it maketh folke look pale, as many as drink of it. Certes by that deuise, namely by ordinary drinking of Cumin (as it is reported) the schollers and followers of *Porcius Latro* (that famous and great Rhetorician) procured themselves pale faces, because they would look like their master, who indeed came to that colour by continuall study and plying his booke. Thus likewise not long since, *Julius Vindex*, being desirous to be affranchised by *Nero*, pretending by his pale visage and poore look, that he had not many daies to liue, made faire semblance vnto *Nero* by his will and testament, that he should shortly be his heire (which cheat the said *Nero* gaped after,) and so by that means *Vindex* entred so far within him, as hee obtained whatsoever he would at his hands. Cumin reduced into the form of trochisks or * nose-tents, put vp into the nostrils, stancheth bloud. The like effect it hath, being fresh gathered and applied with vinegre. Being layd it selfe alone to watering and weeping eies, it restraineth that humour: and in case the eods be bolne or swelled, it is good to mix honey withall in manner of an emplastre. But it sufficeth to make a cataplasme thereof and lay it to the belly alone, of little babes and infants so troubled. Finally, to cure the jaunise it is singular, giuen in white wine when the Patient hath sweate, and is come out of the Baine.

CHAP. XV.

F ¶ * *Of Cumin Ethyopick, which restraineth the flux of urine: of Capres: of Lorach or Panax: and of a kind of Marjerom named Cunila-bubula.*

B Vt for the purpose aforesaid, namely to cure the jaunise, the Ethyopian Cumin is the best, being taken after a bath with vinegre and water: also licked in maner of a Loch with hony.

* It seemeth that this Title is corrupt

* called *Erythrina* or *Nasturtium*

* For *247*

* or *Calemintha*

As for the Cumin of Africk, it is thought to haue a singular proprietie by it selfe for to helpe those who cannot contain and hold their vrin. The garden Cumin, if it be parched drie, brought into powder, and giuen in vinegre, helpeth the defects and infirmities of the liuer: also it cureth the dizziness of the head. But in case the acrimonie or sharpnesse of the vrin be such, as that it fret and moue smart in the passage, the powder hereof would be tempered in sweet wine * cuit. For the impediments of the matrice it ought to be drunk in pure wine of the grape, and withal there must be applied to the place offended, a cataplasme of the leaues vpon a lock of wool. Dried against the fire, bruised and beaten into powder, and so incorporat with oile of roses & wax, and wrought in the end to the form of a Cerot, and then applied, it abateth the swelling of the cods. But the wild Cumin is more effectuall in all the cases aboue mentioned, than that of the garden.ouer and besides, it hath a speciall vertue together with oile, against serpents, scorpions, and Scolopendres. Take as much of Cumin seed as you may comprehend within three fingers, drink it in wine, it wil stay immoderat vomit, yea and the sick heauing of the stomacke, as if it would cast and cannot. A drinke made therewith is giuen also for the colique: and to that purpose a liniment thereof is very commendable, or if it be applied hot in quilted bags, so that the same be kept swaddled down vnto the region of the gut Colon. For a woman that is giuen to the rising and fuffocation of the mother, let her drink it in wine after this proportion, Three drams of Cumin to three cyaths of wine, she shall find that it will resolute those vapors and fuffosities which caused the foresaid maladie. With calues tallow or sewer, or with honey, if it be let drop into the eares, it cureth the founding and tingling therein. Being applied as a liniment, with hony, raisons, and vinegre, it resolue the blacke and blew markes remaining after stripes. Also with vinegre alone it cureth the black spots and speckles appearing in any part of the body, if the place be bathed therewith.

An herb there is resembling Cumin for all the world, which the Greeks cal Ammi: although some there are who thinke it to be all one with the Cumin of Etyopia. Hippocrates calleth it, the roial Cumin [of Egypt:] the reason was, no doubt, for that he deemed that of Egypt to exceed all the rest in goodnes. But most writers besides him do thinke it * an herb altogether of another nature, because it is smaller and whiter: and yet it serueth to the like vse: for at Alexandria in Egypt they put it commonly vnder their loaves of bread in the bottom crust, when they go to the oven, and ordinarily it is occupied in the kitchen about saucis. Be it what it will, it dissolueth ventosities, it pacifieth the wringing torment of the guts, it prouokes vrin, and bringeth down womens moneths. Being taken in wine, together with Linseed, to the quantitie of two drams, it cureth the venomous stings of scorpions: but put thereto an equall quantitie of myrrh, it hath a singular vertue against the horned serpent Cerafies. And, like to the other Cumin before named, it altereth the colour of as many as drink of it, and makes them looke pale. A suffumigation made thereof, with raisons and rosin, mundifieth the matrice & natural parts of women. Finally, it is commonly said, That if a woman smell thereto in the very act of generation, she shall conceiue the rather by that means.

As for Capres, we haue sufficiently written thereof amongst other shrubs that be strangers: and yet it wil not be amisse to reiterate thus much, That a man must be well aduised how he taketh any outlandish Capres that come from beyond-sea: but if he wil go safely to work, let him hardly keep him to those of Italy, for they are lesse harmelesse than the other: for if all be true that is commonly reported, whosoever daily eat Capres, shall not be in danger either of palse or pain of splene. The root of capres is singular good to take away the white spotted morpheue (cousin german to the leprosie) in case it be stamped, and the place affected rubbed therewith. Take the rind of the root, the quantitie of two drams, and drink it in wine, it helpeth the swelled splene; provided alwaies, that the Patient forbear the vse of baines and hot houses: for, by report, this course continued 35 daies, will cause the said splene to purge away, partly by vrine, and partly by seege. The same if it be taken in drink allaieth pain in the loins, & cureth the palse. The seed of Capres sodden in vinegre, bruised & applied to the teeth, or otherwise the root thereof chewed only, assuageth the tooth-ach. A decoction of Capres in oile instilled into the eares, mitigateth their pains. The leaues and the root newly gathered, and so applied as a Cataplasme with hony, healeth the corrosiue vlcers that eat to the very bone. Likewise the root resolues all those glandulous swellings which we name the Kings euil: and if the same be sodden in water, it discusseth the tumors behind the eares, and riddeth away the worms breeding within.

It

* In dulci: hec
n. caneth pas-
sum.

Rue'sm takes
it for Basil
gentle.

A It cureth also the infirmities of the liuer. The manner is to giue the same in vinegre and honey for to chase away the vermin engendred within the guts. Boiled in vinegre, it is singular for the cankers or exulcerations within the mouth: howbeit, all authors doe accord, that they bee not good for the stomacke.

Touching Louage, which some call Panax, it is * hole some for the stomack. Likewise a proper medicine it is for convulsions and ventosities. To conclude, there are some who name it Cunila Bubula, as I haue before noted, but they be deceived.

* Pile: nam
concoctum
ineat. Ex
Dioscor.

C H A P. XVI.

B ¶ Of the wilde Origan Cunila Bubula: of the Bastard Atarjoram, named Gallinacea
Cunila, or Heracleoticum Origanum: of the tender Cunilago: of Rosmarie:
of Garden Saurie or Cunila, and that of the mountaines.

O Ver and besides the garden Saurie, there be many kinds of Cunila known in Physicke: and first that which is called Bubula, and hath seed like to Peniroiall, being either chewed in the mouth or applied outwardly, it is a good wound-hearb, so that it be not remoued but euery fife daies. Taken in wine, it is singular against the poisonous sting of serpents, in case the hearbe it selfe be stamped, and laid withall vpon the fore place: and verily it is an ordinarie thing, to rub therewith well and thoroughly, the wounds that they make. Semblably, the Tortois, against the time that they should fight with Serpents, vse this hearbe in manner of a defensatiue, & take themselves well armed against their enemies: which is the reason, that some giue it the name of Panax. Being dried, it assuageth the pain of tumors, and cures the accidents that befall to the priue members of men: or if the leaues be but stamped, they haue the like effect. And in one word, the operation thereof is excellent and wonderfull, if it be vsed in wine.

Another Cunila or Saurie there is, which our countrey men call in Latine Gallinacea; the Greekes name it Origanum Heracleoticum. If it be braied and salt joined thereto, it is soueraigne for the eyes: it helpeth the cough also, and correcteth all faults of the liuer. If a thicke grewell or few be made thereof, together with floure, oile, and vinegre, so tempered as it may be supped, it cureth the pleurisie or paines of the sides: but aboue all, it is singular for the stinging of Serpents.

D A third kind there is, which the Greeks tearme the male, but we in Latin * Cunilago: a stinking smell it hath with it, a woodie hard root and a rough leafe: but it is generally said, that the operations thereof be more effectuall, than of any other kind. It is verily thought, that if a man cast an handfull thereof from him into any part of the house, all the moths and such like vermin will gather about it. But to come to particulars, It hath a singular power against Scorpions if it be taken with water vinegre. Also if a man or woman take 3 leaues thereof, and rub his bodie thoroughly with it and oile together, there is not a Serpent so hardie as dare approach neare such a bodie so perfumed. Contrariwise the Cunila, which is named Mollis, [i. d. soft] hath leaues and branches more hairie than the former, and those sharpe pointed like prickles. This hearbe if a man rub betwene his fingers, resembleth honey in smell, and will sticke fast too in manner of honny. Another sort there is of Cunila, which we, for the smell that it hath of Frankincense, call Libanotis. But both these, the one as well as the other, taken in wine or vinegre, cureth the biting and sting of Serpents. If they be bruised or stamped into powder, and so put into water, they kill all the fleas in the place where the said water is cast or spinckled. As for the garden Saurie, it also hath many good properties: The iuice thereof with oyle of roses distilled into the eares, is very comfortable vnto them. The hearb it selfe taken in drink, helpeth those who are stung with venomous Serpents. This Saurie oftentimes doth degenerat into a bastard kind, named Mountain Saurie. Like it is to wild running Thyme, and is effectuall against the poyson of serpents. It prouoketh vrin, and purgeth women newly deliuered, if haply they haue not sufficient voidance. Singular it is for to help digestion, and stirreth up appetit to meat wonderfully. In summe, as well the gentle Saurie as the wild, is passing whole some for crudities in the stomacke, if one spice his morning draught therewith fasting. It is vsed also to very good purpose in dislocations and members out of joynt: with barley meale, water, and vinegre, it is excellent for the stinging of waspes, and such like prickles. As touching the other kinds of Libanotis or Rosmarie, write I will more fully in due place.

* Fica-bani

CHAP. XVII.

¶ Of *Piperitis* and *Origanum*: of *Onitis*: *Praesium*: of *Tragoriganum*, and *Heraclium*: of *Lepidium* and *Gith* or *Melanthium*: of *Annise*.

* Ginney pepper.

Canila.

Piperitis or Calicut Pepper-wort (which before we called * *Siliquastrum*) beeing taken in drinke, is very good for the falling sicknesse. *Castor* hath described it after another manner, namely, to be an herb rising vp with a long red stem, thicke set with joynts or little knees; bearing leaues resembling those of Lawrel; with white seed and the same smal, carying with it the tast of Pepper. The vertues of which hearb be these; To help the gumbs and teeth, to make a sweet breath, and withstand soure and stinking belches.

Organ or Origanum, which in tast (as we haue said) resembleth * *Sauery*, hath many kinds, & all medicinable, for there is one fort thereof surnamed *Onitis* or *Praesium*, not vnlike to hyssope: a peculiar propertie this hearb hath being drunke in warme water, to quiet the gnawings in the stomacke, and to concoct the crudities there: but taken in white wine, to cure the venomous pricks of Spiders and Scorpions. The same applied outwardly with oile and vinegre vp-on wooll, is singular good for dislocations, disjointsures, spraines, contusions, and bruises.

As for *Tragoriganum*, it is more like vnto wild creeping Thyme: it hath vertue to prouoke vrin, to discusse and resolueth all tumors or swellings. And more particularly, most effectually it is for them that haue drunke the gum of *Chamelæon*, called *Ixia*: also against the Vipers sting: besides, for the stomacke that belcheth soure, and for the midriffe and preordiall parts. It is an approued medicine for the cough, the phrensie, and inflammation of the lungs, being with honey reduced into the forme of a Lohoch, for to be sucked downe leisurly.

Touching the *Origan* named *Heraclium* or *Heracloticum*, the same also is diuided into three sorts: For the first is of a blacker & more dusky green, with broader leaues: also than the rest; and besides is glutinous and will cleaue to ones fingers. A second sort hath smaller leaues, softer it is & more tender in hand, not vnlike to *Majoram*; and this kind some would rather call *Praesium*. The third hath leaues of a mean bignes between the other two, nor so large as the one nor so slender as the other, but not so forcible in operation as either of them both: but to return againe to our former *Origanum*: the best is that which groweth in Candy; for the same hath a pleasant and sweet sent besides: the next in goodnes is that which commeth from *Smyrna*: then after it, is the *Origan* that is brought from *Heraclia*: but that which is surnamed * *Onitis* is sim-
mon, is to chase away serpents: by way of decoction or portage made thereof, to cure them that be already stung or wounded by them: beeing taken in drinke, to moue vrine: and, together with the root of *Panace*, to helpe ruptures, convulsions, and spasmes: foddren in certaine *Acetables* with figs or hyssope, to the consumption of a sixth part, to cure the dropie. At the entrance into the stouue or hot-house if it be taken good it is against the scab, the iteb, & the wild skurf. The iuice with milk, is dropped into the ears, and that with very good successe. It helpeth also the mumps or inflammation of the *Amygdales* and *Vvula*; likewise the vlcers in the head. The decoction thereof taken with lie ashes in wine, is a countrepoyson to kill the venom of *Opium* and *Plastre*. The measure of one *Acetabell*, looseth the belly. A liniment made thereof, recovereth the native colour of the blacke and blew marks remaining after stripes. With hony and nitre, it assuageth the paine of the teeth if they be rubbed therewith: and besides maketh them looke faire and white. It stauncheth bleeding at the nose. A decoction made therewith and barley meale, resolueth the swelling kernells and inflammations behind the eares. The pouder beeing incorporat in honey and gall-nuts, dorth smooth and cleare the rustinesse of the windpipes, occasioned by a rheume. The leaues applied in manner of a cataplasme with honey and salt, mollifieth the spleene. If the hearbe be foddren with honey and salt, and so taken by little and little, it doth cut, extenuate and make subtil, grosse fleagme, especially if blacke melancholy be bedded therein. Stamped, and instilled into the nostrills with oile, it cureth the iaudise. Such
as be ouerwearyed and tired with extreme trauell, find much alleviation and ease by being rubbed and anointed all ouer with a liniment made thereof, with this caveat, That they come not so neer as to touch the belly with it. A plastre made with it & pitch & applied, healeth the angry bloody-falls & chilblanes, Bruised with figs, it ripeneth felons. A pulues made with it, with
oile,

* Bugle, or
Stachas Arabica.

A oile, vinegre, and barley meale, softneth and resolueth the Kings euill. A liniment made therewith and figs together, assuageth the paine of the sides. Being bruised and reduced into a liniment with vinegre, and so laid to the priuy parts, it restraineth the flux of blood thither; and yet it hath a propertie to euacuate the reliques of blood in women newly brought to bed, who ought to be purged.

As touching *Lepidium* [*Passiflora*] it is to be ranged among the burning and causticke medicines: by which faculty that it hath, and by blistering the skin, it taketh away any spot or blemish in the face; yet so, as the exulceration which it causeth, may be soone helped and skinned again with a salve of wax and oile of Roses. By the same means it serueth to cleanse the leprosie and wild scabs, which it doth alwaies with ease and expedition, as also to smoothe the cicatrices or scars after vlcers. Moreover, it is commonly said, that if it be tied fast vnto the arme on that side where the teeth do ake, it * taketh the pain quite away.

Gith or *Nigella*, the Greeke writers some name *Melanthion*, others *Melaspermon*: the best is that which is blackest, and besides of quickest sent. A singular remedie it is for the sores and wounds occasioned by venomous serpents and scorpions especially, if a liniment be made of it, vinegre and hony mingled together. I find also, that if it be burnt, the very smoke and fume of it will chase away serpents: but particularly against the poison of venomous spiders, a dramme thereof is sufficient to be taken in drinke. Being bruised and knit in a linnen cloath, and so smelled vnto, it resolueth the poyse, or breaketh the cold which stuffereth the nostrills. Applied as a liniment with vinegre to the forehead, or infused into the nostrills, it easeth the head-ache. And if it be soyled with the oile of the floure de-lis root, it staith the waterish humors that fall into the eies, and abateth their swellings. The decoction thereof in Vinegre cureth the tooth-ache, if a collusion thereof be made and the mouth washed therewith. Being stamped and so applied, or but chewed in the mouth, it healeth the cankers or exulcerations within. Likewise a liniment made of it and vinegre cleanseth the leprosie, and the hot red pimples breaking out in the skin. If it be taken in drinke, with some addition of nitre, it easeth the difficulty of breathing in such as blow short. It helpeth all hard swellings, and old festred impostumes or biles, if they be anointed therewith. If a woman be desirous to haue store of milk, let her eat and drinke thereof continually every day. As touching the iuice of *Gith*, it is drawn & gathered after the like maner as *Henbane* iuice. And semblably taken in any great quantity, it is a very poison: which
D is a thing to be maruelled at, considering that the seed thereof seasoneth loaves of bread, & giueth a most pleasant relish to them. Moreover, the seed of *Nigella* cleanseth the eies, prouoketh vrin and the monthly terms in women: yea and more than so, I read, that thirty grains thereof tied in a linnen cloth, and applied to a woman newly deliuered, will draw down the after-birth. They say also, that if it be stamped in vrin and laid to the agnells or cornes of the feet, it cureth them: as also that the smoke killeth gnats or any other flies.

As for the herb *Annise*, if it be drunk with wine it is a counterpoison against scorpions. And *Pythagoras* hath giuen a speciall praise and commendation to it both raw and boiled, as to few other herbs the like: for be it green or dry, it serueth as well for seasoning of all viands, as making all sauces, inasmuch as the kitchen cannot be without it.ouer and besides, when bakers set into the oven, they put *Annise* between the bottom of their loaves and the peece. And for to commend wine, Vintners vse to put it into their *Hippocras* bag, through which they strain *Hippocras* and other aromaticall wines: and indeed with bitter almonds, it giueth a pleasant and delicate tast vnto any wine whatsoever. If one chew it euery morning vpon an empty stomack fasting, together with the seed of *Smynum* and a little hony, it maketh the breath sweeter, and taketh away all stinking fauours about one; provided alwaies, that the mouth be presently washed with a collusion of wine. It causeth one to look fresh and young, if it be hanged about the bed vpon trauers or curtain, or otherwise stuck to the pillow or bolster, so as folke may haue the sent thereof in their nostrills while they lie asleep, it riddeth them of troublesome dreams and fantastical visions. It procureth a good stomack to meat: for so our idle, nice, and delicate
F wantons, euer since they haue giuen ouer exercise and trauell (which should get them an appetite & stomack to their viuals) & betaken themselves to sit still and do nothing, haue deuised this artificial means among others, & haue recourse to *Annise*: in which regards and for these causes, some haue giuen it the name of *Anicetum*. The best of all commeth from *Candia*: the next to it is that of *Agypt*; and indeed this serueth in stead of *Loveach* in all sauces. If a per-
sume

* To wit, by
raising a blister,
and gi-
uing issue,

sume thereof be drawn vp into the nose, it appeaseth the head-ache. *Iollas* saith, that the Anise root bruised and stamped together with Vine, and so applied, stayeth the flux of waterie and weeping eies. The herb it self, with an equall quantitie of saffron and wine, yea, or braied alone with barley grots, restraineth all great fluxions and distillations: and the same composition applied to the eyes, driueth out any thing that hath fallen into them. A liniment made therewith and water together, consumeth and cureth the Polypes or cankerous vlcers within the nostrils. A collution of it in vinegre, with honey and hyssop, vsed as a gargisme, asswageth the squinancie. Tempered with oile of roses it is soueraigne for the eares to be infilled into them. Being taken dried and parched at the fire, it clenseth the brest of the viscous and tough flegme there gathered; but if it be incorporat with honey it doth the deed the better. But would you learn for the cough a soueraign lohoch or confection? Take one Acetabell of Annise, and fifty bitter nuts wel clenfed and blanched: stamp these all together in a mortar, and with hony reduce them into the consistence of an Electuarie. And yer there is one Composition more for this purpose, and of all other the easiest and soonest made. *Recipe*, of Annise three drammes, of Poppy seed two drams, temper these with hony, & for three mornings together take the quantitie of a bean fasting. And this confection is singular besides against soure risings or belching: and therefore it cureth the ventosities which puffed vp the stomacke: it asswageth the torments and wrings of the guts, and represseth the continual flux proceeding from the weaknesse of the retentive facultie in the stomacke. But to return againe to simple Annise seed, a drinke made with the decoction thereof, or the very smell taken vp into the nose, stayeth the troublesome yex or hooquet. The decoction of Anise leaues doth digest and resolueth all crudities. The iuyce drawne from it when it is sodden with parsley, if it be smelled vnto, stineth immoderate sneezing. Moreouer, Annise taken in drinke, procureth sleep, expelleth the stone and grauel, stayeth vomits, and resolueth the tumors in the precordial parts, caused of windinesse. Further, it is a most soueraign medicine for the diseases in the brest: comfortable also to the neruous parts, membranes, and ligaments, wherein the muscles of the body be either inclosed or tied and vnited together. The iuyce of it being boiled with oile, and so dropped or infilled into the head, is good for the pains thereof. It is thought that there is not a better thing for the belly and the guts than Annise: and therefore it is giuen ordinarily (if it be first parched and roasted against the fire) in case of the bloody flux and exulceration of the guts: also for the inordinate profers to the siege, & rising from it without effect or any thing discharged. Some put thereto Opium also, and prescribe to make three pills thereof to the bignesse of a Lupine seed, and to take them euery day dissolved in a cyath of wine. *Diuenches* vsed commonly the iuyce of Anise, to mitigate the pain of the loins: to giue also the seed beaten to powder with mints in wine, for the drowy and the defluxion stomachicall: but the root he thought to be passing good for the kidneyes, vsed and taken in that maner. *Dalio* that famous Herbarist was wont to apply Annise and Parsley together in forme of a cataplasme, to women in labour, for better speed in child-birth: also for the pain of the Mother, yea, he would giue it also to drinke with Dill, vnto women when they cried out in trauell. He applied it also green, with barley grotes in manner of a liniment, to the head, for to stay and settle the brains of phrentique persons. And being so prepared, he found it singular good for young infants subiect to the Falling-sicknesse, or troubled with crampes and contractions of sinewes. As for *Pythagoras* verely, he saith confidently, That whosoever doe but hold this hearbe in his hand, hee shall not be surprised with a fit of the Falling-euill: and therefore he aduise men to sow good store of it in their gardens about their houses, to be ready euer at hand. He affirmeth moreouer, that women in labour, if they smell thereto, shall haue more speedy and easie deliuerance. Hee giueth counsell besides, That immediately after the childe is borne, the mother should drinke a growell made with it and some barley grotes strewed among. *Sosimenes* the Physitian was wont to mollifie and resolueth all hard swellings with Annise & Vinegre: he vsed also to giue the decoction thereof in oile, with some sprinkling of Nitre among, to those that felt weatinesse in their lims. Moreouer, hee assured trauellers and wayfaring men, that if they drank the seed thereof, they should find present help if they were tired. *Heraclides* gaue ordinarily of the seed as much as might be taken vp with three fingers, together with two oboles of Castoreum, in honied wine, for the hoving & inflation of the stomacke: semblably, for the puffing vp and swelling of belly and guts. Also, to those that were streit winded, & could not take their breath but sitting vp right, he ministred the like

pro-

A proportion; to wit, as much as three fingers would contain, with equall quantitie of Henbane seed, in Asses milke. Many Physitians giue counsell to those that would vomit lustily, for to drinke in water as they sit at supper, an acetabell thereof and ten leaues of Baies, bruised and beaten into powder. If Annise seed be chewed, or applied hot in forme of a liniment, yea, or taken as a drinke in vineger and hony, together with Castoreum; it helpeth the rising of the mother and the danger of suffocation thereby. If a woman in child-bed presently vpon her deliuey, drinke it with cucumber seed & line-seed together, of equall quantitie, namely, as much as may be held between 3 fingers, in three Cyaths of white wine; it will fertle the lightnesse of the braine, and stay the dizziness of her head. *Thiopolemus* prescribed for feuers quartane, as much Annise seed as three fingers might comprehend, with the like quantitie of Fennell seed to be taken in vineger and one Cyath of Honey. A liniment made with Annise and bitter nuts, allaieth the grievous pains of the gout. There be who are of opinion, That it hath a speciall vertue and property to resist the poison of the Aspis. Certain it is that it prouoketh vrine, allaieth thirst and the appetite to drinke, yea, and solliciteth to carnal lust. Taken in wine, it gently putteth forth a kind sweat. Moreouer, it keepeth cloths and apparel from the Moth. Generally, the fresher and newer alwaies that it is, and the blacker that it looketh, the more effectuell it is found to be. Howbeit, this one discommodity it hath, That it is an enemy to the stomacke, vnlesse haply it be peppered with ventosities.

C

CHAP. XVIII.

¶ Of Dill: of Sacopenium, and Sagapenum. Of Poppy both white and black. The manner of gathering and drawing iuyce out of herbes. Also of Opium.

Dill also hath a property to dissolue ventosities, to break wind and cause rising; also to assuage any wrings or torments of the belly, & yet it staieth the flux. The roots being reduced into a liniment with water or wine, restraineth the flux of watering eies. A perfume made of the seed as it boileth, receiued vp into the nostrils, staieth the yex. Taken as a drinke in water, it concocteth crudities, and appeaseth the pain of windinesse proceeding from thence. The ashes of it burned, raise vp the Vvula in the throat that is fallen. Howbeit, Dill dimmeth the cie-sight, and dulleth the vigor of genitall seed.

D

As for our Sacopenium here in Italy, it differeth altogether from that which grows beyond sea. For the outlandish kind, resembling gum Ammoniack, is called Sagapen. Good it is for the pleurisie and pain of the brest, Convulsions or Spasmes, and old settled Coughes; for those that reach vp filthy and rotten matter; for the tumors of the midriffe and precordial parts. It cureth the swimming and giddinesse of the head, the shaking and trembling of the joints, the crampe or convulsion that draweth the neck backward, the great swelled spleens, the pain of the bones, and all shaking and quivering colds. A perfume made therewith in vineger, if a woman smell vnto, it helpeth the Mother that is ready to stop her wind. As for the other accidents, it is both giuen in drinke, and also rubbed into grieued parts with oile. It is thought to be soueraign also against poysoned drinckes giuen by Witches and Sorcerers.

E

Touching garden Poppie and the seuerall kinds thereof, I haue written already: but besides them there be other sorts also of the wild, whereof I promised to treat. Meane while, the heads of the foresaid garden white poppy, if they be bruised whole as they grow with seed & all, and so drunk in wine, do procure sleep. The seed it selfe alone cureth the Leprosie. *Diagoras* giueth counsell to cut the stem or stalk of the blacke Poppy when it beginneth to strout and swell toward the flourishing time, out of which there wil issue a certaine iuyce called Opium: but *Iollas* aduise to make that incision when it hath bloomed, and to chuse a faire cleare day for it, & that houre of the day when as the dew thereon is dried vp. Now would they haue them to be cut vnder the head before the bloom; but in the very head, after it hath don flourishing, and verily, there is no other kind of herb wherein the head is cut, but this only. The said iuyce of this herbe as well as of all other is receiued in wooll: or else if it run but in small quantitie, they gather it with the thumbe naile, as the maner is in Lectuces: but the morrow after the incision, so much the more vigilant they must be to saue & gather that which is dried: and in very deed the iuyce of Poppy commonly runneth out in great abundance, & gathereth into a thicknesse: which afterward is stamped and reduced into little trofches, and dried in the shade. Which iuyce thus drawne

drawne and thus prepared, hath power not only to prouoke sleep; but if it be taken in any great quantity, to make men dye in their sleep: and this our Physitians call Opion. Certes, I haue knowne many come to their death by this meanes; and namely, the father of *Licinius Cecinna* late deceased, a man by calling a Pretor, who not able to indure the intollerable pains and torments of a certain disease, and being weary of his life, at Bilbil in Spaine, shortened his owne daies by taking Opium. By reason whereof, Physitians are growne to great variance, and be of contrary opinions as touching the vse of the foresaid Opium. *Diagoras* and *Erasistratus* condemned it altogether as a most deadly thing, & would not allow that it should be so much as injected or infused into the body by way of clyster, for they held it no better than poison: and otherwise hurtful also to the eies. *Andreas* saith moreouer, That if Opium doth not presently put out a mans eies & make him blind, it is because they of Alexandria in Egypt do sophisticate it. But in proceesse of time the later & modern Physitians did not vtterly reject it, but found a good vse therof, as may appeare by that noble and famous Opiat confection called *Diacodium*. Moreouer, there be certain ordinary trofches made of Popy seed beaten into powder, which with milk are commonly vsed by way of a liniment to bring sicke patients to sleepe. Likewise with oile Rosat, for the head-ach; and with the same oile they vse to drop it into the eares for to mitigate their pain. Also a liniment made therof with breast-milk is singular good for the gout. In which sort there is a great vse of the leaues also to the same purpose. And being applied as a cataplasme with vineger, they help *S. Antonies* fire, and all sorts of wounds. For mine own part I would not haue it in any case to enter into Collyries, much lesse vnto those medicines which be ordained to driue away ague fits, or into maturatiues, no nor to go among other ingredients into those remedies which are deuised to stay the flux that commeth from the stomack. Howbeit, in this case last specified, many giue the black Popy with wine. All garden Poppies grow rounder in the head than the wild: for these beare a head longer & smaller, howbeit (for any vse) of greater operation than those of the garden. For the decoction therof taken as a drink, procureth sleep to such as be ouer watchfull: so doth a fomentation thereof, if either the visage bee sprinkled, or the mouth washed therewith. The best Poppies be they that grow in dry places and where it raineth seldom. When the heads and leaues both be sodden & stamped, the iuice that is pressed from them, Physitians call *Meronium*: and it is far weaker and duller in operation than Opium. Now to know which is good Opium indeed, the first and principal trial is by the nose; for the true Opium is so strong, that a man may not indure to smel it: the second proof is by fire: for the right Opium will burn cleare like a candle, and when it is put forth yeeldeth a stinking sent from it in the end: which signes are neuer to be found in that which is falsified and sophisticate; for this that is not right, will not so soon take a light fire, and besides, is readie oftentimes to go out. There is another experiment by water: for the good and pure Opium being put into water, sendeth forth a certaine mist from it like a cloud, which floteth euen aloft: whereas the corrupt and depraued Opium gathereth into blisters and bladders, and so bubbleth vpon the water. And yet there is oneway more admirable than the rest to try good Opium euen by the Sun-shine in a Summers day: for if it be such as it ought, it will sweat and resolute into a thin liquor, like as when it came first out of the plant. To conclude, *Mnesicles* is of opinion, that the best means to keep and preferue Opium, is to lay it in Henbane seed: but others thinke it better to let it lie among beanes.

CHAP. XIX.

Memisbam. ¶ Of the wandering Popy, and the horned Popy. Of * *Glaucium* or *Paralium*. Of *Heraclium* or *Asphrum*. Of the composition named *Diacodium*, and of the *Tithymal*.

IN a middle nature betwene the garden Popy and the wild, is to be ranged a third kinde: which because it commeth vpon corne fields, but yet vnswon and of the own accord, we haue called *Rheas*, and wandering Popy. Some there be, who so soon as it is gathered, chew both heards and head all whole as it grew, and so eat it. Fiue heads of this Popy being sodden in three hemines of wine, and so taken in drinke, do both purge the belly, and also bring the patient to sleep.

Of these wild Poppies there is one kind called in Greek *Ceratitis*, of a dark or dusky green, growing vpon with a stalk a cubit high; with a grosse root, couered with a thicke rinde; the heads

A heads or cups wherein the seed lieth, bend like vnto a little horne. The leaues are lesse and slenderer of this Popy than of any other wild. The seed also is smal, ripe and ready to be gathered in corn haruest; which being taken in drinke, to the quantity of half an Acetabell in honied wine worketh downwards and scoureth the belly. The leaues being stamped with oyle, and so applied, heale the haw in horse eies. The root taken to the quantity of an Acetabell, and sodden in two sextars of honied wine, vntill halfe be consumed, is giuen in drinke for the infirmities of the loins and liner. The leaues applied as a cataplasme with hony, healeth Carbuncles. Some call this kind, *Glaucium*, others *Paralium*; for it growes within the aire of the sea, or els in some brackish place standing much vpon Nitre.

Another kind of these wild Poppies is called of some *Heraclion*, or of others, *Aphron*, with leaues resembling * Sparrows, if a man look a far off. The root runneth very ebbe and superficially vnder the green sord, and the seed seemeth charged with a certaine froth or foam. Here- with linnen cloths in summer time vse to be bleached, and to get a bright white colour. This herbe beaten in a mortar to the quantity of one Acetabell, and taken in white wine, helpeth the falling sicknesse; for it causeth the patient to vomit. This kinde of Popy is the principall ingredient or Basis to the confection named *Diacodium* or *Arteriacum*. The composition or making whereof ensueth in this maner: Take of this Popy heads, or of any other of the wilde sort, 120: let them lie in ioke or infused two daies together in three sextaries or halfe a gallon of water: and in the same water boyle them wel. When this decoction hath passed through a strainer or jelly bag, seeth it a second time with hony vpon to the height or consistence of a Syrupt (that is to say, vntill halfe be consumed away) ouer a soft and gentle fire. Herunto the modern Physicians which came after, put too, of Saffron, of Hypocisthis, Frankincense, Acacia, of each six drams, and in the end, of grosse cuitt of Candy one sextar. But this later composition serued onely for a shew and vaine ostentation, for the simple and plain making of it in old time with Hony and Popy, and no other addition besides, was as wholesome and profitable as this. But to come again to our wild Poppies: there is a third kind therof named *Tithymalos* (which some call *Mecon*, others *Paralium*) carrying a smooth leafe and a white, with a head of the bignesse of a Bean. The time of gathering these Poppies, is when the grape is in the floure: & then the manner is to dry them in the shade. The seed if it be taken in drinke, the quantitie of halfe an Acetabell in mead or honied wine, purgeth the belly. But what Popy soeuer it be, the head either green and fresh, or dry, if it be applied as a liniment to the eies, represseth the flux of watery humors falling to them, and mitigateth their inflammations. If Opium be giuen in pure wine somewhat allaied, presently after the Scorpion hath stung, it is a counterpoyson. Howbeit, some there be who attribute this vertue onely to the blacke Popy, namely, if either the heads or leaues be bruised and reduced into powder.

CHAP. XX.

¶ Of the wild Purcellane or *Peplium*. Of *Coriander* and *Orach*.

HERE is a wild Purcellane also, which they call *Peplium*: more effectual, though not much, than the garden Purcellane; for there be strong and wonderfull properties reported thereof for sundry vses. First it is holden for certain, that this herb if it be eaten as meat, dulleth the poison of venomous arrows, of Serpents also called * Hemorrhoids and * Presters: and being laid to the hurt place, draw forth the said poison. The iuice also of this herb pressed forth and drunk in wine cuitt, is a remedy for those that be poisoned with Henbane. Now if the herb it selfe is not to be gotten, the seed hath the like effect. Moreouer, it is thought to be singular good for the aquosities gathered within the body, and the diseases caused thereby, as dropies, &c. for the head-ach; for rheumatick vicers also, if it be brused and applied with wine. All other sores likewise it healeth, if it be chewed and laid too with hony. After the same manner prepared, it is good to be applied to childrens heads for to temper the heat of the brain, as also to their nauils when they beare out more than they should. For al vehement distillations of watery humors into the eies, as well of old folke as small infants, it is counted singular; for to be applied to the forehead & temples, together with Barly groats: but if it be laid vnto the very eys, then would the same be tempered with milk and hony. Now if it chanced that the eies be ready to fall out of the head, the leaues stamped with the shales of Beane cods, and applied thereto,

* *Seruthio similibus ex Diosc.* i. like to *Seruthium* wherein *Pliny* is foulely ouerscored to translate it *passere presentibus*: because that *seruthio* significeth the herb *Seruthium*, (a Fullers weed) and the bird called a sparrow: vpon which one absurdity more follow still to maintain the same, as commonly it is scene. For that which followeth of bleaching, agreeeth to the foresaid herbe in some sort.

* So called for that they cause flux of Bloud. * Otherwise named *Dioscides*, because they set on fire, as it were, and are vnquenchable thirst: whereupon they tooke both their names.

is an excellent remedy. A cataplasme made of it, with Barly groats, salt, and vineger, cureth an- G
gry wheales and blisters that break out in the skin. The same being chewed raw, represseth the
cankers in the mouth, and the smelling of the gums: likewise, it assuageth the tooth-ache. The
juice of it being well foddren, cureth the sores of the Amygdals, if the mouth & throat be wa-
shed therewith. And some put to this collution a little powder of the stone Murra. And no mar-
uell, for the very chewing only thereof doth fasten the teeth that be loose in the head. It doth
mitigate the inconuenience of crudity and indigestion, it strengtheneth the voyce, and putteth
by thirst. A cataplasme made therewith, hauing gal-nuts and line-seed among, of equal quanti-
ty, allayeth the pains and cricks in the nape or chine of the neck. Tempered with hony & white
fullers clay, it is singular for the accidents that befall to womens breasts. The seed taken with
honey, is very wholesome for such as be short winded. Eaten in sallds, it strengtheneth the H
stomack. If it be laid as a cataplasme [to the belly and Hypochondrial region] it allaieth the heat
of ardent and burning feauers; yea, & in other cases the very chewing of it cooleth the heat of
the guts and entrails. It staith vomits, eaten in vineger: or taken in drink with cumin, it is good
for the bloody flux and other inward imposthumes and filthy sores. Being first foddren and then
eaten, it is singular for those that strain hard vpon the stoole, and notwithstanding many prouo-
cations and profers, deliuer nothing. And whether it be taken in meat or drinke, it is a soue-
raigne thing for the falling sicknesse. For a shift or immoderat course of womens termes, it is
giuen with great successe, the quantity of one acetable measure in wine cuit. A liniment made
with it and salt, is good for the hot gout & S. *Anthony's* fire. The juice if it be drunken, helpeth
the reins and the bladder. It expelleth wormes and such like vermine out of the belly. A good
mitigatiue, it is of pain, if it be applied as a cataplasme to wounds with oyle and Barly groats. I
It mollifieth the stiffenesse and hardnes of the sinews. *Metrodorus* in his book intituled the * A-
bridgement or Breuiary of those roots that are to be cut vp or gathered; gaue counsell to giue
this herb to women, newly laid vpon child-birth, for the immoderate and excessive purgation
that many times followeth them. It cooleth the heat of lust, and represseth dreames of wanton-
nesse. I know my selfe a grand signior in Spain, father vnto a great personage, and one who had
bin advanced to the dignity of a Pretour, who carried euer about him a root of this Peplium
hanging at his neck by a lace or smal thred, & that for the intollerable pains of the Vvula, wher-
to he was subiect; and neuer would he leaue it off, but when he went into the stoue or bayne:
whereby he found such ease, that he was neuer troubled afterward with the said disease. Moreo- K
uer, I haue read in some writers, That if the head be annointed or well rubbed therewith, a man
shall not for a yeare together find any inconuenience of a rheum distilling from the brain: how-
beit, it is thought that the vse thereof wil make the eyes dim.

Concerning Coriander, there is none found growing wild of it selfe without sowing by the
hand. But certaine it is, that the very best commeth out of Egypt: a speciall and peculiar vertue
it hath against one kind of serpent or venomous worm, which they call Amphisbæna [for that
it seemeth to haue an head at both ends] whether it be inwardly taken in drinke, or outwardly
applied. It healeth also other wounds. It cureth the night-foes or chilblans, the red angry pim-
ples also, if it be but only stamped and layd too. There is not a swelling or apostemation gather-
ing to an head, but a cataplasme made with it, with hony and Raisins, either resolueth them, or L
quickly bringeth to maturation. If it be no more but stamped with vineger, it easeth the pushes
and biles that breed commonly in the ordinary emunctories. Three graines of Coriander seed
some prescribe to be eaten before the accessse or fit of a tertian ague: or more than three to bee
rubbed vpon the forehead. Others there are who thinke, that to the same effect they are to bee
laid vnder the bolster and pillow where the patient lieth, before the Sun riseth, and then shall he
be sure to misse his fit and be warished for that feuer. Indeed, Coriander whiles it is green, is of
great force to coole the heat of agues. A cataplasme thereof made with Honey or Raisins, hea-
leth vlcers also that be corrosiue and eat deep into the flesh. In like manner so prepared, it is ve-
ry good for the priuy members; for burns and scaldings, for carbuncles and for the eares. With
womans milk it helps the eyes that water continually. The seed drunken in water, staith the flux M
of the belly & guts; yea, and in case of those violent euacuations vpward & downward, through
the rage of choleric humors, being taken in drinke with Rue, it setteth and knitteth the body
again. If the seed of it be drunken with faller oile and the juice of a Pomgranat, it chafeth forth
worms out of the entrails. *Xenocrates* telleth a strange thing, if it be true, namely, That if a wo-
man-

A man drinke one onely grain or seed of Coriander, her menstrual flux will stay one day; if twain,
they will hold vp two daies: and proportionably, looke how many seeds she drinketh, so many
daies shall she go cleare and see no token of them. *M. Varro* was of opinion, That if flesh meat
were powdered or corned with Coriander grosse beaten together with vineger, it would keepe
sweet, and it were all the Summer long.

As for Orach, there is a wild kind of it growing of the owne accord: a very weed it is and no
better, vtterly condemned by *Pythagoras*; as if it bred the Dropsie, ingendered the laundise,
brought folk to look ill and pale, and were exceeding hard of digestion: and so far hee was out
of conceit with it, that he thought nothing would like wel & prosper, no not in a garden, where
this grew neere, but that it would sensibly decay and fade. *Dionysius* and *Diocles* approoue this
B judgement of *Pythagoras*, and say moreouer, that most diseases are bred thereby. Nay, they would
not haue it to be put into the pot to be foddren, vnlesse it had bin washed before in many waters.
These Physitians hold that it is a very enemy to the stomach, ingendring pimples, freckles, and
whelks. But I muse and maruell much why *Solon* of Smyrna should write, that it hath much ado
to grow and come vp in Italy. As for *Hippocrates*, he is not so far fallen out with it; for with it
and Beets he maketh a decoction (to be injected by the Mettrenchyre) to assuage the inflamma-
tion in the matrice & the natural parts of women. *Lycus* of Naples was wont to giue it to drink
as a counterpoyson against the green flies *Cantharides*. And he thought that a very good lini-
ment might be made thereof, either raw or foddren, to lay vnto biles, pushes, fellons a breeding,
and all hard tumors whatsoeuer. Semblably, that if S. *Anthony's* fire were annointed therewith,
C being incorporat with hony, vineger, and nitre, or if it were applied vnto the gouty parts, there
would ensue great easement. Moreover, in case the nailes be grown crooked, vneuen, & rugged,
it is said that it wil cause one to cast them without any vicer and sore at all. Some there be who
prescribe an electuary, made with the seed of Orach and hony, to be giuen for the laundise: also
if the windpipes be hoarse with some fell or sharp rheume falling downe vpon them, or, if the
Amygdals on either side of the throat be amisse, it is very good to rub those parts therewith.
They affirme moreouer, That a simple decoction of it alone, moueth the body downward; but
with Mallows or Lentils, prouoketh vpward and causeth vomit. Finally, to conclude with the
wild Orach, it is vsed much to colour the haire black, and for the other aboue named purposes,
as well as that of the gardens.

D

CHAP. XXI.

¶ Of the common Mallow. Of the Mallow Malope. Of the Marsh Mallow or Alisa. Of
the common Docke: the soure Docke or Sorrell: of the water Docke: of the
tall Docke called Patience: and lastly of that Docke with
the long root, called Bulapathum.

O Raches were not so much discommended, but on the contrary side Mallows be as highly
praised, as wel that of the garden as the wild. Two kinds there be of the garden mallows;
distinguished both by the largenesse of their leaues. The greater of those that grow in
gardens, the Greekes call Malopum; the other is supposed to be named Malachum; for that it
doth mollifie and soften the belly. Of the wild sort, that which carrieth a broad leafe and white
E roots is called * Althæa, and of some, Aristalthæa, for the excellent vertues that it hath in Phy-
sick. This property haue Mallows, To enrich and fatten any ground, whersoever they be sown or
set. But this marsh Mallow Althæa, is more effectually than the rest against all wounds by sharp
pricks or thornes, and principally against the sting of Scorpions, Wasps, and such like, as also
the biting of the Hardiflurew mouse. Nay, whosoever be thoroughly rubbed or annointed be-
fore hand with any Mallow whatsoeuer, stamped with oyle; or do but carry it about them, they
shall not be stung or bitten at all. As for the leafe of Mal lowes, if it be laid vpon a Scorpion, it
will be freightwaies benumbed. Moreover, good counterpoisons they be all: a liniment made
of them being raw, together with nitre, draweth forth all pricks or stings remaining within the
F flesh: but if leafe and root be foddren together and so drunk, it represseth the poison of the ve-
nomous fish called the sea-Hare; but some say it must be cast vp and vomited againe, or else it
doth no good. Certes, strange and wonderfull things be spoken as touching the operation of
Mallows, ouer and aboue those already rehearsed. But this passeth all the rest, That if a man or
woman

woman sup off a smal draught (though it were no more but half a cyath) euery day of the juice of any mallow, it skills not which, he shall be free from all diseases and liue in perfect health. True it is, that if they be putrified and resolued in chamber-lie, they will heale all the scurfe & running scalls in the head; but if they be tempered with hony, a collution made thereof cureth the cankers of the mouth; and a lauature represseth all tetter, ring wormes, & any such wild fire running vpon the skin. A decoction of the root, clenseth the head of dandruffe, if it be washed therewith, & fethereth the teeth fast that were loose. Take the root of that mallow which riseth vp with one only stem, prick the gums therewith about the tooth pained; do this (I say) till the ach be gone. The same root reduced into a liniment, with the fasting spittle of man or woman, and applied accordingly, resolues the Kings euil, dispatcheth the swelling kernels behind the ears, and discusseth biles and pushes, without any breaking of the skin or making vicer. The seed of mallows if it be taken in thick wine, deliuereth the patient from phlegmatick humors, from the rheume, and the heauing of the stomack making offer to cast and cannot. The root wrapped fast and tied within a lock of blacke wooll, preventeth the euill accidents that may befall vnto womens breasts. The same sodden in milk & taken after a suppling sort (in manner of a supping) for fūe daies together, cureth the cough. And yet *Sextius Niger* saith, they be hurtfull to the stomack. And *Olympias* of Thebes affirmeth, That if women vie it with goose greafe, they shall not ge their full time with childe. Others do write, That if women take an handfull of Mallow leaues in oyle and wine, they shall be thoroughly purged in their due times. This is known for a truth and resolued by all that write or make profession of Physicke, That a woman in labour, if she sit vpon Mallows strewed vnder her stoole, shall be deliuered with greater speed and expedition; but then must they be taken away presently after that she is laied, for feare that the very matrice follow after the child. An ordinary practice it is of sage and discret midwives, to giue vnto women in trauell fasting, a small pint of the juice of Mallows sodden in wine; & yet those that cannot contain but shed their naturall seed, are inioined to take mallow seed bruised, and so to bind it to their arme. Moreover, so good and fauorable naturally be mallows to the game of loue, as if they grew for nothing els: in so much as *Xenocrates* doth asseme, That if the seed of that Mallow which runneth vp in one stalk, be reduced into pouder and strewed vpon that part of a woman which Nature hath hidden, she will be so wooed after the company of a man, as she will neuer be satisfied nor contented with embracing. The like effect (saith he) there wil ensue, if three roots thereof be bound neere to the place of Nature. Also, that a decoction of Mallows ministred by way of clyster, is a singular injection to cure the bloody fixe, or exulceration of the guts; as also the extraordinary and bootlesse desire to the sege. In like manner, a fomentation thereof is very good for other accidents befalling to the seat or tuil. The juice of Mallows is giuen warm, the quantity of three cyaths, to melancholick persons that be troubled in mind, and of foure, to those that be stark mad indeed and besides themselves. A whole hemina of the juice drawne and pressed from mallows boyled, is giuen at one time to those that be subiect to the falling sicknesse. The same being reduced into a liniment, is to good purpose applied warm vnto those, who are troubled with the stone and grauell, with winde cholique and ventosities, with the cramp also or crick that doth draw their necks backward. The leaues being sodden in oyle, are layd with good successe in manner of a cataplasme, vpon the hot fretting humor called *S. Antonies fire*: also to places scorched, burnt, or scalded: but for the accidents and Symptomes concurrent with wounds, they be rather laid raw with crums of bread. The juice of mallows boiled, is comfortable to the sinews, the bladder, and the fretting or grinding of the guts. Mallows being either eaten, or their decoction ministred by way of injection with a metrenchyte, mollifieth the said tumors in the matrice. The juice of mallows wel sodden, either taken in drinke or applied by way of fomentation, inlargeth the Vretere conduits, and giueth good and easie passage for the vrine. The root of Althæa is more effectual to all these infirmities and purposes aboue named, than of any other Mallow; but especially in case of convulsions, cramps, and ruptures. If it be sodden in water, it bindeth the belly. Boyled in white wine and applied as a cataplasme, it resolue the swelling kernels, commonly called the Kings euil; those also that appeare behind the ears; yea, and the inflammations of the paps and breasts. As for the byles or ringings called Pani, the leaues of Althæa or the Marish Mallow sodden in Wine and brought to the forme of a liniment, doe discusse and rid away. The same, after they bee drie, and sodden in milke, cure the Cough, how tough and shrewd soeuer it were, and that most speedily.

Hippocrates

* A woman
Physitian, who
writ of Phys-
ick, or at least
wife a midwife
of good au-
thoritic.

- A** *Hippocrates* gaue counsell to them that were wounded, & for losse of blood exceeding thirstie, for to drinke the juice of Althæa roots sodden. He saith moreover, That the root it selfe empla-
stred with hony and rosin, is good for wounds, bruises, dislocations, and swellings: comfortable
also to muscles, sinews, or joints. He gaue it likewise to those that were troubled with difficulty
of taking wind, and with wheezing; for the dysentery also or bloody flux, to be drunken in wine.
A wonderful thing of this root, that if it be put into water, and the same let to stand abroad in
the open aire, the water will gather to a thicknesse and cruddle, yea turne white it will like milk.
To conclude, the newer and fresher Althæa is, the more effectually you shall haue it in operation.
Touching the Dock, the properties thereof are not vnlike to those of the marish Mallow: there
is a wild kind thereof, which some call Oxalis in Greek [*i. wild Sorrel* or *Soure dock*] this herb
resembleth very neere that of the garden, in regard of the sharpe pointed leaues; in colour like
the white Beet, hauing a very small root: our countrymen name it in Latine Rumex; other La-
patham Cantherinum: this herb being incorporat with hoggs greafe, is singular to mollifie all
the swelled kernels, which some call the Kings euil. A second sort there is, which commonly is
called Oxylapathum, *i. Sharp pointed Dock*; this cometh yet neerer to the garden Docke
than the former: for it hath leaues sharper at the point and redder, and groweth not but in ma-
rish grounds. There is another kind of Dock comming vp in the very water (as some say) Hy-
drolapathum. Yet is there one more called * Hippolapathum, bigger than the garden Docke
or Sorrell, white also, and of a more fast and pulposus substance. As for all the wild Dockes or
Sorrells, they be holden medicinable to cure the sting of Scorpions; and who soeuer hath any
of them about him, is secure from the sting or prick of Scorpions. The root, if it be sodden in
vineger and strained, the juice thereof if the mouth be washed therewith, helpeth the teethe ach:
and if the same be taken in drinke, it cureth the jaundise. The seed of this hearbe remooueth the
tough humors bedded in the stomack, how hard impacted soeuer they be: the roots of Patience
haue this peculiar property, To cause the nailes to fall off that grow rugged and vneuen. The
seed taken to the weight of two drams in wine, riddeth away the bloody flux. The seed of the
sharp Dock being washed in rain water, is singular good for those that reach and cast vp blood,
if there be added thereto as much Acacia as the bignesse of a Lentill. There be most excellent
Trochisques made of the leaues and root thereof, with the addition of nitre and some little
quantity of * conuenient liquor, to incorporat and vnite them: and these must bee infused and
dissolued in vineger, at the time that they are to be vsed. As touching the garden Sorrell, there
is a liniment made thereof, which being applied in manner of a frontall to the forehead, cureth
the distillation of the watery humors to the eies. The root is singular for the wens or impos-
tumes called Melecerides, and likewise of the Lepry. The decoction in wine is as good for the
stone and grauell, as also to resolue the Kings euil, and the swelling kernels behind the ears. If
the seed be drunk in wine, it helpeth the spleen and the tumors thereof: the bloody flux likewise,
the stomachicall flux, and the vaine desire to the stoole without effect. But for all these purpo-
ses, the juice of the Dock is more effectual.ouer and aboue, it breaketh wind vpward, it prou-
oketh vrine, and discusseth the cloud and Mist that troubleth the eies. If this herbe be put vp vn-
der the bathing tub within the baine, or otherwise if the body be annointed with a liniment
thereof without oyle, before one enter into the bath, it taketh away the itch. If the root be but
chewed only, it fasteneth the teethe that shake in the head. The same root sodden in wine, staith
the flux of the belly, and bindeth it; and yet the leaues make the body soluble. Finally (because
I would willingly omit nothing) *Solon* hath made mention of another Docke, called Bulapa-
thum, nothing different from other Dockes; but that the root runneth deeper to the ground,
which, if it be taken in wine, cureth the bloody flux.

CHAP. XXII.

¶ Of three kinds of Senvey: of Horehound, and wilde running Thyme: of water
Cresses: of water Mints, otherwise called Thymbraim: of
Linsced, and Blects.

- F** The herbe Senvey, whereof there be three kinds (as I haue already obserued in my treatise
of garden plants) *Pythagoras* hath placed in the highest ranke of those simples that fume
vp aloft: for there is not a thing that sooner biteth one by the nose, & pierceth and moun-
teth

* Patience, or
Monks Rheu-
barb.

* True, haply
for Thyme, &
Frankincense,
according to
Cormacian.

teth more quickly into the brains than doth Senvey. The seed thereof [commonly called mustard seed] being stamped, & with vineger reduced into a liniment, cureth the sting of serpents, and namely the prick with the Scorpion. It hath besides, a singular vertue to mortifie & kill the venomous quality of mushrooms. If it be but held in the mouth vntill it melt and resolute, or otherwise be gargarised with honied water, it draweth waterie fleame out of the head. Beeing chewed, it easeth the toothach. For the falling down of the Vvula, a gargarisme made of it with vineger and honey, is excellent. There is not a medicine so singular for the stomach and all the infirmities thereof, ne yet for the lungs. Being eaten at meat, it doth loosen superfluous fleame, and causeth a man to reach and fetch it vp with ease; yea and to take his wind and breath at liberty. In like manner, being taken warm with the juice of Cucumber, it cureth the falling sicknesse. It purifieth the senses: it purgeth the head by smelling: it keepeth the body soluble: it prouoketh womens monethly fleures, and vrine. A cataplasme made therewith and applied accordingly, helpeth them that be in a dropisie: so it doth those that be subiect to the falling sicknesse. but then must it be stamped with three parts of Cumin and figs. If it be tempered with vineger and held to the nose of such women as with the rising of the mother seeme to be strangled and to lie in a trance, it raiseth them vp again; in like sort, it awakens those who be in a fit of the lethargy; howbeit, in this case it is good to put thereto the seed of Sefeli of Candy, which they call Tordilion. But say that the Patients be in so deep a sleep in this drowfie disease, that by such means they will not start vp and be raised; then take mustard-seed and figs, temper them with vineger into a cataplasme, apply the same to the * legs or the * forehead or region of the brain rather. It hath a caustick or burning quality, and being applied in form of a liniment to any part, it raiseth pimples; by which means it cureth the old inueterat pains of the brest, the ach of the loins, the haunch, and hucklebone, the shoulders or any part of the body where need is that the offensive humors settled deep within, should transpire and be drawn outwardly to an issue. Now for that the nature thereof is to blister, in case the patient be timorous, & fear some extreme operation of that burning quality that it hath, it may be applied to the part affected between a doubled linnen cloth: otherwise, if the place be very thick and hard, it would be laid too without any figs at all. Moreouer, there is a good vse of Senuy with red earth, for to make the haire come again which is fallen for scabs and scurfe, for foule morphew or the leprosie, the lowfie disease, the vniuersall cramp that causeth the body to stand stiffe and stark, as it were all of one piece without ioint; also the particular cricke which setteth the neck backward, that it cannot stir. An Anction made with it and hony, cureth the eye-lids that be not smooth, but rugged and chapped; yea and clarifieth the eyes which be ouercast with a muddy mist.

As touching the juice of Senvie, it is after three sorts drawne; the first being pressed forth, it is let to take a heat in the Sun gently by little and little, within an earthen pot. Secondly, there issueth forth of the small stems or branches that it hath, a white milky liquor, which after it is dried and hardened in that manner, is a singular remedy for the tooth-ach. Where note by the way, that the seed & root both, after they haue bin wel steeped and soaked in new wine, are stamped or brayed together: now if one do take in a supping as much of this iuice thus drawne, as may be held in the ball of the hand; it is very good to strengthen the throat and chaws, to fortifie the stomach, to corroborat the eies, to confirm the head, and generally to preserue all the senses in their entire. And verily I know not the like wholsome medicine againe, to shake off and cure the lazy and lither feuers that come by fits many times vpon women. Senuy also being taken in drinke with vineger, breaketh the stone and expelleth it by grauell. There is an oyle also made of mustard-seed, infused and steeped in oyle, and so pressed out; which is much used to heat and comfort the stiffenesse of sinewes occasioned by cold; to warme also and bring into temper the thorough cold lying in the loins, hanches and hucklebones, whereof commeth the Sciatica. Of the same nature and operation that Senue is, Adarca is thought to be (according as I haue touched in the discourses of plants and trees growing wild in the woods;) which is a certain fomy substance arising and sticking in the bark of certain Canes, vnder their very leaues and tufts that they beare in the head.

Concerning Horehound, which the Greekes call Prasion, others Linostraphon, some Phyllopes or Philochares, an hearbe so well knowne and so common, that it needs no description; many Physicians haue commended to be as medicinable as the best. And in truth, the leaues and seed both, being beaten into powder, are excellent good for the stinging of serpents, for the

A paine of the brest and sides, & singular for an old cough. Moreouer, the juice is right soueraign for those who haue their lungs perished and do reach vp blood, if the branches thereof gathered and bound vp into bunches, be sodden first in water with the grain called Panick, for to mitigate in some sort the vnpleasant harshnesse of the said juice. A cataplasme of Horehound applied vnto the Kings euill with some conuenient fat or grease, resolueth the hard kernels. Some prescribe a receipt for the cough in this maner; Take the seed of green Horehound, as much as a man may comprehend with two fingers, seeth it with a smal handful of the wheat called Far, putting thereto a little oile and salt, and so sip off the decoction fasting. Others hold, That without all comparision there is not a medicine in the world like to the juice of Horehound and Fennel together, first drawn by way of expression to the quantity of 3 sextars, & afterwards boiled to the consumption of a third part vntill there remaine but two sextars; then to this decoction there must be put one sextar of hony, & all sodden again to the consumption of one third part more, vnto the height of a fyrtryp; whereof one spoonfull euery day taken in a cyath of water, is a drink that in this case hath no fellow. Horehound stamped and mixed with hony, is of wonderfull effect being applied to the priuy parts of a man, for any griefes incident thereto. Laid with vineger, vnto ring-worms, tetter, and any such running wild fires, it purgeth and riddeth them clean away. A wholsome medicine it is to be applied as a cataplasme, to ruptures, convulsions, spasmes, and cramps of the sinews. Taken in drinke with salt and vineger, it easeth the belly and maketh it laxatiue. It prouoketh womens terms, and sendeth out the after-birth. The powder of it drie, mixed with honey, is of exceeding great efficacy to ripen a dry cough, to cure gangrenes, white-flaws, and wertwells about the root of the nails. The juice dropped into the ears with honey, or snuffed vp into the nose, cureth their infirmities; it scoureth away the laundise also and purgeth cholerick humors. And for all kinds of poisons, few herbs are so effectuell as Horehound; for it selfe alone without any addition, clenseth the stomach and brest, by reaching and fetching vp the filthy and rotten fleam there ingendred. If it be taken with hony and the floure-de-lis root, it prouoketh vrine. Howbeit, where there is danger of any exulceration in kidneys or bladder, it must be vsed with great warinesse, if it be vsed at all. Moreouer, the juice of Horehound is said to clarifie the eie-sight. *Cassor* putteth downe two sorts of Horehound, to wit, the black and the white, but he setteth greater store by the white than the other. He prescribeth to take an empty egg-shel, and to put into it the juice of Horehound and hony, by euen portions; & when the said egge is warm, to minister the same by way of clyster or syringe, promising vs that the said injection will breake all inward imposthumes; and when they be broken, cleanse and heale them thoroughly. Also a liniment (saith hee) made of Horehound stamped together with old swines grease, cureth all wounds occasioned by the biting of mad dogs.

Touching running Thyme, some thinke it is called Serpyllum in Latine, a *serpendo* [i. of creeping] because it runneth and creepeth by the ground; a property indeed of the wild kind, and especially among rocks and stony grounds. The garden Serpyllum, which commeth of seed, creepeth not, but groweth to the height of four-fingers bredth. The wilde Thyme which commeth vp of the own accord, liketh and thriue better, hauing whiter leaues and branches than the other: this (I say) is thought to haue a speciall vertue against serpents, and namely the Cenchris, the Scolopendres also as well of the sea as the land; likewise the Scorpions, in case the sprigs and leaues thereof be sodden in wine, and so taken inwardly: if the same be burned, it yeeldeth a perfume, which with the very sent chafeth them all away. A singular power it hath against all venomous creatures of the sea. Boiled in vineger, & reduced into a liniment with oile of roses, it cureth the head-ach, if it be applied as a frontall to the forehead and temples. In like manner it helpeth the phrensie and lethargy; but if it be given to drinke, the weight only of four drams, it easeth the wrings & torments of the belly, it giueth free passage with ease to the vrine, it resolueth squinancy or bringeth them to maturity, and stiaeth vomits. And if one drinke it with water, it is excellent good for the opilation, heat, inflammations, and other accidents of the liuer. The leaues, to the weight of four oboli, are giuen in vineger, for the inflation and hardnesse of the spleen. If it be bearen to powder and giuen in 2 cyaths of vineger and hony, it is thought a good medicine for them that spit and reach vp blood.

The wild Sisybrium or Cresses, called of some Thymbraem, groweth to a foot in height and no higher. That which commeth vp in watery places, is like vnto garden Cresses: but both sorts are effectuell against all pricks and stings of Hornets, and such like creatures. That which

springeth vp in dry ground, hath the narrower leafe of the twain, and carrieth a sweet smel with it; whereupon it is commonly plaited amongst other odoriferous herbes in chaplets and guirlands. But both the one and the other allaieth head-ach: likewise they doe stay the flux of waterish humors which distill into the eyes. Some put crums of bread thereto; others seeth them alone in wine, and vse the decoction. Being reduced into a cataplasme, and so applied euery night and taken off in the day time, it heals within foure times laying on, the angry chilblanes and bloody-fals that trouble the feet in the night season; yea and taketh away the spots & pimples arising in womens faces, which marreth their beauty, whether it be eaten with meat in sub-
 stance, or the juice only taken in drink; it staieth vomits, yexes, wringings, gnawings, and the dissolution or feebleness of the stomach, which causeth inordinat flux. Women going with child must take heed how they eat Sisybrium, vnlesse the fruit of their bodies be dead within them; for if it be but applied outwardly, it will send it forth. If one drinke it with wine, he shall find that it prouoketh vrine; and the wild kind ouer and besides, expelleth the stone and the grauell. Such as had need to wake and watch, namely, those that be giuen to drowsinesse and lethargie, will be raised from their sleep and throughly wakened, if it be distilled aloft vpon their heads with vineger.

Line-feed is employed with other matters in diuers medicines to many vses, but of it selfe alone it cleareth the skin of womens faces, taketh out spots, freckles, pimples, wems, and molls that be eye-sores, if it be applied as a liniment thereto. The juice therof quickneth and helpeth the eye-sight. With Frankincense and water, or els with Myrrhe and wine, it represseth the violent flux of humors to the eyes. Reduced into a cataplasme, with honey, greafe, or waxe, and so applied, it resolueth the swelling kernels behind the ears. The meale thereof in manner of drie barley groats, if it be strewed vpon the stomach, helpeth the weaknesse and queasinesse thereof, which maketh it ready to ouerturn. If it be foddren in water and oile, and so reduced into a liniment with Annise-feed, and applied, it cureth the squinancie. It must be wel dried and parched at the fire, in case it be giuen to stay the running out of the belly. As for those that be troubled with the stomackall flux, or the exulceration of the guts; a cataplasme thereof with vineger and so applied, bringeth them present ease. For the griefe of the liuer, it ought to be eaten with raisons. This seed is passing good for lioches or eleotaries to be made thereof, in the cure of the Phthisick, and consumption of the lungs. Linefeed growing into floure and mingled with nitre or salt, or els with ashes put thereto, is of great operation to mollifie the hardnesse of muscles, sinews, joints, and the nape or chine of the neck; yea and to mitigat the inflammations of the membrans or pellicles of the brain. The same applied with figs, is an excellent maturatiue, and ripeneth all impostumes. But if it be laid too with the root of the wild Cucumber, it draweth forth any thing that sticketh within the body, euen the very spils & shiuers of broken bones. The said powder or floure made of Line-feed foddren in wine, and applied as a cataplasme, stayeth cancerous vlcers that they run no further: the same also with hony ripeneth apostemations of flegmatick humors, and the breaking forth of the small pox. Being mingled with an equall portion of garden Cresses, it cureth the rough nailes that grow vntowardly, and fetcheth them off without any inconuenience. Incorporat with rosin and * Myrrhe, and so laid to the cods, it helpeth their swelling and inflammations: it is good also for ruptures of all sorts; & with water it healeth the gangrene. Take of Line-feed & Fenigreek seed, of each one sextar, seeth them in bonied water, and make a liniment thereof, it easeth the paine of the stomach. Line-feed ministred in a clystire with oile and hony, cureth the deadly maladies of the guts and breast parts.

Bleets seeme to be dull, vnfauourie, and foolish Woorts, hauing no tast nor quicknesse at all: whereupon Menander the comical Poet, bringeth in a husband vpon the stage, who to reproch his wife for her sottishnesse and want of sense, giueth her the terme of Bleet. And in very truth, good it is for little or nothing, and altogether hurtfull vnto the stomacke. It troubleth and disquieteth the belly, inasmuch as it driueth some that vse to eat it, into the dangerous disease Cholera, working both vpward and downward without any stay. And yet some say, that if it be drunk in wine, it is good against Scorpions, and serueth for a prery liniment to be applied vnto the agnells or corners of the feet; yea and maketh a reasonable good cataplasme with oile, for the spleen, and pain of the temples. Finally, Hippocrates is of opinion, that much feeding of Bleets, staieth the monethly course of womens tearmes.

CHAP.

CHAP. XXIII.

¶ Of *Meu*, and *Fenell*, as well *Gentle*, named *Feniculum*, as *Wild*, which is called *Hippomarathrum*, or *Myrsineum*: of *Hempe*, and *Fenell*-geant: and of *Thistles* and *Artichoux*.

MEu or Spicknell is not found in Italy, vnlesse it be in some Physitians garden, and those are very few that sow or set it. Howbeit, there be two kinds thereof; the one, which is the better, is commonly called Athamanticum, of Prince *Athamas* the first inuenter of this herbe, as some thinke; but according to other, because the best Meu is found vpon *Athamas*, a mountaine in *Theffaly*. Leafed it is like to * *Annise*, rising vp with a stem otherwhile two cubits high, putting forth many roots, and those blackish, whereof some run very deepe into the ground; neither is this Meu so red altogether as the other. If the root therof be beaten into powder, or otherwise foddren and so drunk in water, it causeth vrine to passe abundantly: in that order also it doth resolue wonderfully the ventosities gathered in the stomach. It assuageth mightily the wrings and torments of the guts; it openeth the obstructions, and cureth other infirmities of the bladder and the matrice. Applied with honey, it is very good for the joints. Beeing laid as a cataplasme with Parsley to the bottome of the belly of little children, it causeth them to make water.

As for *Fenell*, the Serpents haue woon it much credit, and brought it into name, in this regard, That by tasting thereof (as I haue already noted) they cast their old skin, and by the juice that it yeeldeth do cleare their eies: whereby we also are come to know, that this herbe hath a singular * property to mundifie our sight, and take away the filme or web that ouercasteth and dimmieth our eyes. Now the only time to gather and draw the said juice out of *Fennel*, is when the stalke beginneth to swell and wax big: which after it is receiued, they vse to dry in the Sun, and as need requireth, make an iniunction with it and honey together. There is of this juice to be had in all places: howbeit, the best is made in *Iberia*, partly of the gum that issueth or frieth (rather) out of the stalk [being brought neere to the fire;] or els drawn from the seed whiles it is fresh and green. There is another making thereof out of the roots, by way of incision, presently after that *Fennel* beginneth to spring and put forth out of the ground, when Winter is done.

D There is another kind of wild *Fenell*, named by some *Hippomarathrum*, by others *Myrsineum*. Larger leaves this hath than that other of the Garden, and those more sharpe and biting at the tongues end: it groweth taller also, and ariseth with a maine stem as big as a mans arm, & hath a white root. It groweth in hot grounds and those that be stony. *Diocles* maketh mention of another kind yet of wild *Fennel*, with a long & narrow leafe, bearing seed resembling *Coriander*. As touching the garden *Fennel*, and the medicinable vertues that it hath, it is holden, That the seed, if it be taken inwardly in wine, is a foueragne drinke for the prick of Scorpions or sting of other Serpents. The juice thereof, if it be instilled by drops into the eares, killeth the wormes therin. The herb it selfe carrieth such sway in the kitchen, that lightly there is no meat seasoned nor any vineger sauce serued vp without it. Moreouer, for to giue a commendable and pleasant tast vnto bread, it is ordinarily put vnder the bottome crust of our loues, when they be set into the oven. The seed doth bind and corroborat a weake and feeble stomach, yea if it be taken in a very ague. Being beaten into powder & drunk in cold water, it staieth the inordinat heauing of the stomach, and the vain proffers to vomit; for the lights and the liuer, it is the most soveraign medicine of all other. Being taken moderately, it staieth the loosenesse of the belly, and yet prouoketh vrine. The decoction thereof appeaseth the wrings of the guts and taken in drink, it sil-
 leth womens breasts, and maketh them to strowt again with milk, when it is gone vpon some occasion. The root taken in a Prifane of husked barley, purgeth the reins; so doth the syrrop made with the juice or decoction therof, yea and the seed. The root foddren in wine, is singular good for the dropie and the cramp. A liniment made with the leaues and vineger, and so applied, assuageth hot swellings and inflammations: and the said leaues haue vertue to expel the stone of the bladder. *Fennel* taken inwardly any way, increaseth sperme or natural seed. A most friendly and comfortable herb it is to the * priuie parts, whether it be by fomenting them with a decoction of the roots boyled in wine, or by applying a liniment to them made with the said roots stamped & incorporate with oile. Many do make a cerote thereof with wax, for to lay vnto tumors;

H 3

* *Anise*, rather
Daube, Dill,
 after *Diocle*,
 whereupon it
 is called of
 some, wilde
 Dill.

* Such medi-
 cines be called
Agnes.

* either *Svoit*,
 exulcerate, or
 itching.

* *Myrrhe*.

* Of Serpents.
* Of cutting
vp or gather-
ing roots.

mours to places bruised & made black and blew with stripes. Also they vse the root either pre-
pared with the juice of the herb, or otherwise incorporat with hony, against the biting of dogs,
and taken in wine, against the worm called Milleped. But for all these purposes before said, the
wild Fennell is of greater operation than the garden Fennell: but this principal vertue it hath,
mightily to expell the stone and grauell. If it be taken with any mild and small wine, it is ve-
ry good for the bladder [and namely the Strangury] also it prouoketh womens tearmes that be
either suppressed or come not kindly away: to which purpose the seed is more effectuell than
the root. But whether it be root or seed, it would be vsed in a mean & measure: for it is thought
sufficient to put into drink at once, as much as two fingers will take vp. *Petradius*, who wrote the
booke intituled *Ophiaca, and *Mytion* likewise in his Treatise named *Rhizotomumena were
of opinion, That there is not a better counterpoyson against the venome of Serpents, than, wild
Fennell. And certes, *Nicander* himselfe hath raunged it, not in the lowest place of such medi-
cines.

Concerning Hemp, at first it came vp without sowing euen in the very woods, and carried a
more dusky green leafe, and the same rougher. It is said, that if men eat the seed, it wil extin-
guish vterly their own seed. The juice of green Hemp-seed, being dropped into the eares, dri-
ueth out any wormes or vermin there ingendred, yea, and what ear-wigs or such like creatures
that are gotten into them: but it will cause head-ach withall. So forcible is this plant, that (by
report) if it be put into water, it will make it to gather and coagulat. Which is the reason, that
if horses haue the gurry, they shall find help by drinking the said water. The root if it be boiled
in water, doth mollifie and soften ioints that be shrunk vp: it assuageth the pains likewise of the
Gout, and such like wicked humors that fall down vpon any part. Being yet green and reduced
into a liniment and so applied, it is good for burnes or scaldings, but it must be often remoued
and changed before it bedrie.

As for Ferula or Fennel-geant, it carrieth a seed like to Dill. That kind which riseth vp in
one stem, and then diuideth it self and brancheth forth in the head, is supposed to be the female.
The stalks are good to be eaten boyled: and the right sauce wherein they be serued vp, to giue
them a more commendable taist, is new wine and hony tempered accordingly, and so prepared,
they be good for the stomack. Howbeit, if one eat ouer-liberally of them, they cause head-ach.
Take the weight of one denier Roman of the root, beat it to powder and drinke it in two cyaths
of wine, you shall find it a soueraine medicine against the stinging of serpents: but you must
not forget meanwhile to apply the root it self (stamped into a cataplasme) vnto the hurt place.
After this manner it helpeth the wringing torments of the guts. Make a liniment or vnguent
thereof and vineger together, annoint the body therewith; it restraineth the immoderate sweats
that burst out, although the Patient be sick of a feuer. The juice of Ferula, if it be eaten (to the
quantity of a Beane) doth loosen the belly. The small tendrils or branches of greene Ferula, is
good for all the infirmities abouenamed. Take ten grains of Ferula seed in powder with wine,
or so much of the pith within the stalk, it stancheth bloud. Some hold it good to giue a spoon-
ful thereof euery fourth, sixth, and seventh day after the change of the Moon, to preuent the fits
of the falling sicknes. The nature of all these Fennel-geants is most aduerse to Lamprcies, for if
they be touched neuer so little therewith, they will die vpon it. *Cassor* was of opinion, That the
juice is excellent good to cleare the eye-sight.

And forasmuch as I haue spoken somewhat of Thistles and Artichoux (how they should be
ordered) in my treatise of other garden plants, I will put off no longer to discourse also of their
properties and vertues in Physick. Of the wild Thistles there be two kinds: the one more ful of
branches, shooting out immediatly from the root; the other riseth vp in one intire stem, and the
same is thicker withall. Both of them haue but few leaues, and those beset with prickles: they
beare heads pointed with sharp pricks round about in manner of caltrops. Howbeit, there is one
kind, which is the Artichoke, which putteth forth a purple floure amidst those sharpe pointed
prickles, which very quickly turns into an hoarie downe, readie to flie away with euery puffe of
wind: and this thistle the Grecks cal Scolymos. The juice of the Artichoke stamped & pressed
out before it bloome, bringeth haire again thicke, if the naked place be annointed therewith.
The root either of Thistle or Artichoke, foddren in water and so eaten, is as good as a shoog-
horne to draw on pot after pot, for these great bibbers that desire nothing more than to be thir-
sty and to make quarrell to the cup. It strengtheneth the stomacke, and (if we may beleue it) is
so

A so appropriate vnto the matrice of women, that it disposeth and prepareth it to conceiue men
children. In good faith, *Chereus* the Athenian, and *Glaucias* especially, who seemeth to be most
curious in describing the nature and properties of these Thistles or Artichokes, giue out no
lesse. To conclude, if one chew them in his mouth, hee shall finde that they will cause a sweet
breath.

CHAP. XXIV.

¶ The composition of a Treacle which was the ordinarie and familiar
medicine of King Antiochus.

B Vt before that we go out of the garden, and leaue the herbes there growing, I think it good
to set down one confectiō made of them, thought to be a most excellent and soueraine
antidote or preruatiue against the poison of all venomous beasts whatsoeuer, and which
for the excellency thereof was ingrauen in stone vpon the forefront of the temple dedicated to
Esculapius, in this maner following: Take of wild running Thyme the weight of two deniers;
of Opopanax and *Meu of each the like quantitie; the seed of Dil, Fennel, Ameos, and Parsly,
of each the weight of six deniers; of Ervil floure twelue deniers or drams. Let these be beaten
into powder and finely searced; and when they be incorporat in the best wine that may be had,
they ought to be reduced into the form of Trofches, euery one weighing a victoriat or half den-
ier. When occasion is to vse this composition, dissolue one of these Trofches in three cyaths
of wine, and drinke it. This is that famous Treacle or countrepoyson which great *Antiochus*
the King was wont (by report) to take against all venoms or poysons whatsoeuer.

* Mei, won Mi-
ly. 22 Galen.



THE TWENTY FIRST BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS

SECVNDVS.

The nature of Floures, and namely those of Chap-
lets and Guirlands.

CHAP. I.

¶ The wonderfull varietie of Floures.



As in his Treatise of Gardens ordained as a necessary point, That they should
be planted and enriched with such herbes as might bring forth floures for Co-
ronets and Garlands. And in very truth, their diuersitie is such, that vnpossible
it is to decipher and expresse them accordingly. Whereby wee may see, that
more easie it was for dame Nature to depaint & adorn the earth with sundrie
pictures, to beautifie the fields (I say) with all maner of colours, by her handy-
worke (especially where she hath met with a ground to her minde, and when she is in a merrie
humour and disposed to play and disport her selfe) than for any man in the world to vter the
same by word of mouth. Wherin certes her admirable prouidence she hath shewed principally
in

in this, That whereas she hath giuen vnto those fruits of the earth which serue for necessities & the sustentation of man, long life and a kind of perpetuities, euen to last yeares and hundreds of yerres, these floures of pleasure and delight, good only to content the eye, or please the sense of smelling, she would haue to liue and die in one day. A great document and lesson for vs men in generall to learne, How all things whatsoeuer that flourish most louely and be gayest in shew, soonest fade and are gon suddenly. But to come again to the varietie of floures aforesaid, together with their diuers mixtures: verily there is no painter with all his skill, able sufficiently with his pensil to represent one liuely garland of floures indeed; whether they be plaited and intermeddled in manner of neseagaies one with another, or set in ranks and reues one by another, whether they be knit and twisted cord-wise and in chain-work of one sort of floures, either to wind and wreath about a chaplet, bias, or in fashion of a circle, or whether they be sorted round into a globe or ball, running one through another, to exhibit one goodly sight and entire vniformity of a crosse garland.

CHAP. II.

¶ Of Garlands, Coronets, Chaplets, and Neseagaies made of floures. Who deuised first the sorting and setting of sundry floures. The first inuention of the Coronet or Guirland, and the name of it in Latine, Corolla: and whereupon it was so called.

THE Coronets or Garlands vsed in ancient time were twisted very small, and thereupon they were called Strophia, i. Wreaths: from whence came also womens gorgets & stomachers to be named Strophiola. As for the word Corona, a Coronet or Garland, long it was first ere it came to be vulgar and commonly taken vp, as a term chalenged either by priests and sacrificers in their diuine seruice, or victorious captaines in their glorious triumphs. But those Garlands and neseagaies being made of floures were called in Latine Serta, or Seruiz, i. serendo, i. of sorting and setting together. The manner of which plaiting and broiding of herbes and floures, the ancient Greekes took no pleasure in: for at the beginning they vsed to crowne with branches only of trees, those braue men who had woon the prise in their sacred games and solemne Tournies or exercises of actiuitie. But afterwards they began to beautifie and enrich their chaplets of triumph with sundry floures entermingled together. And, to say a truth, the Sicyonians passed in this feat of sorting together one with another, floures of sweet fauor and pleasant color, in making of posies and garlands. Howbeit the example of *Paufias* the cunning painter, and *Glycera* the artificial maker of such Chaplets, set them first a worke. This Painter was wonderfully enamoured vpon the said *Glycera*, and courted her by all the meanes hee could deuise: among the rest, he would seem to counterfeit and represent liuely with his pensil in colours, what floures soeuer she wrought and set with her fingers into garlands; and these againe strived aue to change and alter her handiwork every day, for to driue him to a non-plus at the length, or at leastwise to put him to his shifts: insomuch, as it was a very pleasant and worthie sight, to behold of one side the works of Nature in the womans hand, and on the other side the artificial cunning of the foresaid painter. And verily there are at this day to be seene diuers painted tables of his workmanship: and namely one picture about the rest, entituled, * *Stephanoplocos*, wherein hee painted his sweet-heart *Glycera* twisting and braiding Coronets and Chaplets, as her manner was. And this fell out to be after the hundreth Olympias was come and gon, by iust account.

Now when these Garlands of floures were taken vp and receiued commonly in all places for a certain time, there came soon after into request those Chaplets which are named Egyptian; and after them winter Coronets, to wit, when the earth affoordeth no floures to make them; and those consisted of horn shauings died into sundry colours. And so in proceffe of time, by little and little crept into Rome also the name of Corolla, as one would say, petty Garlands; for that these Winter Chaplets at first were so pretty and small: and not long after them, the costly Coronets and attires Corollaria, namely, when they are made of thinne leaues and plates and Latin, either guilded or siluered ouer, or else set out with golden and siluered spangles, and so presented.

CHAP.

CHAP. III.

¶ Who was the first that exhibited in publicke shew a Guirland or Chaplet of gold and siluer. fol. c. How highly Coronets were esteemed in old time. Of the honour done to Scipio, of plaited Coronets. And one notable Act of *Queene Cleopatra*.

CASSIUS the rich was the first man, who at the solemn Games and Plaies which he set out in Rome, gaue away in a braue shew, Chaplets of gold and siluer, resembling liuely floures and leaues of hearbes. Afterwards, such Coronets were adorned with ribband also, and those were added as pendants thereto for more honour and state: a deuise respectiue to those * *Tuscane* Guirlands and Coronets, which might haue no such ribbands or lace hanging vnto them but of gold. And in truth those labels a long time were plaine and without any other setting forth saue only the bare gold: vntill *P. Claudius Pulcher* came in place, who exhibited in his publicke shewes, the said labels wrought, chased, and engrauen; yea, and hee garnished the said plates of gold with glittering and twinkling spangles besides. Howbeit, were these Coronets neuer so rich and precious, yet those Chaplets woon and gotten at the solemn Games for some worthy feats of actiuitie performed, caried alwaies the greater credit & authority. For to gaine this prise, the Grand-seigniors and great men of the citie thought it no scorne to enter themselves in proper person into the publick place of Exercise to trie maistries: yea, and thither they sent euery man his seruant and slaue. Hereupon grew these Ordinances, specified among the laws of the twelue tables in these words: *Whosoever winneth Guirland, either himselfe in person, or by his monie, goods and chattels, is to be honoured in regard of his vertue*. And certes who maketh doubt, but what Prize or coroner, either slaues or horses haue obtained, the same by vertue of this law, should be reputed as gotten by the money and goods of the master or owner of the said horses or slaues? But what honor might this be which is thus atchieued by such a chaplet? many that which is right great, namely, that without all fraud and contradiction, not only the party himselfe who woon it, should be crowned therewith after his death, both whiles his body lay vnder board within house, and also all the way that it was caried forth to the place of sepulture or funerall fire; but euen his parents likewise, both father and mother [if they were then liuing], *Jecertes*, such Guirlands otherwise though they were not woon at games or prize, but only made for pleasure & pastime, might not come abroad ordinarily, nor be commonly worn; for the law was very strict and seuer in this case: we read that *L. Fulvius Argentarius* in the time of the second Punicke war, vpon an information or speech giuen out, That in the open day time he only looked forth of a gallerie which he had in the publicke Forum or common place at Rome, with a Garland of Roses vpon his head, was by authoritie of the Senate committed to prison, and was not enlarged before the end of the warre. *P. Munatius* hauing taken from the head of *Marsyas* a Chaplet of floures, and set it vpon his owne; and thereupon being commaunded to ward, by the Triumvirs, called vnto the Tribunes of the Commons for their lawful fauour and protection: but they opposed not themselves against this proceeding, but deemed him worthie of this chastisement. See the discipline and seueritie at Rome, and compare it with the loosenes of the Athenians, where yong youths ordinarily followed reuils and bankers, and yet in the forenoon would seeme to frequent the schooles of Philosophers, to learne good instructions of vertuous life. With vs verily we haue no example of disorder in this behalf, namely, for the abuse of garlands; but only the daughter of *Augustus Caesar* late Emperor, and canonised as a god at Rome, who complaineth of her in some letters of his yet extant, & that with grone and griefe of heart, to be giuen to such riot and licentious loosenesse, that night by night she would seem to adorn with Guirlands the statue and image of *Marsyas* the Minstrell. We do not read in Chronicles, that the people honoured in old time any other with a Coronet of floures, but onely *Scipio* surnamed *Serapio*, for the neere resemblance that he had to his baily or seruant so called, who dealt vnder him in buying and selling of Swine: in which regard he was wonderous well beloued of the commons in his Tribuneship, as bearing himself worthy of the famous and noble house of the *Scipios* surnamed *Africani*. Howbeit, as well descended and beloued as he was, yet when hee died, he left not behind him in goods sufficient to defray the charges of his funerals: the people therfore made a collection, and contributed by the poll euery man one * *As*: and so took order

* These Guirlands or Chaplets were called *Tetrusca*. For so saith *Terullian*. *Proseruatur etiam illis Tetrusca*. *Hoc vocabulum est Cornu* & i. to be Adile

* *three farthings*.

by

* A Garland-maker.

by a generall expence, that he should be honourably enterred: and as his corpes was carried in the streets to his funeral fire, they flung floures vpon his bere out of euery window all the way. In those daies the maner was to honor the gods with chaplets of floures, and namely those that were counted patrones and protectours, as well of cities and countries, as of priuat families; to adorne and beautifie therewith the tombs and sepulchres of those that were departed, as also to pacifie their ghosts, and other infernall spirits: farther than thus, there was no vse of such Guirlands allowed. Now of all those Chaplets, most account was made of them wherein the floures were platted. We find moreover, That the Sacrificers or Priests of Mars called *Sally*, were wont in their solemnities & feasts (which were very sumptuous) to weare Coronets of sundry floures sowed together. But afterwards, Chaplets of Roses were only in credit and reputation: vntill that in proceffe of time, the world grew to such superfluitie and sumptuous expence, that no Guirlands would please men, but of the meer precious and aromaticall leaf Malabathrum: and not content therewith, soone after there must be Chaplets set as far as from India, yea, and beyond the Indians, & those wrought with needlework: and the richest coronet was that thought to be, which consisted of the leaues of Nard: or els made of fine silke out of the Seres country, and those of sundry colors, perfumed besides & al wet with costly and odoriferous ointments. Further than thus they could not proceed, and so our dainty wanton dames rest contented hitherto, and vse no other Chaplets at this day. As for the Greekes verily, they haue written also feuerall Treatises concerning floures and Garlands: and namely, *Mnestheus* and *Callimachus*, two renowned Physicians, haue compiled bookes of those Chaplets that be hurtfull to the braine and cause head-ach. For euen herin also lieth some part of the preseruatiou of our health, considering that perfumes do refresh our spirits, especially when we are set at table to drinke liberally and to make merrie, whiles the subtil odour of flours pierceth to the braine secretly ere we be aware. Where, by the way, I cannot chuse but remember the deuise of Queene *Cleopatra*, full of fine wit, and as wicked and mischieuous withall: For at what time as *Antonie* prepared the expedition and journey of Actium against *Augustus*, and stood in some doubt of jealousy of the said Queen; for al the fair shew that she made of gratifying him and doing him all pleasure, he was at his taster, & would neither eat nor drink at her table without assay made. *Cleopatra* seeing how timorous he was, and minding yet to make good sport and game at his needlesse feare and foolish curiositie, caused a Chaplet to be made for *M. Antonius*, hauing before dipped all the tips and edges of the floures that went to it in a strong and rank poison, and being thus prepared, set it vpon the head of the said *Antonie*. Now, when they had sitten at meat a good while, and drunk themselves merrie, the Queen began to make a motion and challenge to *Antonie*, for to drink each of them their chaplets; and withall began vnto him in a cup of wine seasoned and spiced (as it were) with those floures which she ware her owne self. Oh the shrewd & vnhappy wit of a woman when she is so disposed! who would euer haue misdoubted any danger of hidden mischief herein? Well, *M. Antonie* yeelded to pledge her: off goeth his owne Guirland, and with the floures minced small, dresseth his own cup. Now when he was about to set it to his head, *Cleopatra* presently put her hand betweene, and staied him from drinking, and withall vttered these words, My deare heart and best beloued *Antonie*, now see what she is whome so much thou dost dread and stand in feare of, that for thy security there must wait at thy cup and trencher extraordinarie tasters; a straunge and new fashion ywis, and a curiosity more nice than needfull: lo, how I am not to seek of means and opportunities to compass thy death, if I could find in my heart to liue without thee. Which said, she called for a prisoner immediately out of the goale, whom she caused to drink off the wine which *Antonie* had prepared for himselfe. No sooner was the goblet from his lips againe, but the poor wretch died presently in the place: but to come againe to the Physicians who haue written of floures besides those abouenamed. *Theophrastus* among the Greekes hath taken this argument in hand. As for our countrey men, some haue entituled their bookes * Anthologicon: but none of them all, so farre as euer I could find, wrote any Treatise concerning floures. Neither is it any part of my meaning at this present to make Nosegaies, or plat any Chaplets, for that were a friuolous and vaine peece of work: but as touching floures themselves, I purpose to discourse so much as I think and find to be memorable and worth the penning. But before I enter into this Treatise, I am to aduertise the Reader, that we Romanes are acquainted with very few garden floures for Guirlands, and know in manner none but Violets and roses.

CHAP. IV.

¶ Of the Rose employed in Coronets. The diuers kinds thereof: and where it is set and groweth.

The plant whereupon the Rose doth grow is more like a thorn or bush, than a shrub or any thing else. For it will come of a very Brier or Eglantine also, where it wil cast a sweet and pleasant smell, although it reach not far off. All Roses at their first knitting seeme to be inclosed within a certain cod or huske full of graines: which soon after beginneth to swell and grow sharp pointed into certain green indented or cut buds: then by little and little as they wax red, they open and spread themselves abroad, containing in the midst of their cup as it were certain small tufts or yellow threds standing out in the top. * Vsed they are exceeding much in Chaplets and Guirlands. As touching the oile Rosat, made by way of infusion, it was in request before the destruction of Troy, as may appeare by the poet *Homer*. Moreover, Roses enter into the composition of sweet ointments and perfumes.ouer and besides, the Rose of it selfe alone as it is, hath medicinable vertues, and serueth to many purposes in physick. It goeth into emplastres and collyries or eye-salues, by reason of a certain subtil mordacitie and penetratiue qualitie that it hath. Furthermore, many delicate and dainty dishes are deuised vpon the table, either couered and bestrewed with Rose leaues, or bedewed and smeared all ouer with their iuice; which doth no harme to those viands, but giue a commendable tast thereto. We at Rome make most account of two kinds of Roses about the rest, to wit, those of Præneste, and of Capua. And yet some haue ranged with these principal Roses, those of Miletum, which are of a most liuely and deep red colour, and haue but twelue leaues in a floure at the most. The next to them are the Trachinian Roses, not so red all out. Then those of Alabanda, which be of a baser reckoning, with a weak colour inclining to white. Howbeit the meaneest and worst of all, is the Rose * Spineola. Most leaues in number it hath of all others, and those in quantity smaller. For this would be knowne, that Roses differ one from another either in number of leaues, more or lesse; or els that some be smooth, others rough and prickly: also in colour and smell. The fewest leaues that a Rose hath be five: and so vward they grow euer still more and more, vntill they come to those that haue an hundred, namely about Campain in Italy, and neere to Philippos a city in Greece, whereupon the Rose is called in Latine Centifolia. Howbeit, the territorie of Philippi hath no such soile as to bring forth these hundred-leaf Roses: for it is the mountain Pangæus neare adioynning, vpon which they naturally doe grow, with a number of leaues I say, but the same small: which being remoued & transplanted by the neighbor borderers, do mightily thrue in another ground, namely about Philippi aforesaid, & proue much fairer than those of Pangæus. Yet are not such Roses of the sweetest kind, that are so double and double againe; no more than those which are furnished with the largest and greatest leaues. But in one word, if you would know a sweet smelling rose indeed, chuse that which hath the cup or knob vnder the floure, rough & prickly. *Capio*, who liued in the time of *Tiberius* the Emperour, was of opinion, That the hundred-leaf Rose had no grace at all in a garland, either for smell or beauty; & therefore should not be put into chaplets, unless it were last in maner of a tuft, to make a fur-croist, or about the edges as a border: no more than the Rose Campion, which our men call the Greek Rose, and the Greekes name Lychnis, which lightly groweth not but in moist grounds, and neuer hath more than five leaues. The floure exceeds not the bignes of a certain violet, and carrieth no sent or fauor at all. Yet is there another Rose called *Gracula*, the floures & leaues whereof are folded and lapped one within another, neither wil they open of themselves, unless they be forced with ones fingers, but looke alwaies as if they were in the bud, notwithstanding that the leaues when they be out are of all others largest. Moreover, there be Roses growing from a bush that hath a stalk like a Mallow, and beareth leaues resembling those of the oliue: and this kind is named in Greek Mofcheuton. Of a middle sife between these abouenamed, is the Rose of Autumne, commonly called Coroneola. And to say a truth, all the said Roses, except this Coroneola, and that which groweth vpon the brier or Eglantine before-named, haue no smell with them in the whole world naturally, but are brought to it by many deuises & sophistications: yea, & the very Rose it selfe, which of the own nature is odoriferous, carrieth a better smell in some one soile than in another. For at Cyrene they passe all other for sweetnes and pleasant favor.

fauor: which is the reason that the oile Rosat, and ointment compounded thereof, is most excellent there of all other places. And at Cartagena in Spain there be certaine timely or hastie Roses, that blow and floure all winter long. The climat also and temperature of the aire makes for the sweetnesse of the Rose: for in some yeares yee shall haue them lesse odoriferous than in others.ouer & besides, the place would be considered: for the roses be euer more sweet growing vpon dry than wet grounds. And indeed the Rose bush loueth not to be planted in a fat and rich soile, ne yet vpon a vein of cley, no more than it liketh to grow neere vnto riuers where the banks be ouerflowed, or in a waterish plot; but it agreeth best with a light and loofe kinde of earth, and principally with a ground full of rubbish, and among the ruines of old houses. The Campain Rose bloweth early and is very forward. The Milesian comes as late. Howbeit those of Præneste be longest ere they giue ouer bearing. As touching the maner of planting them: as the ground would be deluded deeper than for corn, so a lighter itich had need be taken than for Vine sets. Those that be sowed of seed be latest of all others ere they come vp, and thriue most slowly. [Now lieth this feed in the cup or husk thereof iust vnder the very floure, and is covered all ouer with a down.] And therefore it is better to set sions cut from the stalk, or els to slip the little oilets and shoots from the root, as the maner is in reeds and canes. After which sort they vse to set, yea & to graf one kind of a prickly & pale rose bush, putting forth very long twigs & shoots like to those of the Cin-q-foile rose, which is one of the Greekish kind. There is no rose bush whatsoeuer, but prospereth the better for cutting, pruning, yea and burning. Moreover, it loueth to be remoued and transplanted as well as the Vine, and by that meanes will it come to the proof and beare best. As for the sets or sions, they ought to be foure fingers long or more above the ground, when they be first put into the earth, to wit, after the occultation of the brood Hen star. Then would they be translated in Februarie, at what time as the Western wind Favonius is aloft, and replanted with a foot distance one from another: but they require to be euer and anon digged about the root. They that desire to haue Roses blow betimes in the yeare, before their neighbours, vse to make a trench round about the root a foot deep, and poure hot water into it, euen at the first when the bud of the Rose beginneth to be knotted.

CHAP. X.

¶ Of Lillies three kinds: and the maner of planting or setting them.

NEXT to the Rose, there is not a fairer floure than the Lilly, nor of greater estimation. The oiles also and ointments made of them both haue a resemblance and affinitie one to the other. As touching the oile of Lillies, the physitians call it Lirinon: & if a man should speake truly, a Lilly growing among Roses becommeth and beautifieth the place very well; for it beginneth then to floure when Roses haue halfe done. There is not a floure in the garden again that groweth taller than the Lilly, reaching otherwhile to the height of three cubits from the ground: but a weak and slender neck it hath, and carieth it not streight and vpright, but it bendeth and noddeth downward, as being not of strength sufficient to beare the weight of the head standing vpon it. The floure is of incomparable whitenesse, diuided into leaues, which without-forth are chamfered, narrow at the bottom, and by little and little spreading broader toward the top: fashioned altogether in maner of a broad mouthed cup or beaker, the brims or lips wherof turn vp somewhat backward round about, and lie very open. Within these leaues there appeare certain fine threds in maner of seeds: and iust in the midst stand yellow chiuies like as in Saffron. As the colour of the Lilly is twofold, so carieth it a double smell; one in the leaues which resembleth the cup aforesaid, and another in those strings or chiuies; howbeit the difference is not much. Now for to make the oile and ointment of Lillies, the leaues also are not reiected.

There is an herb named in Latine Convolvulus [i. with wind] growing among shrubs & bushes; which carieth a floure not vnlike to this Lilly, saue that it yeeldeth no smell, nor hath those chiuies within: for whitenesse they resemble one another very much, as if Nature in making this floure, were a learning and trying her skill how to frame the Lilly indeed.

Now Lillies be set and sowed after the same maner in all respects as the Roses, and grow as many waies. This vantage moreouer they haue of the roses, That they will come vp of the verie liquor that distilleth and droppeth from them, like as the herbe Alifanders: neither is there in the

A the world an herb more fruitful, in so much as you shall haue one head of a root put forth oftentimes fise hundred bulbes or cloues.

There is besides a red Lilly, which the Greeks in their language call Crinon: and some name the floure of it Cynorrhodon. The excellent Lilly of this kind groweth in Antiochia & Laodicea, cities both in Syria: the next to that is found in Phaselis. In a fourth place, is to be set the Lilly growing in Italy. There are besides, purple Lillies, which otherwhiles rise vp with a double stem: these differ from the rest only in the pulpos root which they haue; and the same carrie a great bulbe in one entire head, and no more: such they call Daffodills. A second sort there is of these Daffodills with a white floure, & a purple cup or bel within. Herin differ Daffodills from Lillies, for that the Daffodil leaues be toward the root, & namely those in the best mountains of Lycia; whereas in Lillies they put forth in the stalk. The third kind agreeth in all points with the rest; but that the cup in the midst of the floure, is of a grasse greene. All the sort of them be late ere they floure, and begin not to blow before the retreat of the star Arcturus, and about the Autumn Equinox: but such are the monstrous deuises of some fantastical spirits, that they inuented forsooth a new kind of artificiall * coloring and dying of Lillies: for which purpose, in the month of Iuly they gather their stems, when they begin to wither, & hang them vp in the smoke to drie. Now when the knobs or heads of their roots looke once bare and are shor out from the said stalks, (which commonly falleth out in the month of March) they infuse & steep them in the lees of deepe red wine, or some Greekish wine, for to suck and drinke in the colour thereof: which done, they set them in little trenches, whereinto they poure certaine hemines or

B pints of the said wine: and by this means become the Lillies aforesaid, purple. A strange and wonderfull matter that any root should take a tincture so deep, as to bring forth a floure of the same die and colour.

CHAP. VI.

¶ Of the Violet and the Marigold: of Bacchar, and Combretum: of Azara-bacca, and Saffron.

IN the third ranke of floures, be ranged the * Violets: whereof be many kinds: to wit, the purple, the yellow, and the white. All of them may be set of plants, like as worts, and garden pot-herbs. But of those which naturally come vp & grow of their own accord in leane grounds, and those exposed to the Sunne, the purple [March] Violets, they haue a broader leafe than the rest, & those spring immediatly from the root, which is pulpos and fleshy. These alone be distinct from the rest by a Greek name, and are called * Ia, whereupon purple cloth is likewise of them named Ianthina. But of those which are sowne or set by hand, the * yellow beare the greatest name aboue all other. These floures be distinguished into diuers kinds, namely, into the Tuscan Violets; and those of the sea, which haue a broader leafe but are not so sweet as others. Some smell not at all, to wit, the * Calathian Violet with the small leafe, a floure this is that Autumne yeeldeth, whereas the rest doe flourish in the Spring.

E Next vnto the Violet, are the Marigolds, all of one colour. In number of leaues this floure passeth the Sea-violet aforesaid, which neuer exceedeth fise: but in recompence of that defect, this Violet goeth beyond the Marigold, in sweet fauour, for the Marigold carrieth a strong sent with it and an vnpleasant. As for the hearb called * Scopia regia, it hath a smell nothing milder than it; although the leaues (to say a truth) doe smell, and not the floures.

Bacchar is named by some Rustick: Nard: this plant hath nothing in it odoriferous and senting well, but the root. Of which root, (as Aristophanes an auncient Comical Poet testifieth in one of his Comedies) they were wont in old time to make sweet perfumes and odoriferous compositions for their ointments: whereupon some there be who call the root Barbarica, but falsly; for deceived they are. The fauour that this root doth cast, draweth very neere to the sent of Cinamon. It loueth a leane and light soile, and in no wise commeth vp in a moist ground.

F As touching the hearb named Combretum, it resembleth the same very much: howbeit the leaues be passing small and as slender as threds, but the plant it selfe is taller than Bacchar: well, rest we must not in the description of these hearbes and floures only, but also we are to reforme and correct their error, who haue giuen to Bacchar the name of Nard-rustick: For there is another hearbe properly so called, to wit, that which the Greeks name Afaron, [i. A. fara-bacca, or

* Inficendi.

* Note that Viole in Plinie and other authors, reacheth to our Stock-gilliflowers, wall-flowers, and other floures, as to the purple March Violet. * Chius or Wal-floures. * Some take it for a kind of Foxe-gloue.

* Which some take for yellow Yarrow.

Fole.

Fole-foot,] a plant far different from Bacchar, as may appear by the description therof, which I haue set down among the sundrie kinds of Nardus. And verily I do find, that this plant is named * Afarum, because it is neuer vsed in making of guirlands and chaplets.

* *Son. n. cupit,*
i. ornate: *q. d.*
cupit, because
it adorneth no
chaplets.

* *Adfrangula*
figula: which
if you refer to
a drachme fig-
nifieth a third
part lesse; but
if to an ounce,
the 24 part.

* *Phlegma* but
Turneb. rea-
doth *Egea*, ac-
cording to
Dioscor.

Concerning Saffron, the wild is the best. To plant it within any garden in Italie, is held no good husbandry, for it will not quit cost, considering there is neuer a quarter set therewith, but it asketh a * scruple more in expence, than the fruit or increase commeth to, when all the cards be told. For to haue Saffron grow, you must set the cloues or bulbous heads of the root: and being thus planted, it prooueth larger, bigger, and fairer than the other: howbeit sooner far it doth degenerate and become a bastard kind: neither is it fruitfull and beareth chiues in euerie place, no not about Cyrene, where the goodliest floures of Saffron in the world are to be seen at all times. The principal Saffron groweth in Cilicia, and especially vpon the mountain Corycus there: next to it, is that of Lycia, and namely vpon the hill Olympus: and then in a third degree of goodnesse, is reckoned the Saffron Centuripinum in Sicily: although some there bee, who attribute the second place vnto the saffron of the mount * Phlegra. Nothing is so subject to sophistication as Saffron, and therefore the only triall of true Saffron indeed, is this. If a man lay his hands vpon it, he shall heare it to cracke as if it were brittle and readie to burst: for that which is moist (a qualitie comming by some indirect means and cunning cast) yeeldeth to the hand and makes no words. Yet is there another prooffe of good Saffron, If a man after hee haue handled it, reach his hand vp presently to his mouth, & perceiue that the aire and breath therof smiteth to his face and eyes, and therewith fretteth and stingeth them a little, for then he may be sure that the saffron is right: there is a kind of garden saffron by it self, and this commonly is thought best, and pleaseth most, when there appeareth some white in the mids of the floure, and thereupon they name it Dialeucon, whereas contrariwise this is thought to be a fault and imperfection in the Corysian Saffron, which is chiefe: and indeed the floure of it is blacker than any other, & soonest fadeth. But the best simply in any place wherfoeuer, is that which is thickest and seemes to like best, hauing besides short chiues like hairs: the worst is that which smelleth of mustines. *Mutianus* writeth, that in Lycia the practise is to take it vp euerie 7 or 8 yere, and remove it to a plot of ground wel digged and delued to a fine mould; where, if it be replanted, it will become fresh again and young, whereas it was ready before to decay and degenerate. Nowse there is in (any place) of Saffron floures in garlands; for the leaues are small and narrow, in manner almost of threads. Howbeit with wine it accordeth passing well, especially if it be of any sweet kind: and being reduced into powder and tempered therewith, it is commonly sprinkled ouer all the theatres, and filleth the place with a perfume. It bloometh at the setting or occultation of the star Vergilia, and continueth in floure but few daies: and the leaf driueth out the floure. In the mids of winter, it is in the verdure and al green, and then would it be taken vp and gathered: which done, it ought to be dried in the shadow, and the colder that the shade is, so much the better. For the root of Saffron is pulpous and full of carnositie; and no root liueth so long about ground as it doth. Saffron loueth a life to be trampled and trod vpon vnder foot: and in truth, the more injurie is done vnto it for to mar it, the better it thriueh: and therefore neare to beaten paths, and wells much frequented, it commeth forward and prospereth most.

CHAP. VII.

¶ Of the floures vsed in old time about coronets and guirlands: the great diuersitie in aromaticall and sweet smelling simples. Of *Saluunca* and *Polium*.

Saffron was (no doubt) in great credit and estimation, during the flowring estate of Troy; for certes, the Poet *Homer* highly commendeth these three floures, to wit, Melilot, Saffron, and Hyacinth. Of all odoriferous and sweet senting simples, nay of all hearbes and floures wharfoeuer, the difference consisteth in the colour, the smell, and the juice. And note this to begin withall, that seldome or neuer you shall meet with any thing sweet in sent, but it is bitter in tast; and contrariwise, sweet things in the mouth, be few or none odoriferous to the nose: And this is the reason that wine refined, smelleth better than new in the lees; and simples growing wild, haue a better sauer far than those of the garden. Some floures, the further they be off, the more pleasant is their smell: come nearer vnto them, their sent is more dull and weaker than it

was

A was, as namely Violets. A fresh and new gathered rose casteth a better smell afar off than neere at hand; let it be somewhat withered and dry, you shall sent it better at the nose than farther off. Generally, all floures be more odoriferous and pleasant in the Spring, than at any other season of the year: and in the morning they haue a quicker and more piercing sent, than at any houre of the day besides: the neerer to noon, the weaker is the smell of any herb or floure. Moreover, the floures of new plants are nothing so sweet as those of an old stock: and yet I must needs say that floures smell strongest in the mids of Summer. As for Roses and Saffron floures they cast the pleasanter smell if they be gathered in cleare weather, when it is faire and dry about head: and in one word, such as grow in hot countries be euer sweeter to smell vnto, than in cold Climates. Howbeit in *Aegypt* the floures haue no good sent at all, by reason that the aire is foggie and mistie, with the dewes rising from the riuer Nilus. Moreover, certain floures there be that are sweet and pleasant enough, yet they stiffe and fill the head. Others, so long as they be fresh and green, haue no smell at all, for the excessiue abundance of moisture within them; as we may perceiue in Fenigreek, which the Grecians call Buceros. Many floures cast a quick and liuely smell, and yet are not without good store of juice, but moist enough, as violets, roses, and saffron: but such as are destitute of such moisture, and yet their sent is piercing and penetrant, they all of them be of a strong sauer also, as for example the Lilly of both kinds. Sothernwood & *Margeram* haue a hot and strong sauer. Some herbs there be which yeeld no smell nor goodnes at all but in their floure only, for all their other parts be dull and good for nothing, as violets and roses. Of garden herbes, the strongest of smell be alwaies dry, as Rue, Mints, and Ach or Parsley: likewise are all such as grow in dry places. Some fruits, the elder they be and the longer kept, the sweeter is their sauer, as Quinces: and the same Quinces degard smell better when they be gathered, than if they hung still vpon the tree and so preferred. Others there are, that vnles they be broken, bruised, rubbed, and crushed, haue no smell: and ye shall haue those that cast no sent at all, vnlesse their rind or bark be taken off: as also such as except they be cast into the fire and burnt, yeeld no sauer, as Frankincense and Myrrhe. Furthermore, all floures being bruised, are more bitter than they were vntouched and vnhanded. Some after they be dry retain their odor longest, as the Melilot. There are that make the place sweeter where they grow, as the floure de lis, inso much as it perfume the whole tree (wharfoeuer it is) the roots whereof it toucheth. The herb *Hesperis* smells more by night than day, whereupon that name was deuised. * There are no liuing creatures which yeeld from their bodies a sweet sauer, vnlesse we giue credit to that which hath bin reported of the Panthers.

* *Plinie* neuer
heard of the
Musk-goats
nor *Chier* cats
in these daies.

Furthermore this would not be passed ouer as touching the difference of odoriferous plants and their floures, in this respect, that many of them are neuer employed to the making of Guirlands and chaplets, as namely the Floure de lis and Nard Celtricke, *Saluunca*, which although they yeeld both of them an excellent sauer, yet are not vsed that way. But as for the * Flour de lis, it is the root only therof that is comfortable for the odor: as if Nature had made the plant it selfe to serue only for physick vses, and compositions of sweet perfumes. The best Floure de lis is that which groweth in Illyricum or Sclauonia; and not in all parts thereof, not (I say) in the maritime coasts, but farther vp into the main, among the mountaines and Forrests of Drilo and Narona. The next to it in goodnes commeth out of Macedon, and it hath the longest root of all others, but slender withall and whitish. In the third place is to be ranged the floure de lis of Africk or Barbary, which as it is the biggest in hand, so is it also the bitterest in tast. As touching the Illyrian Ireos, there be two sorts of it; namely, *Rhaphanitis*, which is the better of the twain, so called for the resemblance that it hath to the Radish root. The second they name *Rhizotomos*, and it is somewhat reddish. In sum, the best Ireos, if a man do but touch it will prouoke sneezing. The stem of the Floure de lis groweth straight and vpright to the height of a cubit. The floure is of diuers colours, like as we see in the rainbow, whereupon it took the name Iris. The Ireos of *Pisidia* is not reiected, but held to be very good. Moreover, they vse in Sclauonia to be very ceremonious in digging vp the root of floure de lis; for 3 moneths before they purpose to take it forth of the ground, the manner is to poure meade or honied water round about the root in the place where it groweth, hauing before-hand drawne a threefold circle with a sword's point; as it were to curry sauer with the Earth, & make some satisfaction for breaking it vp and robbing her of so noble a plant: and no sooner is it forth of the ground, but presently they hold it vp aloft toward heauen. This root is of a feruent & caustick nature, for in the very

* Commonly
called *Ireos* is

handling it raiseth pimples and blisters in maner of a burn, vpon their hands that gather it. **A** G
 nother ceremonie also they haue in gathering thereof, for none must come about this worke,
 but such as haue liued chaste and not touched a woman: this (I say) about all is obserued most
 precisely. This root about all others is most subiect to the worme, for not onely when it is dry,
 but also while it is within the earth, it quickly commeth to be worme-eaten. In old time the
 best Irinum or oile of Ireos was brought from the cape of Leucas and the city of Elis in Boeo-
 tia; for planted it hath bin in those parts many a yeare. But now there is excellent good com-
 meth out of Pamphylia: howbeit that of Silicia, and namely from the Septentrionall parts is
 most highly commended.

As for the plant Saliunca or Nard Celtick, ful of leaues verily it is, yet they be so short, that
 handfomly they cannot be knit and twisted for garlands: a number of roots it putteth forth, to
 which the floure or herbe groweth close: for surely a man would iudge it all herbe rather than
 floure, as if it were platted and pressed flat to the root with ones hand; and in one word, resem-
 bling a very thick tuft of grasse by it selfe. This herb groweth in Austria and Hungarie, also
 among the Morici, and the Alps on the Sun side. As for that which commeth vp about the ci-
 tie Eporthedia, it is so pleasant and odoriferous, that there is as much seeking after it as if it
 were some precious metall; and it yeeldeth a reuenue to the City no lesse than some metall
 mine. And in very truth, a singular herbe it is in a wardrobe to lie among good cloathes, for to
 get them a most pleasant and commendable smell.

Another plant there is which the Greekes vse likewise in their Wardrobes, called Polium.
 This herbe *Museus* and *Hesiodus* the Poets extoll and set out to the highest degree; for they re-
 port that it is good for all things that it shall be employed about, but principally, that it auai-
 leth much to win men fame, renown, promotions, and dignities.ouer and aboue which vertues,
 miraculous it is (if it be true which they say) * that the leaues thereof in the morning seeme
 white, about noon purple, and at the Sun-setting blew. Two kinds there be of it, one groweth in
 the plains & champian grounds, and is the greater: another in the woods, and is the lesse. Some
 call it Teuthrion. The leaues resemble the gray haire of an old man, springing directly from
 the root, and neuer passe in height a hand bredth. Thus much may suffice concerning odorife-
 rous floures.

CHAP. VIII.

¶ The colours of Cloth resembling those of Floures, and strining with them for the better. Of **K**
Amarantus or *Passe-velours*: of *Chrysocome* or *Chrysis*.

THe excessiue ryot and prodigall superfluitie of men is grown to this passe, that hauing ta-
 ken no small pleasure in surmounting the natural savor of simple floures, by their artifi-
 cial odors and compound perfumes; they canot rest so, but must proceed also in the craft
 and myserie of dying cloth, to challenge the fairest floures in the garden, and to match, if not
 to surpasse, the liuely colours of Natures setting. Of these tinctures I finde that there be three
 principal: the one in grain, which striueth with that bright orient colour in Roses; and there is
 not a more pleasant thing to the eye, than to see the Scarlet or purple of Tyros, or to behold
 the double died Dibapha, or the Laconian purple. The second rich dy stands vpon the Ame-
 thyst colour, and resembleth the March violet: this also beareth much vpon that purple, which
 of the said violet is called Ianthinus: for now I handle dies and colors in general terms, which
 neuertheless may be subdivided into many other speciall sorts: The third is ordinarily made
 of the purple & porcellane shel-fishes, and that in diuers & sundry maners; for of this tincture
 there are cloathes which incline much to the colour of Turnsole; and of these some be many
 times of a deeper and fuller dy than others. Also there is another sort which standeth much on
 the Mallow floure, inclining to a purple; and a third sort which resembleth the violet that com-
 meth late in the yere [called the purple stock-gillofre] and indeed this is the freshest & richest
 color that can be died out of those fishes aforesaid. Certes, the tinctures & dies now adaies are
 so liuely, as wel for simple colors as mixt and compound (such artificiall means are deuised by
 our sumptuous gallants) than in this strife of Nature and art together, a man shal hardly iudge
 whether of them haue the better hand. As touching yellow, I finde that it is a most antient co-
 lour, and highly reputed of in old time: for the wedding vail which the Bride ware on her ma-
 rying day, was all of yellow, and women only were permitted to vse them: which might wel be
 the

* Diose, repor-
 tet this of
 Tripolium, and
 not of Polium:
 wherby it see-
 meth that Pli-
 ny is in a fault.

A the cause that this color is not reckoned among those that be principall, that is to say, common
 as well to men as women: for the wearing and vsing of colours indifferently by the one and the
 other, is that which hath giuen them their name and speciall credit. Howbeit, doe what we can
 for all our skill and industry we must giue place without all doubt to the purple floure gentle,
 for we cannot reach possibly to the color thereof. Now to say a truth, a purple Spike rather this
 is than a floure, and the same altogether without any smell. Of a strange and wonderfull nature
 this is: it loues of all things to be cropped, and the more it is plucked, the better it commeth a-
 gaine: it beginneth to spike or put out the floure in the month of August, and continueth vntill
 Autume. The best is that of Alexandria, for after it is gathered, it will keep the fresh and liuely
 colour still. This maruellous propertie it hath by it selfe, That when all other floures doe faile
 and are gone, if it be wet in water it looketh fresh againe; and for want of others, serues all win-
 ter long to make chaplets & guirlands. The chiefe and principall vertue that it hath, is shewed
 in the very name *Amaranthus*, for so it is called in Greeke, because it neuer doth fade or wither.

B But to come again to our artificiall colors, we haue one that answereth to the floure named
Cyanos, i. blew bottle: likewise to the yellow golden floure *Elichryson*. Verily none of all these
 floures or colors were in request in the daies of *K. Alexander* the Great, for the Greeke authors
 who wrot next after his decease, haue made no mention at al of them, whereby it is plaine, that
 they grew into a name & liking since their time: howbeit no man needs to make doubt or ques-
 tion, That found out they were first by the Greekes: for how els should it be, that their names
 which be meere Greekish, are currant here in Italy? Howbeit this cannot be denied, that Italie
 hath giuen name to the hearb *Petilium*, which floureth in Autumne, groweth about briers and
 brambles, and is only commendable for the colour sake, which is much like to the wild Rose
 or Eglantine: the leaues of which floure be small, and no more than fiae. A wonderfull thing to
 be noted in this floure, That the head should bend and nod downward so, as vnlesse it bee thus
 (as it were) wreathed and bowed, the said leaues will not shew out of a small cup or vessell of
 fundrie colours, and enclosing within it a yellow seed.

As touching a dafie, a yellow cup it hath also, and the same is crowned as it were with a gar-
 land consisting of fiae and fifty little leaues, set round about in manner of fine pales. These bee
 floures of the meadow, and most of such are of no vse at all; no maruell therefore if they be name-
 lesse: howbeit some giue them one tearme, and some another. As for *Chrysocon* or *Chrysis*,
D no Latine denomination it hath at all: an hearbe it is, growing an hand-breadth high, putting
 forth certaine buttons (as it were) in the head, glittering as bright as gold, with a black root, ta-
 sting harsh and yet sweetish withall: it groweth commonly in places full of stones & shadowy.

CHAP. IX.

¶ The excellencie of Chaplets and Guirlands: of *Cyclaminus*, and *Melilot*: of
Trifolie or *Clauer*, and three kinds thereof.

NOW that we haue gone through in manner the principall dies and richest colours that be
 it remaineth that we passe to the treatise of those Guirlands, which being made of diuers
 colored floures, in regard only of that varietie, are delectable & pleasing to the eye. And
 considering that some of them stand vpon flours, others of leaf, they may be all reduced to two
 principall heads. Among flours, I take to be all kinds of broom (for from them there be gather-
 ed yellow floures) and the Oleander. Item, the blossoms of the Iubbe tree, which also is called
Cappadoeia, for they resemble much the odor of the oliue blooms: as for *Cyclaminus*, i. Sow-
 breed, it groweth among bushes, whereof more shall be said in another place: a purple Colof-
 lian floure it carries, which is vsed to beautifie & set out game-coronets. To come now to chap-
 lets made of leaues; the fairest that goe vnto them be * *Smilax* and *Iuy*, and therein also their
 berries interlaced among, do make a goodly shew aboue al: of which we haue spoken at large in
 the treatise of shrubs and trees. Many kinds there are besides of plants proper for this purpose,
 which we must be faine to expresse by Greeke names, forasmuch as our countrey men haue not
 bene studious in this behalfe, to giue any Latine names to the greatest part of them: besides,
 most of them are meere strangers in Italy, and grow in forraign parts: howbeit, looked for it will
 be at our hands that we should enter into the discourse of them also, for that our purpose & de-
 signe reacheth to all the works of Nature, and is not limited & confined within the bounds of

* Bindweed.

* *Vitis alba*, of
some: *Glycyphyl-
lon Dodonaei*,
of others,
* *Viburnum
Maishii*.

Italy. Well then, to begin withall, * Melothron, Spireon, Trigonon, * Cneoron, which *Higinius* calleth *Casia* (afford leaues very meet to make chaplets: so doth *Conyza*, called otherwise *cunilago*; *Melysophyllon* named also *Apiastrum*, *Bawme*; and *Melilot*, which wee commonly terme *Sertula Campana*; & good reason, for the best in Italy is that of *Campaigne*: & in Greece, that which groweth in the promontory *Sunium*. Next to these the *Melilot* of *Chalcis* & *Candie* is wel accepted of: but grow it in what country it wil, rough thickets and woods it delighteth most in. And that of this hearb they were wont vsually in old time to make garlands, may appeare by the very name *Sertula*, which it took therupon, and retaineth still. In sauer & floure both, it commeth neare to *Saffron*: the hearbe otherwife of it selfe is hoary and gray. The best *Melilot* is counted that which hath thortst leaues, and those most plumpe and fattie withall. Semblably, the hearbe *Trifoile* or *Clauer*, hath leaues which go to the making of coronets and guirlands. And hercof there be three kinds: the first is that which the Greeks call *Mynianthes*, others *Asphaltion*, hauing a bigger leafe than the rest; an hearbe that garden-makers commonly vse: the second with a sharpe leafe, called thereupon *Oxytriphylon*: the third, which is least of al other. Among these *Trifoiles*, I cannot but aduertise the reader, that some there be which haue strong and firme stems: as nervous as those of garden *Fennell* and *Fennell wild*, yea and as stiffe as those of *Myophonos*. But to returne againe to our chaplets, there bee employed about them, both the maine stalkes of *Ferula*, as also the berries and purple floures of the *Iuie*. There is besides a kind of them, like vnto the wild roses: and in them verily the colour only is delectable, for odour they haue just none. To conclude, of *Cneoron* there be two kinds, the blacke and the white: both well branched and full of leaues, but the white is most odoriferous: and as well the one as the other, doe flourish after the *Aequinox* in Autumne.

CHAP. X.

¶ Of *Oryganum*, and *Thyme*: of the Athenien honey: of *Conyza*, and *Iupiters*.
floure, of *Southernwood* and *Camomile*.

As many sorts also there be of *Origanum*, seruing to make guirlands: as for one of them, it hath no seed; but the other which is sweet, is called *Origan* of *Candy*. In like manner, two kinds there be of *Thyme*, to wit, the white and the blacke: this hearb doth flourish about the Summer Solstice, at what time as Bees also begin to gather honey from it: and according to the flourishing of it more or lesse, a man may guesse ful wel what season there wil be for honey: for honey-masters and such as keep Bees, hope to haue a good yere of honey when they see the *Thyme* to bloume abundantly. *Thyme* canot well away with rain, and therefore it taketh harme by shoures and sheddeth the floure. *Thyme* seed lyeth so close, that vnneeth or hardly it can be found; whereas the seed of *Origan*, notwithstanding it be exceeding smal, is euident enough and may soone be seene. But what matter maketh it, that Nature hath so hidden the seed, considering it is wel known, that it lyeth in the very floure, which if it be sowe, commeth vp as well as any other seed? See the industrie of men, and how there is nothing but they haue made trial of and put in practise! The honey of Athens carieth the name for the best honey in the world, by reason of the *Thyme* growing thereabout. Men therefore haue brought ouer into other countries, *Thyme* out of *Attica*, although hardly and with much ado (being sown thus in the floure as I haue said) it commeth vp. But there is another reason in Nature, why it should thriue so badly in Italy, or elsewhere, considering that the *Atticke* *Thyme* wil not continue & liue, but within the aire and breath of the sea. Certes this was an opinion receiued generally of our ancient fore-fathers, That no *Thyme* would doe well and prosper, but neere vnto the Sea, which should be the cause, that in *Arcadia* there is none of it to be found. And in those daies also, men were verily persuaded, that the *Oliue* would not grow but in the compasse of three hundred stadia from the Sea side: howbeit, in this our age verily we are aduertised and know for certain, That in *Languedoc* and the prouince of *Narbon*, the very stonie places are all ouergrowne and couered with *Thyme*, vpon which there are fed thousands of sheepe and other cattaille: in such sort, as this kind of herbage and pasturage, yeeldeth a great reuenuie to the inhabitants and payants of that country, by ioynting and laying in of the said beasts brought thither out of far remote parts for to feed vpon *Thyme*.

Concerning the hearbe *Conyza*, which goeth also to the making of Chaplets, there be two kinds

A kinds likewise of it, namely, the male & the female. And these differ onely in leaues: for those of the female *Conyza* be thinner, smaller, narrower, and growing closer together than the other of the male, which indeed branch and spread abroad more, lapping one ouer another in manner of creft tiles. The floures also of the male *Conyza* is more bright and liuely: howbeit, both the one and the other floure late, and not before the rising or apparition of the star *Arcturus*. The male carrieth a strong sent: but that of the female is more penetrant; in which regard the female is better for the bite and sting of venomous beasts. The leaues of the female, smell of *Hony*. The root of the male, is by some called *Libanotis*, whereof we haue already written.

As touching these herbs following, * *Dios Anthos*, Majoran, the day *Lillie* *Hemerocalles*, *Southernwood*, *Elecampane*, water *Mints*, and wild running *Thyme*, as also all which do branch and put forth shoots as *Roses* do, such serue only in lease for garlands. As for the said *Iupiters* floure or *Dios Anthos*, particularly, there is nothing in it but the colour to commend it; for sauer it hath none, no more than another herb which the Greeks call *Phlox*. As for the rest, their floures and branches both be odoriferous, except the running wild *Thyme*.

Elecampane, named in Greeke *Helenium*, sprang first (as men say) from the teares of *Ladie Helena*: and therefore the best *Elecampane* is that which groweth in the Island of *Helena*. The plant is raised like vnto wild *Thyme*, spreading & running low by the ground with little branches, nine inches or a span long.

Southernwood doth flourish in Summer, and carrieth a sweet and pleasant sauer, howbeit, the head it somewhat stuffeth and offendeth. The floure is of a golden colour. And say, that it carrieth neither seed nor floure, yet commeth it vp of it selfe in void and vacant places altogether neglected and without any culture, for it doth propagat and increaseth by the tops and tips of the branches lying vpon the ground, and so taking root. And therefore it groweth the better if it be set of root or slip, than sowed of seed. For of seed, much adoe there is to make it come vp: and when it is aboue ground, the yong plants are removed and set, as it were in *Adonis* gardens, within pots of earth; and that in Summer time, after the maner of the herb and floure *Adonium*: for as well the one as the very tender, and can abide no cold: and yet as chill as they be, they may not away with ouer-much heat of the Sun, for taking harme. But when they haue gotten head once and be strong enough, they grow and branch as * *Rue* doth.

Much like vnto *Southernwood* in sent and smell, is *Camomile*: the floure is white, consisting of a number of pretty fine leaues set round about the yellow within.

CHAP. XI.

¶ Of *Marioram*, the greater and the lesse, called in Latine *Amaracus* or *Sampsuchum*. Of *Nyctygetum*, *Melilot*, the white *Violet*: of *Codaminum*, and wild *Bulbes*: of *Heliochrysum*, and *Lychnis* or *Rose Campain*. And of many other herbs growing on this side the sea.

Diocles the Physitian, and the whole nation in maner of the Sicilians, haue called that herb *Amaracus*, which in Egypt and Syria is commonly named *Sampsuchum*. It commeth vp both waies, as well of seed as of a slip and branch. It liueth and continueth longer than the herbs before named, and hath a more pleasant and odoriferous sent. *Marioram* is as plentiful in seed, as *Southernwood*: but whereas *Southernwood* hath but one tap root and the same running deep into the ground, the rest haue their roots creeping lightly aloft and ab within the earth. As for all the other herbes, they are for the most part set and sowne in the beginning of the Autumne; some of them also in the spring, and namely in places which stand much in the shade, which soue to be well watered also and enriched with dung.

As touching *Nyctygetum* [or *Lunaria*] *Democritus* held it to be a wonderfull herb, and few like vnto it; saying that it resemblith the colour of fire, that the leaues be prickly like a thorne, that it creeps along the ground: he reporteth moreover, That the best kind thereof grows in the lad *Gedrosia*. That if it be plucked out of the ground root and all after the Spring *Aequinox*, and be laid to drie in the Moonshine for 3 daies together, it will giue light and shine all night long; also, That the *Magi* or *Sages* of *Persia*, as also the *Parthian* kings vse this herb ordinarily in their solemn vowes that they make to their gods: last of all, That some call it *Chenomychos*, because Geefe are afraid of it when they see it first; others name it *Nyctilops*, because in the night

* or *Iouis* Flou.
which some
take to be the
Columbines.

* *Helenium*
here described
agreeth not
with our *Ele-*
campane.

* *Ruta vicia*.

night season it shineth and glitter eth as farre off. As for Melilote, it commeth vpon euery where: **G** howbeit, the best simply & wherof, is made the greatest account, is in Attica: but in what place soeuer it growes, that is most accepted which is fresh & new gathered, not enclining to white, but as like vnto Saffron as is possible. And yet in Italie the white Melilote is the sweeter and more odoriferous.

The first floure bringing tidings of the springs approach, is the white bulbous stock-Gillofre. And in some warmer climates they put forth and shew euen in Winter. Next vnto it for their timely appearance is the purple March Violet: and then after them the Panse, called in Latine Flammea, and in Greeke Phlox, I meane the wild kind onely.

Codiaminon bloweth twice in the yeare, namely, in the Spring and the Autumne: for it cannot abide either Winter or Summer. Somewhat later than those before rehearsed, are the Daffodil and Lilly ere they floure, especially in countries beyond sea. [in Italy verily (as I haue said before) they bloum not till after Roses:] for in Greeke the Passe-floure * Anemone is yet more lateward. Now is this Anemone the floure of certain wild Bulbes, different from that other Anemone whereof I will speake in the Treatise of Physick-hearbs. Then followeth * Oenanthe, and Melanion, and of the wild fort Heliochryfos. After them, a second kind of Passe-flower or Anemone, called also Leimonja, beginneth to blow. And immediatly vpon it the pety Gladen or sword-grasse, accompanied with the Hyacinth: & last of all the Rose sheweth in her likenes. But quickly hath the Rose done, and none so soone, and yet I must except the garden Rose. Of all the rest, the Hyacinths or Harebells, the * stock-Gillo floure, and Oenanthe or Filipendula, beare floures longest. But of this Oenanthe, this regard must bee had, that the floures bee often picked and plucked off, and not suffered to run to seed. This groweth in warme places. It hath the very same sent that Grapes when they first bud and put out blossom, whereupon it took the name Oenanthe. But before I leaue the Hyacinth, I cannot chuse but report the fable or tale that goeth thereof, and which is told 2 maner of waies, by reason that the floure hath certaine veines to be seen running in and out, resembling these two letters in Greeke AI, plaine and easie to be read: which as some say, betoken the lamentable mone [*] that Apollo made for his wanton minion Hyacinthus whome he loued, or as others make report, sprung vp of the blood of Ajax who slew himselfe, and represented the two first letters of his name AI.

Helyachryfos beareth a yellow floure like to gold, a small and fine leafe, a little stalk also & a slender, but hard and stiffe withall. The Magi or Sages of Persia vse to weare this hearbe and floure in their Guirlands: and they be fully persuaded, that by this meanes they shall win grace and fauour in this life, yea, and attaine to much honour in glorie, provided alwaies, that their sweet compositions wherewith they annoint and perfume themselves, be kept in a vessel or box of gold, not yet fired nor purified in the fire, which gold they call Apyron. And thus much for the floures of the Spring.

Now succeed and come after in their rank, the summer floures, to wit, Lychnis, Jupiters flower or Columbine, and a second kind of * Lilly: likewise Iphyon, and that Amaracus or Marjoram, which they cal the Phrygian. But of all others, the flower Pathos is most louely & beautiful: whereof there be two kinds, the one with a purple flower like vnto the Hyacinth, the other is whiter, and groweth commonly in churchyards among graues and tombs, and the same holdeth on flourishing better, and liueth longer. The flower de-luce also is a Summer flower. These haue their time, fade, and are soone gone. And then come other flowers for them in their place in Autumne, to wit, a third kind of Lillie, and Saffron: But of both these, the one is of a dull or no sent at all: the other is very odoriferous, but all of them break out and shew abroad with the first shower of rain in Autumne. Our chaplet makers vse the floures also of Bedegnar or white Thistle in their Guirlands: and no maruell, since that our Cookes dresse the young tendrells and crops thereof, for to make a daintie dish for to content our tast and goe pleasantly downe the throat. Thus you see the order and manner of beyond-sea floures, how and when they come abroad. In Italy it is somewhat otherwise: for the Rose followeth immediatly after the violets: and when the Rose is in the mids of his ruffe, in comes the Lilly to bear him company. No sooner hath the Rose played his part, but the blew-blaw entereth the stage: and after him the Passveluer or floure-gentle. As for the Pervinck, it continueth fresh and greene all the yeare long: this hearbe windeth and runneth too, and fro with her fine and slender twigges in manner of threads or laces, and those beset with leaues two by two in order, at euery knot or joint.

Passing

* Pulsatilla or
Wind-floure.

* Filipendula
supposed of
some.

* or rather the
Wall flower.

* Some read
Cerynthus
rather.

A Passing good and proper indeed for vinet and stony worke in borders, arbors or knots, and meet for fine and curious Gardeners: howbeit, for default of other floures, the Garland-makers borrow a little of the law, and make vp their defects with a supply from it. The Greeks call it Chamadaphne.

The life of the white Violet or bulbous stock-Gillofre, is three yeares at most, and so long it holdeth the owne well, after that terme it doth degenerate and wax worier. The Rose-bush will continue five yeares, without cutting downe or burning (which are the meanes to maintaine it in youth still.) But as we haue already obserued, there lieth very much in the soile, which would be considered especially in floures: for in Egypt, none of all these about rehearsed, haue any odor or sent at all; and yet the Myrtle trees there, they alone carry a most sweet and pleasant favor. Moreover, in some tracts all these herbes and floures before named, do preuent in budding and blowing (two months) those of other places. As for Rose-rewes, the earth ought to be digged and opened about the roots, first presently vpon the coming of the Western wind Favonius in February, and then a second time about the Summer Solstice: to conclude, these would be looked vnto about all things, that before and between those times, they be kept well pruned and cleansed from all superfluities.

CHAP. XII.

* The order of nourishing and maintaining Bees. What meat is to be giuen them. Their diseases, and the remedies to them belonging.

C IN this discourse of ours concerning gardens and gay floures appertaining to Garlands, requisite it is to speak of bees and bee-hiues, which become the garden very well: considering the gain that commeth in so easily by them, especially when they stand and do well. In regard therefore of these bees, so beneficiall as they be, and kept with so small charges, a garden ought to be well planted and stored with Thyme, Baulme, Roles, Violets of all kinds, Lillies, sweet Trefoile, Beanes, Ervile, Cunila or Sauerie, Poppies, Conyza, Catia, to wit, Lauander and Rosemary, Melilote, Melissophyllum, and Cerinthe. This Cerinthe is an herb bearing white leaues, and those bending downward: it groweth a cubit high, and carrieth an hollow head, containing within it a certaine sweet liquor resembling honey: bees are most eager and greedy after the floure of this herbe, as also of Senuie, whereat we may well make a wonder, seeing that for certain they will not touch nor come neere to the blossome of the Oliue trees. And therefore good it is to set bee-hiues far enough from this tree. And yet of necessity some there would be planted neere vnto them, that when the bees do swarme or cast, they might haue a convenient place at hand to settle vpon, for feare they should flie too far from the hieue. The Cornell tree also is not good for bees, for if they chance to tast the floure thereof, they fall presently into a vehement lask, wherof the poore wretches (if they haue not help the sooner) die: and therefore it would not stand in their way. Howbeit, there is a remedy to cure them of this flux, namely, to take soruises and stamp them together with hony, and so to giue it them: to set vnto them either mans urine or beastes stale or els last of all to serue them with graines of the Pomgranate, besprinkled and drenched in wine of the Ammian grape: but if you set broome all about their hiues, you do them an high pleasure.

As touching their food and nourishment, I will tell you a wonderfull and memorable thing vpon mine own knowledge. There is a towne or Burgade called Hostilia, scituate vpon the riuer Po, the inhabitants of this village, when they see that their bees meat goeth low therabout, and is like to faile, take me their hiues with bees and al, and set them in certain boats or barges, and in the night row vp the said riuer Po against the streame five miles forward. The morrow morning out go the bees to seeke food and reliefe. Now when they haue met with meat, and fedde themselves, they returne againe to the vessels aforesaid: and thus they continue daily, although they change their place and haunt, vntill such time as their masters perceiue that the hiues bee full, by the settling of their boats low within the water with their weight, and then they returne home againe downe the streame, and discharge the hiues of the honey within.

CHAP. XIII.

¶ Of a certaine venomous and poisonfull honey. The remedies as well against the said Honey, as another kind that maketh folke besides themselves.

SEmblably in Spain they deale with their Bees & hiues vpon Mules backs in the like case, and carry them vp into the country for to be prouided of victuals. But here it would be considered by the way, what pasturage it is that they be put into: for there is some kind of food, which poisoneth all the honey that is gathered from it. At Heraclea in Pontus, in some yeares, all the hony that the Bees do make, is found to be venomous and no better than poison; and yet the same bees in other yerres gather good and wholsome hony. Howbeit, those authors who haue deliuered thus much in writing, haue not set downe what floures they be that yeeld this hurtfull hony: and therefore I thinke it not amisse to write what I haue found and knowne as touching this point. There is an herbe called *Ægolethron* in Greeke, which killeth horses verily, but Goats most of all, feeding therupon; and therefore it took that name: the floures of this herb, if it chance to be a wet and rainy Spring, do conceiue and ingender within them a certain deadly venome which doth corrupt and rot them. This may be a probable reason, that the foresaid mischief and bane is not alwaies felt alike. This poisonfome honey may be knowne by these signs: first it will neuer thicken but continue liquid still; secondly, the colour is more deep and reddish than ordinary; thirdly, it carrieth a strange sent or smell with it, and will cause one to sneeze presently; last of all, it is more ponderous and heavy than the good and harmlesse hony. The symptoms or accidents that insue vpon the eating of this honey, are these, They that haue tasted thereof, cast themselves vpon the ground and there fall a tumbling: they seek by all means they can to be cooled; and no maruell, for they run all to sweat, that one drop ouertakes the other. Howbeit, there be many remedies for this poison, which I will shew in place conuenient. Mean while, because a man would not be without some good thing ready at hand, since the world is so full of villany & set vpon such secret mischiefes, I must needs put down one good receit, and that is this: take honied wine that is old, mingle and incorporate it with the best hony you can meet withal, and Rue together: vse this confection at your need. *Item*, Eat much of saltfish, although it come vp again, and that your stomach do cast it. Moreouer, this hony is so pernicious, that the very dogs if they chance to lick vp any excrements that passe from the partie so infected (either by reaching, spitting, vomit, or seege) they are sure to be sped therewith, and to feele the like torments. Howbeit, the honied wine that is made therewith, if it may haue age enough and be stale, is knowne for a certainty to do no creature harm. And there is not a better medicine in the world, either to fetch out spots in womens faces, and make their skin faire and cleare (if it be applied with Costus;) or to take out the black and blew marks remaining after stripes in eye or elsewhere, so it be tempered with Aloe. Another kind of honey there is in the same region of Pontus, and namely among the Sanni (a people there inhabiting) which because it driueth folke into a fit of rage and madnesse, they call in Greeke *Mænomenon*. Some attribute the occasion hereof to the floure of the *Olcander*, whereof the woods and Forrests there be full. This nation selleth no hony at all, because it is so venomous and deadly: notwithstanding they do pay for tribute a huge masse of wax vnto the Romans euery yeare. Moreouer, in the kingdome of Persis, and in *Cetulia*, which lieth within *Mauritania Casariensis*, a country confining and bordering vpon the *Massefuli*, there be venomous hony-combs; yea, you shall haue in one hiue some hony combs full of poisoned hony, whereas others be found and good: a dangerous thing no doubt, and than which, there could be no greater deceit to poison a number of people; but that they may be known from the rest by their leaden and wan hew that they haue. What should we thinke was Natures meaning and intent by these secret sleights and hidden mischiefes, That either the same Bees should not euery yeare gather venomous hony; or not lay the same vp in all their combs differently? Was it not enough that she had bestowed vpon vs a thing, wherein poyson might be soonest giuen and least perceiued? Was the not content thus to indanger our liues, but she must proceed farther, enen to incorporat poison her selfe in hony, as it cometh from the Bee, for to empoison so many living creatures? Certes, I am of this mind and believe verily, That shee had no other purpose herein, than to make men more warie what they eat, and lesse greedy of sweet meats to content and please the tooth. For the very honey

honey indeed she had not generally infected with this hurtful quality, like as she had armed all Bees with sharp pricks and stings, yea, and the same of a venomous nature; and therefore against these creatures verily she hath not deferred and put off to furnish vs with a present remedy: for the juice of Mallowes or of Yvie leaues serueth to annoynt the stinged place, and keep it from rankling; yea, and it is an excellent thing for them that be stung, to take the very Bees in drink; for it is an approued cure. But this I maruell much at, That the Bees themselves, which feed of these venomous herbs, that cary the poison in their mouths, and are the makers of this mischief, can do escape and die not thereof? Whereof I can giue no reason at all, vnlesse dame Nature, that lady and mistresse of the world, hath giuen vnto these poore Bees a certaine Antipathy and vertue contrary vnto poison: like as among vs men to the *Mars*, and *Pysli*, shee hath imprinted (as it were) a repugnancy in their bodies, to resist the venome of all Serpents whatsoever.

CHAP. XIII.

¶ Of a certaine kind of honey which Flies will not touch. Of Bee-hiues. How to order the same, and namely when Bees want meat and are in danger to be famished. The manner also of making Wax.

HERE is in Candy another strange and wonderful thing, as touching hony, gathered about the mountaine *Carina*, which taketh nine miles in compasse: within which space, and circuit of ground, there is not a Flie to be had; and the honey there made, Flies wil not touch in any place wherefoeuer. By which experiment, this honey is thought to be singular for medicines, and therefore choise is made thereof before any other.

As touching Bee-hiues, they ought to stand on the open side vpon the *Æquinoctiall* Sunne rising, that is to say, when the daies and nights be equall. And in any wise, regard would be had, that they open not in the North-east, and much lesse the full West. The best Bee-hiues be made of barks and rinds of trees: the second in goodnesse be those of *Ferula* or *Fennell*-geant. In the third place are such as be wrought of oifier twigs. Many haue made them of Talc, which is a kind of transparent glasse stone, because they would see through them how the Bees do worke and labor within. Daubed they should be if they were well serued, both without & within with Oxe dung. The couer and lidde thereof ought to be moueable and haue liberty to play vp and down behind, that it may be let down far within-forth, in case either the hiue be too large & of greater receit in proportion than the Bees are in number, for feare they should slack their work and giue ouer their trauell, despairing euer to fill the same, seeing it so big and of so great capacity, and being thus let downe (to make their hiue seem the lesse) it must be gently drawn vp again by little & little, that the Bees may be deceiued thereby, & not perceiue how their worke grows vpon them. In Winter time Bee-hiues should be couered with straw: & oftentimes perfumed with beasts dung especially; for this is agreeable to their nature.ouer and besides, it killeth the wicked vermin that breed in them, Spiders, Butterflies, and Wood-worms; yea, and this property it hath moreouer, to stir vp and quicken the Bees, and make them more liuely and nimble about their businesse. As for the Spiders aforesaid, they verily are not so harmful, & be soon destroyed: but the Butterflies do the more mischief, & are not so easily rid away. Howbeit there is a way to chase them also, namely, to wait the time when the Mallow doth begin to blossom, to take the change of the Moone, and chuse a faire and cleare night, and then to set vp certaine burning lights just before the Bee-hiues: for these Butterflies will couer to flie into the flame. But what is to be done, when you perceiue that the bees do want victuals, then it will be good to take dry Raisins of the Sun and Figs, to stamp them together into a masse, and lay it at the entry of the hiue. *Item*, It were not amisse to haue certain locks of wool well rouzed and carded, and those wet & drenched in cuir either foddren to the thirds, or to two thirds, or els soaked in honied wine, for them to settle vpon and suck. Also to set before them in their way the raw carcases of Hens, naked and pulled to the bare flesh. Moreouer, there be certain Summers so dry and continually without raine, that the fields want floures to yeeld them food, and then must they be serued with the foresaid viands, as well as in Winter season. When hony is to be taken forth of the hiues, the holes and passages for the ingresse and egress of the bees ought to be well rubbed and besmeared with the herb *Melissophyllon* and *Genista* bruised and stamped: or else the hiues must be compassed about in the midst with branches of the White Vine, for

* Considering that of a beasts carcase they will be engendred.

for feare left the Bees depart and flie away. The vessels whereout hony hath been imploied, yea, and honey combes, would be well rinced and washed in water; which being thoroughly sodden, maketh a most wholesome and excellent vineger.

As touching wax, it is made of the combes after the hony is pressed and wrong out of them. But first they must be purified and clenfed with water, and for three daies dried in some darke place: vpon the fourth day they are to be dissolued and melted vpon the fire in a new earthen pot neuer occupied before, with so much water as will couer the combs: and then it should bee strained through a panie of reeds or rushes, which done, the wax is to be set ouer the fire a second time in the said pot, and with the selfe same water, and sodden again, and then it ought to run out of it into other vessels of cold water, but those first should be al about within annointed and besmeared with honey. The best wax is that which is called Punica, *i.* of Barbary, and is white. The next in goodnesse is the yellowest, and smelleth of hony, pure and clean without sophistication; such commeth from the country of Pontus; and verily I wonder much how this wax should hold good, considering the venomous hony whereof it is made. In the third place is to be ranged the wax of Candy: for this standeth much vpon that matter which they cal Propolis, wherof I haue already spoken in the Treatise of Bees and their nature. After all these, the wax of the Isle Corsyca may be reckoned in the fourth rank; which becaufe it is made much of the Box tree, is thought to haue a vertue medicinable. Now the making & working of the first and best Punick white wax, is after this manner: They take yellow wax, and turne it often in the wind without the house in the open aire; then they let it seeth in sea-water, and namely, such as hath bin set far from the shore out of the very deep, putting thereto Niter, this done, they scum off the floure (that is to say, the whitest of it) with spoons, & this cream (as it wer) they change into another vessel, which hath a little cold water in it. Then once againe they boyle it in sea-water by it selfe alone, and set the vessel by for to coole. After they haue done thus three times, they let it dry in the open aire vpon an hurdle of rushes, in the Sun and Moon, both night and day: and this ordering bringeth it to be faire and white. Now in the drying, for feare that it should melt, they couer it all ouer with a fine Linnen cloth. But if they would haue it to be exceeding white indeed, they seeth it yet once more, after it hath bin thus sunned and mooned. In truth, this Punick white wax, is simply the best to be vsed about medicines. If one be disposed to make wax black, let him put thereto the ashes of paper: like as with an addition of Orchanet it will be red. Moreouer, wax may be brought into all manner of colours, for painters, limners, and enamellers, and such curious artificers, to represent the forme and similitude of any thing they list. And for a thousand other purposes men haue vsed thereof, but principally to preferue their walls and armors withall. All other things as touching Hony and Bees, haue bin handled already in the peculiar Treatise to them and their nature belonging. Here an end therefore of Gardens and Gardinage.

CHAP. XV.

¶ Of herbes which come vp of themselves, and such especially as be armed with prickles.

It remaineth now to speake of certain wild herbes growing of their own accord, which in many nations serue for the kitchen, and principally in Ægypt; for this countrey, although it bee most plentiful in corne, yet may seem to haue least need thereof, and of all nations vnder heauen best able to liue without the same: so well stored it is with hearbs, wherof the people doth ordinarily feed: whereas in Italy here, we know as few of that kind good to be eaten, namely, Strawberries, *Tanus, Ruscus, Crestemarine or Sampire, as also Batis Hortensiana, which some call French Spurge: we haue also the wild Parsnep of the meadowes, and the Hop, but wee vse them rather for pleasure and delight, and to giue contentment to our tast, than for any necessary food to maintain life. But to come againe to Ægypt, there is to be found the noblest plant of all others, Colocasia, which some name Cyamos, *i.* the Egyptian beane: this herbe they gather and cut downe out of the riuer Nilus: it putteth forth a main stem, which being sodden, yeeldeth in the eating and chewing, a certaine threddy matter or woolly substance, drawing out in manner of a cob-web; but the stalk as it groweth vp amid the leaues, maketh a faire and goodly shew: for indeed the said leaues be exceeding large, and comparable to the broadest that any tree beareth, resembling those for all the world of the Clote or great Burrhe growing in our ri-

uers

A vers, which we cal Personata. A wonderful thing it is to see, what store they in Ægypt set by the commodities that their riuer Nilus doth afford: for of the leaues of this Colocasia (plaited & infolded naturally one within another) they make them cups of diuers forms and fashions, out of which they take no small pleasure to drink. And now adaeies this herb is planted here in Italy. Next to Colocasia, the Ægyptians make most account of that Cichory, which I named before, the wild and wandering Endiue, which herb commeth vp in that country after the rising of the Brood-hen star: it flourisheth not all at once, but bloweth by branches one after another: a supple and pliable root it hath, and therefore the Ægyptians vse it in stead of cords to binde withall. As for Anthallium, it groweth not in Nilus, but not far from the riuer: it beareth a fruit in bignesse and roundnesse resembling a Medlar, hauing neither kernell within, nor husk without: and the leafe of this plant is like to Cyperus, or English Galangale. This herbe they vse to eat, being first *dressed and prepared in the kitchen. They feed likewise vpon Oetum, a plant that hath few leaues and chose very small, howbeit a great root. Touching Aracida and Aracos, they haue many roots verily branching and spreading from them, but neither leafe nor herbage ne yet any thing els appearing aboue ground. And thus much of the chiefeest and greatest herbes of Ægypt serued vp to the table: the rest are common or vulgar, and euery mans ineat, by name, Condrylla, Hypochæris, Cautalis, Authriscum, Scandix (called by some Tragopogon, which beareth leaues like to Saffron,) Parthenus, Strychnum, Corchorus, and *Apacc, which sheweth his head about the Æquinox: also Acinos, and that which they name Epipetron, and it neuer beareth floure; whereas Aphace contrariwise neuer giueth ouer flourishing, but when one floure is faded and shed, another commeth vp, and this course it holdeth all Winter long; throughout the Spring also, euen to the heat of Summer. Many other herbes they haue of bale reckoning: but aboue all, they make greatest account of *Cnicus (an herbe not knowne in Italy) not for any good meat they find in it, but for the oyle drawne out of the seed thereof. Of this herb there be two principall kinds; to wit, the Wild, and the Tame: the Wild is subdiuided into two speciall sorts, the one of a more mild and gentle nature than the other, although the stalks of both be alike, that is to say, stiffe and streight vpright: and therefore women in old time vsed the stens thereof for rocks and *distaffes; wherupon some do call the herb Attractylis: the seed is white, big, and bitter. The second is more rough and hairy, creeping long on the ground, with stalks more musculous and fleshy, and carrieth a small feed. The herb may be ranged among those that be prickly: for so must herbes be diuided into such general heads, namely, that some be full of prickles, others cleane without and smooth. As for those which stand vpon prickles, they be subdiuided into many members and branches. And to begin with a kind of Spurge, called also Scorpio, it hath no leafe at all; but instead therof, prickles and nothing els: some therbe leaved indeed, but those are beset with prickles, as the Thistle, Sea-holly, *Liquorice, and Nettle: for the leaues of all these herbes be prickly & stinging withall. Others, besides their leaues, haue prickles also, as the *bramble, & Rest harrow or whin. Some be provided of prickles both in leafe and stalk, as Phleas, which others haue called Stœbe. As for Hippophacet, it hath a prick or thorne in euery joint: but the bramble Tribulus aforesaid, hath this property by it selfe, That the fruit also which it beareth, is set with prickles. Of all these sorts, the Nettle is best knowne, which carrieth certain goblets and concavities, and the same yeelding a purple kind of downe in the floure, and it riseth vp sometimes aboue two cubits high. Many kinds there be of these Nettles; namely, the wild Nettle, which some would haue to be the female, and this is more milde than the rest. In this wilde kinde is to be reckoned also, that which they cal Cania, and is of the twain more agree, for the very stalk will sting, and the leaues be purled as it were and jagged. But that Nettle which carrieth a stinking fauor with it, called is Herculanca. All the sort of them are full of feed, and the same blacke. A strange quality in these Nettles, that the very hairy downe of them (hauing no euident prickles sticking out) should be so shrewd as it is, that if one touch it neuer so little, presently there followeth a smarting kind of itch, and anon the skin riseth vp in pimples and blisters, as if it had been skalt or burnt: but well knowne is the remedie of this smart, namely, to annoint the place with oyle. Howbeit this biting property that it hath, commeth not to it at the beginning when it is new come vp, but it is the heat of the Sun that fortifieth this mordacitie. And verily in the Spring when the Nettle is young and peepeth first out of the ground, they vse to eat the crops therof for a pleasant kind of meat, and many be persuaded besides that it is medicinable, & therefore precisely & religiously feed thereupon.

K

* as Theophrastus saith, Caden in aether-deaco Zythv.

* Thought to be Dent de lion

* Cardamus, or bastard saffron: but Turnebus supposes it to be put for Cici, wherof commeth Oleum Cicinum. * Cal. al. though some read fufis, i. spinules.

* Glycyrrhiza, but this agreeeth not with our Liquorice. * Tribulus. * Acerabula.

* The fruit or berry wherof is Volutaminia

thereupon, as a preservative to put by all diseases for that present yeare. Also the root of the wild Nettle, if it be sodden with any flesh, maketh it to eat more tender. The dead nettle, which stingeth not at all, is called Lamium. As touching the herb Scorpio, I will write in the treatise of herbs medicinable.

CHAP. XVI.

¶ Of Carduus, and Ixine: of Tribulus and Anchusa.

The common Thistle is full of prickly hairs, both in leafe & stalk: likewise * Acorna, * Leucacanthos, Chalceos, Cnicos, Polyacanthos, Onopyxos, Ixine, & Scolymos. As touching the Thistle Chamæleon, it hath no prickles in the leafe. Moreover, these prickly hearbes are distinguished & different one from another in this, that some of them be furnished with many stems, and spread into diuers branches, as the Thistle: others againe rise vp with one maine stalk, and branch not as Cnecos. Also there be of them that be prickly only in the head, as the Eryngium or Sea-holly. Some floure in Summer, as Tetralix and Ixine. As for Scolymus, late it is also ere it blow, but it continueth long in the floure. Acorna differeth from it onely in the red colour and fattier iuice that cometh from it. Attraytis also might go for Scolymus, but that it is whiter and yeeldeth a liquor like bloud: whereupon there be some who call it Phonos, i. Murderer: this quality it hath besides that it senteth strong: the seed also ripeneth late, & not before Autumne: and yet this is a property common to all plants of this prickly and thistly kind. But all these herbs will come of seed and root both. As for Scolymus, it differeth from the rest of these Thistles herein, that the root, if it be sodden, is good to be eaten: besides, it hath a strange nature, for all the sort of them during the Summer throughout, neuer rest and giue ouer, but either they floure, or they apple, or els be ready to bring forth fruit: and look when the leaues begin to wither, their prickles lose their force and will not pierce.

Ixine * is a rare herb and season to be seen, and not found growing in all countries alike. Immediately from the root it putteth forth leaues plenty; out of the mids of which root there swel- leth out a bunch like an apple, but the same is couered with the foresaid leaues: in the very top of which fruit there is contained a gum of a pleasant tast, called the thistle Mastick. Touching the herb Cactos, which groweth also in Sicily and nowhere els, it hath a property by it self; the stalks whereof shooting from the root, creep along the ground, and it carrieth a broad leafe full of prickles and thorns; and indeed these stalks thus running vpon the earth, the Sicilians call Cactos, which they vse to keepe and preserve; and being thus condited also, they commonly eat, as very good meat. One stem it hath growing vpright, which they terme Pernix, as sweet & pleasant as the other, but it will not abide to be kept long. The seed thereof is couered with a certain soft down, which they call Pappos, which being taken off with the husk, there remaineth a tender kernell within, which they eat, & find it as delicat as the very heart of the Date tree top, which is called the Brain: and this pith aforesaid, the Sicilians name Ascalia.

The Caltrop thistle Tribulus, groweth not but in moory grounds and standing dead waters. Surely in other places, folke curse it as they passe by, the prickles and spurs stick out so dangerously: but about the riuers Nilus and Strymon, the inhabitants do gather it for their meat: the nature of this plant, is to lean and bend downward in the head to the water. The leafe resembles in form those of the Elme, and they hang by a long stele or taile. But in other parts of the world there be two other kinds of Tribulus: the one is leaved like vnto the Cichling pease; the other hath leaues sharp pointed; this second kind is later ere it floure, and commonly groweth about the mounds of clothes lying by villages and town sides; the seed lieth in a cod rounder than the other, and black withall; whereas the former hath a * sandy seed. Of these thorny and prickly plants, there is yet one kind more, namely Ononis, i. Rest-harrow; for it carrieth prickles close to the very branches; the leafe is like to Rue: the whole stalk throughout is set with leaues disposed in manner of a garland. This plant commonly groweth after corn, it * plagueth the plough, and yet there is much adoe to rid it out of a ground, so loth it is to die. Of plants that be prickly, some haue their stalkes and branches trailing by the ground, as namely that hearbe which they call Coronopus, i. Harts horn, or Buck-horne Plantaine: contrariwise, there stand vpright, Orchanet, the root whereof is so good to colour wax and wood red. And of such as be more gentle in handling * Camomile, Phyllanthus, Anemone, and Aphace. As for Crepis & * Aparite, their stalkes

* A kind of thistle: some call it Mans blond. * S. Mary's hille.

* Nonura visum est equum omnibus terris nascitur: Ex Theophrastus, which is clean contrary to Pliny.

* Spumelle, for onocrotas, in Theophrastus, is like the seed of Sesama. * And therefore it is called resista bouis, or resista uari, because it staith the draught of the Ox at plough.

* Antithus, i. Decret: so called, because the bitternesse decoueth many a one, looking like to a kind of Cichorie.

A stalks be all leafe. Moreover, this would be noted, that the leaues of herbs differ one from another, as well as in trees: some in the length or shortnesse of the stele whereto they hang; others in the breadth or narrownesse of the leafe it selfe; in form also, whereby you shal haue some cornered, others cut and indented; likewise in sent and floure, for some there be that continue longer in floueing than others, and blow not all at once, but one part after another, as Bassill, Tornfall, Aphaca, and Onocheile.

CHAP. XVII.

¶ The difference of herbs in their leafe: what hearbes they be that floure all the yeare long: of the Asphodell, Pistana, and Petie-Gladen or Sword-grasse.

Many hearbes there be as well as some trees, which continue greene and hold their leaues from one end of the yeare to the other, as Tornfol, and Adiantum or Capillus Veneris. Another sort there is of herbs that floure spike-wise, of which kind are Cynops, Alopecurus [i. Foxtaile] Stelephuros, which some call Ortyx, others Plantaine (of which I will write more at large among Physick herbs) and Thryollis. Of these, Alopecurus carrieth a soft spike, and a thick mossie down, not vnlike to Fox-tails, whereupon it tooke that name in Greeke: and Stelephurus resembleth it very much, but that the Foxtaile bloweth not all together, but beareth floures some at one time & some at another. Cichory and such like, haue their leaues spreading vpon the ground, and those put forth directly from the root, beginning to spring immediately after the apparition of the star Vergiliæ. As touching Parietary, there be other nations as well as the Egyptians, who feed vpon it: it took the name Perdicium in Latine, of the bird Perdix, i. the Partridge, that seeketh after it so much, and plucketh it out of the wals where it groweth: it hath many roots and the same thick. In like maner, the herb Ornithogale, i. Dogs onion, hath a small stem and a white, but a root, * halfe a foot long: the same is full of bulbs like onions, soft also, and accompanied with three or foure other spurs growing out of it. This hearbe they vse to seeth among other pot-herbs for potage. I will tell you a strange quality of the herb Lotos and of Ægilops; if their seed be cast into the ground, it wil not come vp in a yeare. As wonderfull is the nature also of the Camomile: for it beginneth to floure in the head, whereas all other herbes which blow not all at once, floure at the foot first. Notable is the Bur likewise

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* Semipedali, Dioscor. hath Sesquipedali, a foot and a halfe.

* Cyperi, or rather Xyphi, de Pbaiani.

indeed (according to *Hesiodus*) is the only way to dresse it. Moreouer, it is said, that Asphodels planted before the gates of any ferme house in the countrey, preferue the place from all charms and forceries. *Homer* also the Poet hath made mention of the Asphodell. The root resembleth * *Navews* of a mean bignesse: and there is not another root with more heads, for oftentimes a man shal see 80 bulbs clustred in a bunch together. *Theophrastus* and all Greeke writers almost, and namely *Pythagoras* (the chiefe prince of Philosphers) describe this plant to haue a stem of one cubit in length, yea and oftentimes of two, with leaues like to wild Porret: and the sayd stem they called Anthericon; but the root, (i.) those bulbs resembling onions, Asphodelas: but our countrymen haue named in Latin, the stem *Albus*; but the root, *Hastula Regia*. This is the name also of the stalk, full of grains or berries; and thereof they would make two kinds [the male and the female.] Well, the stem of the Asphodell then, is commonly a cubit long, large and big, clean and smooth. Of this herb *Mago* hath written, and ordained, that it should be cut down in the going out of March and entrance of Aprill; namely, after it hath don flourishing, and before that the seed be swelled and grown to any bignesse: then vpon the fourth day after, when the said stems are slit and clouen, they must be laid abroad to drie in the Sunne: when they be dried, they ought to be made vp into knitchets or handfuls. He saith moreouer, that the Greeks name that herb *Pistana*, which we cal in Latin *Sagitta*, growing in marishes and moores among other fenny weeds. This also would he haue to be cut downe and gathered, betweene the Ides of May and the end of the month of October: then, to be pilled, and so to be dried by little and little with the moderat heat of the Sun. The same author giueth order likewise, that the other kind of *Gladiolus*, which they call *Cypiros*, which also is an herbe growing about lakes and meeres, any time within Iuly should be cut downe to the very root; and the third day after, to be dried in the Sun vntill it looke white; but euery day that it lieth abroad, it must be brought into the house before the Sun go downe, because all herbs growing vpon marish grounds, take harm by dewes in the night.

CHAP. XVIII.

¶ Of *Rushes*, six kinds; and of *Cyperus*: their medicinable vertues. Of *Cypirus*, and the sweet *Rush Scarnanth*.

M *Ago* writing of the *Rush*, commonly called *Marifcon*, saith, That for to twist and weaue into mats, it ought to be gathered out of the marish ground where it groweth, in Iune vntill mid-Iuly. As for the drying of it, the same order must be obserued in all points, as we haue set downe before in the discourse of other marais weeds. Hee maketh a second kinde of water *Rushes*, which I find to be called the sea *Rush*, and of the Greekes *Oxyschoenon*, i. the sharp *Rush*: which also is subdiuided into three other sorts; for there is the barren *rush*, called also the male, & in Greek *Oxys*: the female *Rush* bearing a black seed, which they call *Melancranis*. This is thicker than the other, fuller also of branches and tufts. And the third more than it, which is named *Holoschoenus*. Of all these, *Melancranis* commeth vp of the own seed, without any other kinds intermingled with it: but *Oxys* and *Holoschoenus*, grow both together out of one turfe. Of all others, the great *Rush* *Holoschoenus* is best for to be wrought in mats, and such like implements about an house, because it is soft and fleshy; it beareth a fruit hanging & clustering together in maner of fish spawn. As for that *rush*, which we called the male, it groweth of it selfe, by reason that his top fasteneth in the ground, and so taketh root by way of propagation: but *Melancranis* foweth her owne selfe, and commeth vp of seed; for otherwise their race would perish, considering the roots of them all euery yere dodie. These *Rushes* are vsed to make leaps and weels for fishers at sea, & fine & dainty wicker vessels: also candle-wick & matches; especially the marow or pitch within, which is so great (especially about the foot of the Alps reaching to the sea-side) that when a *Rush* is slit, there is found in the belly a pith almost an inch broad by the ruse. And in Egypt there be found *Rushes* so big, that they will serue to make sieues, rangers, and vans. In such sort, that the Egyptians can finde no matter for that purpose, better. Some there be, that would haue the triangled or three square *rush* *Cyperus*, to be a feuerall kind by it selfe. This *Cyperus*, many there be that cannot distinguish from *Cypirus*, by reason of the great affinity of their two names: but I mean to put a difference betweene them both; for *Cypirus* is the *Petrie-glader* or *Sword-grasse* (as I haue before shewed) with a bulbous

A or onion root: the best of which kind, groweth in the Island of Crete: next to it in goodnesse, is that of the Isle *Naxos*: and in a third degree, is to placed that of *Phoenice*: and indeed that of Crete or Candy, in * *whitenesse* and odor commeth neere to *Nard*. The *Naxian* *Cypirus* hath a quicker sent: the *Phœnician* *Cypirus* smelleth but a little: as for that in Egypt, it hath no fauor at all; for there also groweth *Cypirus*. But now to come vnto the properties thereof, it hath vertue to discusse and resolu hard swellings in the body. For now my purpose is to speake of their medicinable vertues, forasmuch as there is great vse in *Phyficke*, as well of such aromaticall simples, as odoriferous floures. As touching *Cypirus* therefore, I professe verily that I will follow *Apollodorus*, who forbiddeth expressly to take *Cypirus* inwardly in any drink: and yet he protesteth, that it is most effectually for them that be troubled with the stone, and full of gravel; but, by way of fomentation onely. He affirmeth moreouer, that without all doubt it causes women to trauell before their time, & to slip their vntimely fruit. But one miraculous effect thereof he reports, namely, that the Barbarians vse to receiue the fume of this herb into their mouth, and thereby wast and consume their swelled Spleens: also, they neuer go forth of dores, before they haue drunk a pipe therof in that maner: for persuaded they are verily (saith he) that by this means they are more youthful, liuely, and strong. He saith moreouer, that if it be applied as a liniment with oile, it healeth all merry-gals and raw places where the flesh is rubbed off or chafed: it helpeth the rank rammyth smel vnder the arm-holes; and without faile cureth any chilling, numbesse, and through cold. Thus much of *Cypirus*.

C As for *Cyperus*, a *Rush* it is (as I haue said) growing square and cornered: neere the ground it is white; toward the top, of a dark blackish green, and fattish: the vnder leaues that be lowest, are slenderer than leek-blades; the vppermost in the head, are smal, among which is the seed: the root is like vnto a black oliue, which if it grow long-wile, is called *Cyperis*, and is of singular operation in *Phyficke*. The best *Cyperus* is that which groweth amongst the sands in *Africke*, neere the temple of *Iupiter Ammon*: in a second rank, is that of *Rhodes*: in a third place may be ranged the *Cyperus* in *Thracia*: and in the lowest degree, that of Egypt. And hereupon came the confounding of these two plants, *Cyperus* and *Cypirus*, because both the one and the other grow there. * But the *Cyperus* of Egypt is very hard, and hath no smell at all; whereas in the other, there is a fauor resembling the very *Spikenard*. There is another herb also comming from the Indians, called * *Cyperis*, of a feuerall kind by it selfe, in forme like vnto *ginger*: if a man chew it in the mouth, it coloureth the spittle yellow, like as *Saffron*.

D But to come againe to *Cyperus*, and the medicinable properties therof, It is counted to haue a depilatory vertue for to feth off haire. In a liniment it is singular good for the excrecence of the flesh about the naile roots, or the departure and loosnesse therof about them; which both imperfections be called *Pterygia*: it helpeth the vlcers of the secret parts, and generally all exulcerations proceeding of rheumatick humors, as the cankers in the mouth. The root of *Cyperus* is a present remedy against the stinging of serpents, and scorpions specially. Taken in drink it doth desopilat & open the obstructions of the matrice: but if a woman drink too much thereof it is so forcible that it will drie the matrice out of the body. It prouoketh vrine, so as it expelleth the stone and grauell withall; in which regard also, it is an excellent medicine for the droppe. A liniment thereof is singular for cancerous and eating sores, but especially for those that be in the stomach, if it be annointed with wine or vineger tempered with it.

E As concerning the *rushes* before said, their root sodden in three hemines of water, vntill one third part be consumed, cureth the cough. The seed parched against the fire, and so drunk in water, staieth the flux of the belly, and stoppeth the immoderat course of womens moneths; but it procureth head-ach. As for the *rush* called *Holoschoenus*, take that part of it which is next the root, and chew it; then lay it to the place that is stung with a venomous spider, it is an approved remedie. I find one sort more of *Rushes*, which they call *Euripice*; and this property withal, That it bringeth one to sleepe: but it must be vsed with moderation, for otherwise it breedeth drowfinesse, sib to the lethargy. Now seeing I am entred into the treatise of *rushes*, I must needs set down the medicinable vertues of the sweet *Rush* called *Squinanth*; and the rather, because (as I haue already shewed) it groweth in Syria furnamed *Coele*. The most excellent *Squinanth* commeth out of *Nabatea*, and the same is knowne by the addition or syname *Teuchites*. In a second place is that of *Babylon*. The worst of all is brought out of *Africke*, and it is altogether without smell. *Squinanth* is round, of an hote and fiery * taste, biting at the tongues end.

* *Asph*: Diof-
cor. *Glandibus*,
Ch. nuts or a-
cornes.

* *Cando*: some
scale color:
like colour.

* No more
hath *Cypirus* in
Egypt, by his
owne saying.
* This *Cyperis*
is taken to be
Cucuma, or
Terramerita,
called therup-
on corruptly,
Turmericke.

* *Ignis mordax*,
fiery.

The true Squinant indeed which is not sophisticated, if a man rub it hard, yeeldeth the smel of a Rose: and the fragments broken from it do shew red. As touching the vertues thereof, It resolueth all ventosities, and therefore comfortable it is and good for the wind in the stomack: also it helpeth them that puke vp choler, or reach and spit blood: it stineth the yex, causeth rifting and breaking wind vpward; it prouoketh vrine, & helpeth the bladder. The decoction thereof is good for womens infirmities, if they sit therein. A cerot made therewith, and dry rosin together, is excellent against spafmes and cricks that set the neck far backward.

As concerning Roses, the temperature thereof is hot; howbeit they knit the matrice by an astringent quality that they haue, and coole the naturall parts of women. The vse of Roses is twofold, according to the leafe of the floure, and the floure it selfe (which is the yellow.) The head of the Rose leafe, to wit, the white part thereof, is called in Latine Vnguis, i. the Nail. In the yellow floure aforesaid, are to be considered feuerally, the feed, the hairy threds in the top, the husk and pellicle that couereth the Rose in the bud, & the cup within: & every one of these haue their proper qualities & vertues by themselves. The leaues are dried, or the iuice is drawn and pressed out of them three waies: either all whole as they be, without clipping off the white nail, for therein lyeth the most moisture: or when the said nails are taken off, and the rest behind is infused in the sun, lying either in wine or oile within glasses, for oile rosat or wine rosat. Some put thereto salt, others mingle withall either Orchanet or Aspalathus, or els Squinant: and this manner of iuice thus drawne and prepared, is very good for the matrice, and the bloody flux. The same leaues, with the whites taken away, are stamped, & then pressed through a thicke linnen cloth into a vessell of brasse; and the said iuice is sodden with a soft fire vnto the consistence of hony: and for this purpose, choise would be made of the most odoriferous leaues.

CHAP. XIX.

¶ The medicinable vertues of Roses: of the Lilly and Daffodill, called *Lam. tibi.*
Of the Violet, of Bacchar, Combretum, and *Azarabacca.*

How wine of Roses should be made, I haue shewed sufficiently in the treatise of diuers kinds of wines. The vse of the iuice drawn out of Roses, is good for the eares, the cankers, and exulcerations in the mouth, the gums, the Tonsils or Amygdales, for gargarismes, for the stomack, the matrice, the infirmities and accidents of the tuil or fundament, and the head-ach. Taken alone, it is singular good for the ague; with vinegar, for to procure sleep, & to restrain the heauing of the stomack, and the offers to vomit. The ashes of Roses burnt, serue to trim the haire of the eiebrowes. Roses dried and reduced into powder, represseth the sweat betwene the * legs, if it be strewed vpon the place. Dried Rose leaues do represseth and stay the flux of humors into the eies. The floure [which is the yellow in the mids] procureth sleepe. The same taken inwardly with vinegar & water, stayeth the immoderat flux of women; and the whites especially: also it represseth the reaching and spitting of blood. The pain of the stomack it appeaseth, being taken in three cyaths of wine. The seed or fruit of the Rose (which is of a Saffron colour) is best, so it be not about a yeare old, and the same dried in the shade. As for the black, it is nought and good for nothing. To rub the teeth with this feed, easeth the toothach: the same prouoketh vrine. Being applied to the stomack, it is comfortable: & so it helps *S. Antonies* fire, if it hath not run too long. If it be drawn vp by the nostrils, it purgeth and clengeth the head. As for the heads or knobs, if they be taken in drinke, they knit and bind the belly, and withall, do stay the flux of blood vpward. The whites or nails of the Rose leafe be singular for waterish eies, so they be applied dry with bread crumbs: the leaues verily if they be brought only into a liniment, and outwardly applied, are reputed foueraigne for the queasinesse and pain of the stomack, for the gnawings and other accidents which the belly and guts be subiect vnto; also for the Midriffe and other precordiall parts. Moreover, they are good to be eaten, if they be condite and preferred in manner of garden Dock or Patience. But in keeping of Rose leaues, an eie would be had to them, for fear least they grow to a mouldinesse, that quickly will settle vp them. Drie Rose leaues are of good vse in Physick, yea, the very Rose cake after the iuice & moisture is pressed out of the leaues, serueth for some purpose. For of them be made bags and quilts, yea, and drie pouders for to represseth sweat, and to palliat the strong smel therof: with this charge and cauet, that presently after that one is come out of the stouue or baine, the pouders be suffered to dry vpon

* Siccis famina
asperguntur: I
doubt that Pl.
my read in Di.
ostoides, puris
for puris, (10)
Zugentia: and
then it carieth
this sence; that
dried Roses &
powdred, en-
ter into sweet
ointments.

A vpon the body, and then afterward washed off with cold water. The wild Rose * leaues reduced into a liniment with Beares greafe, doth wonderfully make haire to grow again, where through some decaye it is fallen away.

Lilly roots through their singular vertues and operations many waies, haue ennobled their own floures: for first and formost, if they be taken in wine, they be countrepoysons against the sting of serpents, and the venom of Mushrooms. Sodden in wine, and applied in manner of a cataplasme, and so bound to the feet, they mollifie and resolue the cornes; but this must not be vndone and removed in three daies. Boiled with greafe or oile, they cause haire to come againe euen in places that were burnt. If Lilly roots be drunk in honied wine, they do euacuat downward at the siege with other ordure, the cluttered, bruised, and hurtfull blood within the body.ouer and besides, in this manner they help the spleen, them that are bursten and bruised, & withall, bring down womens terms orderly. But if they be sodden in wine, and so laid to in forme of a cataplasme, they knit and heale sinues that were cut asunder. They rectifie running tertars and lepries, they scour away dandruf and pilling skales in the face, they make the skin smooth and take away riuels and wrinkles. The leaues of Lillies boiled in vinegre are good to be layed to green wounds: reduced into a cataplasme with Hony, Henbane, and wheat meale, incorporate and vnited all together, and so applied to the cods, they represseth the flux of humors falling to those parts. The seed made into a liniment allayeth the heat of *S. Antonies* fire. And in the same sort for the floures and leaues applied doe heale old sores. As touching the iuice which is pressed forth of the floures, of some it is called Mel [i. hony:] of others Syrium: singular good for to soften and mollifie the matrice, for to procure sweat and to ripen impostumes tending to suppuration.

Now for Daffodils, there be two kinds of them admitted by the Physitians for to be vsed in medicine; the one with a purple floure, the other of a grasse green. This later Daffodil is aduerser and hurtfull to the stomack, and therefore causeth it to overturn and vomit: it setteth the belly also into a flux: contrary it is to the sinues, and stuffeth the head: for which narcotick qualitie of stupifying & benumbing the senses, it took the name in Greeke Narcissus, of Narce which betokeneth nummednesse or dulnesse of sence; and not of the yong boy *Narcissus*, as the Poets do feign and fable. The roots as wel of the one as the other Daffodil, haue a pleasant tast as it were of honied wine: the same is good for burns, applied to the place with a little hony: and so it helpeth dislocations and healeth wounds. Moreover, a cataplasme made of it, hony, and oatmeale, doth resolue and ripen biles and great apostemations: and in that sort it drawes forth spils, shiuers, arrow heads, and thorns, and whatsoever stick within the body. Being stamped and incorporat with barley groats and oile, it cureth them that be bruised and smitten with a stone. Mingled with meale it cleareth wounds, it scoureth the skin from all spots that disfigure it, yea and taketh away the black morpew. Of this floure is made the oile Narcissinum, good to supple and soften all hard tumours, good also to reuiue and heat againe whatsoever is stark and benumbed with extreme cold. And about all, this floure is excellent for the eares, howbeit it maketh the head to ake.

Of Violets there be some wild and of the field: others domesticall, and growing in our gardens. The purple violets are refrigeratiue and do coole. And therefore a good liniment is made of them to be applied vnto an hot stomack, against burning inflammations. A frontall likewise may be made of them to be laid vnto the forehead. But a peculiar vertue they haue besides to stay the running and waterie eies: as also to help the procidence or falling downe both of tuill and matrice, and to reduce them again into their places. Moreover, being applied to swellings and impostumations, they resolue the same without any head or suppuration. Guirlands being made of violets and set vpon the head, resist the heauinesse of the head, and with stand the overturning of the brains vpon ouer-liberall drinking; yea, the very smel thereof will disperse such fumes and vapors as would trouble and disquiet the head. Violets being drunk with water, doe cure the Squinancie. That which is purple in the floure of the Violets, helpeth the falling euil, in children especially, if they drink it with water. Violet seed resisteth the poison of scorpions. Contrariwise, the floure of the white Violet, to wit the bulbous stocke-Gilloffe, is good to break all impostumat swellings, whereas March violets did resolue them. But as wel the white Violets as the yellow wall-floures, are singular good to extenuate the grosse blood of womens terms, and to moue vrine. Violets, if they be fresh and new gotten, are not so effectuall for these purposes.

* or rather the
spongie sub-
stance grow-
ing vpon the
Cane brier
and wild Rose.

purposes as the dry and old gathered, and therefore they would haue a whole yeares drying before they be vsed. The wall-floure being taken to the quantitie of halfe a cyath in three cyaths of water, stirreth womens fleurs, and draweth them downe. A liniment made with the root and vinegre together, do mitigate and allay the paine of the spleen: likewise it asswageth the gout: and being tempered with myrrh and saffron, it is singular for inflammations of the eyes. The leaues mixed with hony cleanse the head from scurfe and skall: reduced into a cerot, it healeth vp the chaps in the seat or fundament, as also all such Fissures in any moist place whatsoever. And with vinegre they be good for all collections of humors and apostemations.

Bacchar also is an herb whereof there is good vse in physick. Some of our countrymen haue called it in Latine Perperisa. It affoordeth a good remedie against serpents: it qualifieth the excessiue heat of the head, allaieth the ach, and restraineth the flux of humours downe into the eyes. A cataplasme is made thereof for womens breasts, swelling immediatly after childbirth, for to breake the kernell. Also for fistulous vlcers, beginning to breed betwene the corners of the eies and of the nose, and Saint *Antonies* fire. The very odour thereof is a good inducement to sleep. The root foddren and taken in drinke is singular for them that are troubled with cramps and convulsions; that haue fallen from on high, that be drawn together with spasmes, and finally for such as labor for wind. A decoction made of three or foure of the roots, boiled away to the thirds, is giuen with good successe for an old cough. And this drinke or Iuleb is very conuenient for to purge women that haue trauelled and bin deliuered before their time. It taketh away the stiches in the side, cureth the pleurisie, and skoureth the stone. Herof be bags and quilts made, and those if they be laid in a wardrobe among cloathes and apparel, causeth them to smell sweet.

As for Combretum (which I said was much like vnto Bacchar) if it be beaten to powder and tempered with hogs greafe it maketh a soueraign salue that healeth wounds wonderfully. *Afarum* (by report) is an appropriat medicine for the liuer, if an ounce of it be taken in one hemine of honied wine. It purgeth the belly as violently as Ellebore. In case of the dropie it is singular; as also for the midriffe, precordial parts, the Matrice, and the Iaunise. If it be put into new wine when it worketh, and so tunned vp, it maketh a singular diuretick wine for to prouoke vrin. It must for this purpose be digged out of the ground when the leaues begin to put forth. Dried it ought to be in the shade; although it be subiect to corruption and mouldeth very soon.

CHAP. XX.

¶ Of French Nard, and Saffron. The medicinable vertues of Saffron, and the cake or dregs thereof. Of *Saliunca*, *Polium*, and *Floure de-lis*. Of *Holochryson*, *Chrysocome*, and *Melilot*.

Forasmuch as some haue taken rustick-Nard to be the root of Bacchar, and so named it: the which hath put me in mind of French Nard, and the promise which I made in my treatise of strange and forein trees, to put off no longer than this place for to speake of it, and the properties thereto belong. To acquit my selfe therefore, I will here set down the vertues of the said Nard, as touching the vse thereof in Physicke. First therefore, if two drammes of French Nard be taken in wine, it is singular against the sting and biting of serpents. *Item*, if one drinke it either in wine or water, it causeth the passions of the Collick, proceeding from the inflammation of the gut Colon. In like sort it cureth the inflammation of the liuer and the reins, the ouerflowing also of the gal, and the Iaunise thereupon. Taken alone by it selfe or with Wormewood, it is a good remedy for the Dropie. It represseth the immoderat flux of womens fleurs.

As touching Setwall or Valerian, which in the foresaid place we named Phu; the * root either beaten into powder, or foddren and so giuen in drinke, is excellent for the rising of the Mother, which threatneth suffocation; for the pains of the breast and pleurisie. The same prouoketh the course in womens terms, so it be taken in wine.

Saffron will not resolue nor be mixed wel with hony or any sweet thing. Howbeit, in wine or water, it wil dissolue very soon and be incorporated therewith. A soueraign spice this is, & singular for many maladies. The best way to keep saffron is within a box of horn. It discusseth verily all inflammations, but principally those of the eies, if together with an egge it be applied in forme of a liniment. Excellent it is for the suffocation of the matrice, the exulcerations of

A of the stomacke, breast, kidnies, liuer, lungs, and bladder: and more particularly, if any of these parts be enlamed, a proper remedie also it is in that case. Likewise it cureth the cough & pleurisie. It killeth an itch, and prouoketh vrin. Our wine-knights when they purpose to sit square at the tauerne and carouse lustily, if they drinke Saffron, neuer feare surfeit nor the ouerturning of their braine: and they are verily persuaded, that this keepeth them from drunkenesse, and maketh them carie their drinke well. Certes, a Chaplet of Saffron vpon the head, dooth allay the fumes ascending vp thither, and preuent drunkenesse. Saffron induceth sleep, but it troubleth the braine * somewhat it pricketh forward to wanton lust. The floure of Saffron reduced into a liniment with white Fullers earth, helpeth the Shingles and *S. Antonies* fire. And saffron it self entereth into very many compositions of Physicke. One Collyrie or * eye-salue there is, which B taketh the name also of saffron. And when the ointment made of Saffron called *Crocini*um, is strained and pressed out, the grounds which remaine is named *Crocomagma*, which also is not without some speciall vses, for it cureth the suffusion of the eyes, or the cataraet: but it causeth ardeur and heat of vrine more than Saffron it selfe. The best is that accounted, which if a man tast in his mouth, doth colour his spittle and staine his teeth.

As touching the Flower de-lis, the red is thought to be better than the white. Certes if little infants do wear it tied about them by way of necklace, collar, or girdle, it is supposed to be a singular remedie, especially when they breed teeth or haue the chincough. Also if they be troubled with the * worms, they hold it good gently to inskill the same in the body [either by drinke or clystres.] All other operations that the Flour-de-lis hath, differ not much in effect from hony. A singular property it hath to cleanse the head from sores and skalls, and generally to mundifie all impostumat vlcers. Two dramms thereof taken with hony, causeth the belly, & prouoketh to the stoole. Giuen in ordinary drinke, it staieth the cough, appeaseth wrings, & dissolueth ventrosities in the belly. In vinegre it openeth the opilations of the spleene. And being taken with water and vinegre together, it is an effectuell remedie against the stinging of serpents and spiders. The weight of two dramms eaten with bread or drunk in water, resisteth the poison of scorpions. Being made into a liniment with oile, and so applied, it cureth the bitings of mad dogs, and heareth the parts mortified with extreame cold. In like manner also it allaieth the paines of the sinews. Reduced into an ointment with Rosin, it is singular for the paine of the loins and the gout *Sciatica*. This root is hot in operation. If it be drawne or snuffed vp into the nose, it causeth sneezing, and purgeth the head. A liniment of it and Pome. quinces or Peare-quinces, causeth the head-ach: it represseth also the vapours flying vp into the head, causing distemperature of the braine, in a surfeit of wine or strong drinke. It helpeth streightnesse of breath, and such as cannot take their winde but sitting vpright. It prouoketh vomit, if it be taken to the weight of 2 Oboli. A cataplasme of it and hony together, draweth forth spils of broken bones. The powder of it is much vsed for Whit-flawes: and the same applied with wine, taketh away cornes and werts: but it must lie on three daies before you vnbind and take it from the place. The very chewing of it, correcteth a strong and stinking breath: as also the filthie saour of the arme-holes. The iuice thereof doth mollifie all hard tumors. It prouoketh sleepe, but it consumeth sperme or natural feed. The Fissures in the seat, as also the blind and swelling piles in the fundament and all superfluous excrecences of the bodie, it cureth.

There is a wild kind of Floure-de-lis, which some call *Xyris*: the root of this herb is good to resolue & discuss the swelling kernells named the Kings euil, hot biles, & risings in the groin. Howbeit for to work these effects, there be certain ceremonies precisely to be obserued, namely, That it be taken out of the ground with the left hand in any case. *Item*, that they who gather it do say in the gathering, For whose sake they pluck it vp; and withall, name the person: & here in making mention of this matter, I cannot but detect the knauery of these Harbarists and simplers: Their maner is not to employ & occupie all that they haue gathered, but reuerue & keep part thereof, as also of some other hearbes, as namely of Plantaine, and if they be not well contented, nor thinke themselves paid thoroughly for their paines in the cure, they make no more ado but burie and couer within the earth that part which they kept by them, in the same place where it was digged forth. And I beleue verily they haue an vnhappy meaning and a certaine kind of witchcraft herin: for sooth, That the maladies which they seemed to haue healed, should breake out and be sore again, to the end that they might be fet on work anew. As touching *Saliunca*, the decoction of it in wine and so taken, staieth vomits, and corroboreth the stomack.

* Nay it is a great enemie vnto it.
* *Dia croctis*.
* *Fallacis*.

* *Tinearum* vnto it. Plinie commonly it taketh *Tineas* for worms in the belly: although otherwise it be broken into sores and skalls in the head.

Musæus and *Hesiodus* the Poets haue a great opinion of Polium: for they giue counsell to all those that would come to preferment & promotion, for to be anointed all ouer with a liniment thereof: such also as be desirous of renowne and glory, to be euer handling of it, to set it also, and maintaine it in their gardens. True it is, that folke do carie Polium about them ordinarily, or lay it vnder their beds for to chafe away serpents. Physicians do seeth it either new & green, or drie, in wine, and therof make a liniment: or els they giue it to drink in vinegre, to those that be pained with the jaundise; yea, & to such as be newly fallen into the dropsie, they giue counsell to drinke the decoction thereof, being sodden in wine. And of it so prepared, they make a liniment for to be applied vnto green wounds. Moreouer, this herb is very good to fend out the after-burden in women newly brought to bed, and to expell the dead infant out of the mothers wombe. And otherwise it serueth well to mitigate any paines of the body. It doth purge and euacuate the bladder: and in a liniment applied to the eyes, restraineth their excessiue watering. I know not any other hearbe better to goe with other ingredients into antidots or countrepoisons (named of the Greeks *Alexipharmaca*) than this. Howbeit, some denie all this, and are of opinion that it is hurtful to the stomacke, that the drinking of it stuffeth the head, and causeth women to fall into labor before their time. They say also, that this cerimonie would be precisely obserued, That in the very place where this plant is found, so soone as euer it is gathered it should be hanged presently vpon the necke of the partie, with a speciaall care that it touch not the ground first, and then is it an excellent remedie for the cataract in the eye. And these authors describe this hearbe to haue leaues like Thyme, but that they be softer and couered ouer with a more hoarie and woollie downe. Being taken with wild Rue in raine water, so that it be beaten before into powder, it doth mitigat (by report) the deadly paines caused by the sting of the Aspis, it bindeth and draweth vp a wound, it keepeth corrosiue fores from festering and going farther, as well as the floures of the Pomegranate.

The hearb *Holochrysol* if it be taken in wine, helpeth the strangury, and such as cannot pisse but by drops. And a liniment therof is passing good to repress the flux of humors to the eyes. If it be incorporat with Tartar or wine lees burnt into ashes, and drie Barley groats, it mundifieth the skin, and riddeth away ring-wormes, tetter, and such like wild fires.

As for *Chryfocome*, the root of it is hot, and yet astrigent. It is giuen to drinke for the diseases of the liuer and the lights. And being sodden in honied water, it assuageth the paines incident to the matrice. It prouoketh womens monthly purgation: and being giuen in drink raw, it purgeth waterie humors gathered in the dropsie.

Touching *Baulm*, which the Greeks call *Melittis* or *Melissophyllon*: if Bee-hiues be rubbed all ouer and besmeared with the juice thereof, the Bees will neuer away, for there is not a floure whereof they be more desirous and faine, than of it: and in truth, looke in what garden there groweth abundance of this hearbe, the Bees therewhen they swarme, will be soone intreated to tarry, & not be hastie to wander far abroad. The same is a most present remedy not only against their stings, but also of wespes, spiders, and Scorpions. And being tempered with a little nitre, it is singular against the strangulation of the mother. Taken in wine, it pacifieth the wrings and torments of the belly. The leaues therof being sodden with salt, and brought into an ointment, are singular good for to be applied vnto the scrophules or swelling kernills called the Kings euill: and likewise to the accidents of the seat and fundament, as the swelling hemorrhoids or piles. The juice taken in drinke, bringeth women to their ordinary monethly courses: it discurseth veuosities, and healeth vlcers: it allaieth the paines of any gouts, and cureth the biting of mad dogs: it is good for the bloudy flux that hath run on a long time: as also those fluxes which proceed from the imbecillitie of the stomack: it helpeth them that be streight in the chest, and cannot take their wind but bolt vpright: it mundifieth also the vlcers within the breast. To conclude, it is said to be a singular remedie & none like vnto it, for to dispatch the webs in the eye, if they be annointed with the juice thereof and honey tempered together.

Melilot is thought also to be good for the eyes, if it be applied with milk or line seed. It assuageth also the paine of the jawes and head, if it be laid too with oile of Roses: likewise it doth mitigat the paine of the ears, if it be instilled or dropped into them with wine cuir. Moreouer, the tumors and breaking out of the hands it helpeth. Being boiled in wine or stamped green, it easeth the griefe of the stomacke. The same effect it hath in the pain of the matrice. But if the cods be amisse, if the Longaon or tuill bee fallen, and beare out of the bodie; or if that part bee

As namely *Di-
oscorides*.

* *Diocorides*
hath *Melilot*,
i. Mushromes:
whereof there
be some that
be dangerous
for suffocation.
But *Plinie*
as it should
seeme, read it
perum, and
accordingly
hath translated
it.

A affected with other accidents, Bath the place with a decoction of it, boiled greene in water or cuir, and the patient shal find ease. But if there be an ointment made of it and oile of Roses incorporat together, it is a souerain remedie for all cancerous fores. If it be boiled first in sweet wine or cuir, it is the better for the purpose aforesaid: and so prepared, a speciall and effectuaill thing it is for the wens called *Melicerides*: wherein is engendred matter resembling honey.

CHAP. XXI.

¶ Of *Trefoile*, and *Thyme*: of the day *Lillie Hemerocallis*: of *Elcampane*, and *Southernewood*, and *Cypres*.

B I Am not ignorant that folke are verily perswaded, how that *Trefoile* or three leaued grasse, is of great force against the stings of serpents and scorpions, if either 20 graines of the seed bee inwardly taken in wine, or water and vinegre together, or if the leaues and the whole hearb be sodden, and the decoction drunk: as also, that serpents are neuer seen to lie vnder this *Trefoile*. Moreouer, I know full well that diuerse Authors renowned and of great credit, haue deliuered in their bookes, That fise and twentie graines of that *Trefoile*, which we called *Menianthes*, is sufficient for a preternatiue and antidot against all poisons whatsoeuer: besides many other medicinal vertues which be ascribed to this hearb. But for mine owne part, I am iuduced by the authoritie of the most graue and reuerend Poet *Sophocles*, to stand against their opinion; for hee affirmeth plainly, That *Trefoile* is venomous. Likewise, *Simus* the Physician doth report, that if the decoction of it sodden, or the juice thereof stamped, bee poured or dropped vpon any part of the body which is found, it wil cause the same fiery and burning smart as followeth vpon a place bitten or stung with a serpent. And therefore I would thinke with them, and giue counsell also, that it is not to be vsed otherwise than a countrepoison. For it may bee peradventure, that in this as in many other, one poyson (by a certaine antipathie and contrarietie in nature) expelleth & mortifieth another. Moreouer, this I mark and obserue in their writings, that the seed of the *Trefoile* which hath smallest leaues, if it be reduced into a liniment, is singular good to embelish womens skin, and to preferue their beauty, if the face be annointed therewith.

Thyme ought to be gathered whiles it is in the floure, and then to be dried in the shade: now there are of *Thyme* two kinds, to wit, the white, which hath a woodie root, growing vpon little hills; and this is thought to be the better: the second, is blacker, & caries besides a black floure. They are thought both of them, the one as well as the other, very good to cleare the eyesight, whether they be eaten with meats or taken as a medicine. In like maner, an electuarie or lohoch made of *Thyme*, is supposed to be excellent good for an old cough, and being taken with honey and salt, to raise and breake steam, causing the same to be raught vp with more facility: also that if it be incorporat with honey, it will not suffer the bloud to clutter and congeale within the bodie. Applied outwardly as a liniment with *Sennae*, it doth extenuate and subtiliate the rheume that hath of long time fallen in the throat and windpipe: and so also it amendeth the grievance of stomacke and belly. Howbeit, these *Thymes* must be vsed with measure and moderation: because they set the body in an heat, although they be binding and make the belly costie. Now in case there be an exulceration in the guts, there must be taken the weight of 1 denier or dram in *Thyme*, to euery Sextar of honey and vinegre: semblably, it must bee ordered in case of the pleurisie; and when there lyeth a paine between the shoulders or in the breast. A drink made of *Thyme* with honey and vinegre in manner of a juleb or syrup, cureth the griefe of the midriffe and preordiall parts neere vnto the heart. And verily a souerain potion this is to be giuen vnto them that be troubled in mind and lunaticke, as also to melancholicke persons. The same also may be giuen to those who be subject to the epilepsy or falling sicknes: whom the very perfume and smell of *Thyme* wil raise out of a fit, and fetch them again, when the disease is vpon them: it is said, that such should lie ordinarily in a soft bed of *Thyme*. This hearb is proper for those that canor draw their breath vnlesse the fit vpright, and to such as are short winded, yea, and good for women, whose monethly courses are either suppressed or come but slowly. And so that the infant were dead in the wombe, a decoction of *Thyme*, sodden in water vnto the thrids and so taken, doth send it forth of the bodie. Men also doe find a great benefit by *Thyme* if they drinke a syrup made of it with honey and vinegre, in case of ventosities and inflations: also, if their bellies be swollen or their cods; yea, and when their bladder is pained: moreouer if it

be

CHAP. XXIII.

¶ *The vertues of Oenanthe in Physicke.*

Oenanthe is an hearb growing vpon rocky and stony grounds. The leafe resembleth those of the Parnepe: roots it hath many, and those big. The stemme and leaues of this herb, if they be taken inwardly with honey and thicke sweet wine, doe cause women in labor, to haue easie deliuerance, and withall, doe cleanse them wel of the after-birth. Eaten in an Elec-tuarie, or licked in a lioch made with hony, the said leaues doe rid away the cough, and prouoke vrine. To conclude, the root also is singular for the infirmities and diseases of the bladder.

CHAP. XXV.

¶ *The medicines made with the hearbe Heliochryson.*

Heliochryson, which others name Chrysanthemon, putteth forth little branches very faire and white: the leaues are whitish too, much like vnto Abrotomum: From the tips and ends of which branches, there hang down certaine buttons (as it were) like berries round in a circle, which with the repercussion and reuerberation of the Sun-beames, doe shine againe like resplendent gold. These tufts or buttons, doe neuer fade nor wither: which is the cause that the chaplets wherewith they crowne and adorne the heads of the gods, be made thereof: a ceremonie that Ptolomæus K. of Egypt obserued most precisely. This herbe groweth in rough places among bushes and shrubs. If it be taken in wine, it prouoketh vrine, and womens fleurs. All hard tumors and inflammations it doth discusse and resolueth without suppuration. A liniment made with it & honey, is good to be applied to any place burnt or scalded. It is giuen in drinke usually for the sting of serpents: for the paines and infirmities also of the loines. If it be drunke in honyed wine, it dissolueth and consumeth the cluttered bloud, either in the belly and guts, or the bladder. The leaues taken to the weight of three Oboli in white wine, do stay the immoderate flux of the whites in women. This hearbe, if it be laid in wardrobes, keepeth apparel sweet, for it is of a pleasant odour.

CHAP. XXVI.

¶ *The vertues and properties of the Hyacinth, and Lychnis, in Physicke.*

The Hyacinth loueth France very well, and prospereth there exceedingly. The French vse therewith to die their light reds or lustie-gallant, for default of graine to color their scarlet. The root is bulbous & Onion-like, well known to these slaue-courfers, who buy them at best hand: and after, tricking, trimming, and pampering them vp for sale, make gain of them: for being reduced into a liniment, they vse it with wine to annoint as well the share of youths, as the chin and cheeks, to keep them for euer being vnder-grown, or hauing haire on their face, that they may appeare young still and smooth. It is a good defensatiue against the prick of venomous spiders: and besides, allaieth the griping torments of the belly. It forcibly prouoketh vrine. The seed of this hearbe, giuen with * Abrotomum, is a preseruatiue against the venome of serpents and scorpions: it cureth the jaundise.

As touching Lychnis, that flaming hearbe furnamed Flammea, the seed of it beaten to powder and taken in wine, is singular good against the sting of serpents, scorpions, hornets, and such like. The wild of this kind is hurtfull to the stomacke, and yet it is laxatiue and purgeth downward. Two drams thereof is a sufficient dose to purge cholles, for it worketh mightily. Such an enemy it is to scorpions, that if they doe but see it, they are taken with a nummednesse that they cannot stir. In Asia or Natolia, they call the root of this hearbe Bolites, which if it be laid vpon the eyes and kept bound thereto, taketh away the pin and the web, as they say.

CHAP. XXVII.

¶ *The medicinable vertues of Peruinele, Ruscus, Batis, and Acinos.*

Also the Peruinele, called by the Greeks * Chamædaphne, if it be stamped drie into powder, and a spoonfull thereof giuen in water to those that are full of the drop sicke, it doth euacuat most speedily, the watry humors collected in their belly, or otherwise: the same root

rested

A roasted in embres, and well sprinkled and wet with wine, discusseth and drieth vp all tumors, being applied thereto. The iuyce thereof dropped into the ears, cureth their infirmities. A cataplasme applied to the belly, helpeth them (as they say) very much, who are vexed either with gripes or fluxes of the wombe.

Concerning Ruscus, the decoction of the root, if it be giuen in drink each other day, to them that be tormented either with the stone, or the wringing paines of the strangurie, or to such as pisse bloud, it helpeth them. Now the preparing of this medicine, and the proportion also of it, is in this wise: The said root must be taken out of the ground as it might be to day, and tomorrow morning betimes it would be foddens; and a sextar of this decoction is to be mingled with two cyaths of wine, and so the Patient is to drink it. Some make no such ado, but take the root while it is green, stamp it, and in water draw the iuyce raw as it is, and so drink it. In sum, it is held for certain, That there is no better thing in the world for the infirmities and diseases incident to the priuy members of men, than to bruse the tender crops of this herbe, and then with wine and vinegre to presse out the iuyce, and afterwards to drink the same. In like maner, * Batis is good for them that be bound and costive in the belly: and a liniment of it, after it is roasted in the embres and stamped, is singular for the gout. Last of all, as touching the herbe Acinos, the Egyptians vse to sow it, as well to make guirlands thereof, as to eat it. Surely I would say it were Basil, but that the branches and leaues be more hairy; for certainly it is very odoriferous. It hath a property to prouoke vrine, and womens fleurs.

* Taken by the most part for wild B. fill:

C

CHAP. XXVIII.

¶ *The medicines that Colocasia or the Egyptian Bean doth afford.*

Colocasia was of opinion, that Colocasia was good to lenifie or mitigat the acrimony of humors within the body, and withall to help the stomack.

CHAP. XXIX.

¶ *The medicines made of Anthalium.*

Touching Anthalium (wherof the Egyptians vse much to eat) I find no other vse of it, but only from the kitchen to the table. Indeed there is an herb much like to it in name, which some call * Anthyllion, others Anticellion: whereof be two kind; the one hath leaues and branches like to the Lentill, and groweth a hand breadth or span high: it commeth vp in sandy grounds exposed to the Sun, and is saltish in taste. The other resembles * Chamæpitys but that it is lower and more hairy: it beareth a purple floure, carrieth a strong sent, and loueth to grow in stony places. The former kind is a most conuenient and proper herb for the diseases of the matrice and the natural parts of women. Also being applied as a cataplasme with oyle Rosat and milke, it is an vmbretarie medicine. In case of the strangury and pains of the kidnies it is giuen with good successe to the quantitie of three drams. The other likewise is giuen to drink the weight of four drams with hony and vinegre, for to mollifie the hardnesse of the matrice, to assuage the torments of the belly, and to cure those that be taken with the falling sicknesse.

* Some take it for Kalli.
* Anthyllion.
* Chamæpitys.
* Diofco.
* Some white brackish.
* Ina muscata.
or Arabitica.

CHAP. XXX.

¶ *Of * Parthenium, and the medicinable vertues that it hath.*

As for Parthenium, some name it Leucanthe, others Tamnaum; but our countryman Celsus the Physitian calleth it Perdicium and Muralium. It groweth in the mounds & hedges about gardens: it bringeth forth a white floure, sauouring like an * apple, and hauing a bitter taste. The decoction of this herbe, if a woman sit ouer it and receiue the fume into her body, is good to mollifie the hard tumors of the matrice and natural parts; as also to discusse all inflammations. A powder made of this herb dried, and incorporat with honey and vinegre, [i. Oxymel] and so applied, purgeth cholera adust and melancholy. In which regard it is good for the swimming and dizziness of the brain, and those that are giuen to breed the stone. Being vsed in maner of a liniment, it is good for the shingles and S. Antonies fire: likewise for the Kings euil, if it be incorporate with old swines greafe. The Magicians vse it much for Tertian

* Some thinke it is Mother-wort, others Feuefew.

* Specially according to Diofcorid. & Plinie should haue written thus: Flore per ambrosium candido, id est, with a floure white round about but within of a dark yellow like to honey: & this is good to Feuefew.

agues: but they lay a great charge, that it should in any wife be plucked vp with the left hand, and the parties precisely named for whose sake they gather it: but in any case they who pluck it, must not look behind them: which done, a leafe of the herbe must be put vnder the tongue of the sick patient; and when it hath bin held so a little while, it must anon be swallowed down in a cyath of water.

CHAP. XXXI.

¶ Of Night-shade or Morell: of *Alkakengi* and *Halicacabus*, and their vse in Physicke.

* *Alkakengi*, or winter-cherry
* or rather for that the sayd berry lieth within a cod like a bladder.

NOW concerning Nightshade or Morell, which some name *Strychnos*, others haue written by the name of *Trychnos*; would to God that the guirland-makers of Egypt had not employed and vsed in their chaplets the floures of two kinds of them, induced therto by the resemblance that they haue to the Iuy floures: of which, the second that hath red berries like cherries of a scarlet colour, contained within certain bladders, & those berries full of grains or seeds, some name * *Halicacabus*, others *Callion*: but our countrey men here in Italy call it * *Vesicaria*, because it is good for the stone in the bladder. Certes this plant is more like a shrub, or little tree full of branches, than any herb, bearing great and large bladders, & those fashioned like a top, broad and flat at one end, and sharp pointed at another, inclosing within it a great berry, which ripeneth in the month Nouember. The third kind of *Strychnos* or *Solanum* hath leaues like to Basil: but I must but lightly touch this herb, and not stand long about the description either of it or the properties which it hath; since my purpose is to treat of hollosom remedies to saue folke, and not of deadly poisons to kill them: for certes this herb is so dangerous, that a very little of the iuice thereof is enough to trouble a mans brain, and put him beside his right wits. And yet the Greeke writers haue made good sport with this herb, and reported pretty jcasts of it: For, say they, whoeuer taketh a dram of the iuice shall haue many strange fantasies appearing euidently vnto them in their dreames; if they be men, that they dally with faire women: if they be women, that they be wantons, playing and toying with men without all shame and modesty; and a thousand such vain illusions: but in case they take this dose double, then they shall proue foolish indeed broad waking, yea & go besides themselves: let them take neuer so little more, it is mortal, and no remedy then but death. This is that poison which the most harmlesse and best minded writers that euer wrot, called simply *Dorycnion*; for that soldiers going to battell vsed to anoint and inuenom therewith the heads of their arrows, darts, and speares, growing as it did so commonly in euery place. But other Writers, who had not fought so far into the matter, nor aduisedly considered of it, gaue it the name of *Manicon*. But those that of a naughty mind, cared not secretly to impoison the whole world, haue hidden the danger thereof, and term it by a name pretending no harm; some calling it *Neuris*, others *Perisson*. But as I protested before, I think it not good to be too curious and busie about the description of this herb, notwithstanding I might seem to giue a good caueat of it by further particularizing thereof. Well, the very second kind which they call *Halicacabus*, is bad enough, for it is more soporiferous than Opium, and sooner casteth a man into a dead sleep, that he shal neuer rise again. Some name it *Morion*, others *Moly*: and yet it hath nor wanted those that haue thought it praise-worthy: for *Diocles* and *Euenor* haue highly commended it: and *Tamaristius* verily hath not stuck to write verses in the commendation of it: A wonderful thing, that men should so far ouerpasse themselves, and forget all honesty and plaine dealing: for they say, forsooth, that a collution made of this herbe confirmeth the teeth that be loose in the head, if the mouth be washed therewith. And one onely fault they found in *Halicacabus* (otherwise it might be praised without exception) that if the said collution were long continued, it would trouble the brain, & bring them that vsed it to foolerie & idleness of head. But for mine own part, my meaning is not to set down any such receipts and remedies, which may bring a further danger with them, than the very disease it selfe for which they were deuised. The third kind also is commended for to be eaten as meate, although the garden Morell is preferred before it in pleasantness of taste. Moreover, *Nemocrates* auoucheth, That there is no maladie incident to our bodies, but the said Morell is good for it. Howbeit, I make not so great reckoning and account of all the hopes that these and such like herbes may afford, as I doe make confidence

to

A to deliuer them in writing, especially seeing we haue so great store of safe and harmlesse medicines, which we may be sure can do no hurt. Indeed, the root of *Halicacabus* they vse to drinke and make no bones at it, who would be known for great Prophets to foretell future things: and therefore it is alone for them to be seen furious and raging, the better to colour their knauerie and lead the world by the nose in a superstitious conceit and persuation of their diuine gift of prophesie, and so to feed men still in their folly. But what is the remedie when a man is thus ouertaken? (for surely I am better content to deliuer that) Euen to giue the party thus intoxicate, a great quantity of Meade or honied water, and to cause him to drinke it off as hot as he can. Neither will I ouerpasse this one thing besides, That *Halicacabus* is so aduerser vnto the nature of the Aspis, that if the root thereof be held any thing neere vnto the said serpent, it will bring B asleepe and mortifie that venomous creature, which by a soporiferous power that it hath also of the own, casteth a man into a deadly sleep, and killeth him therewith. And therefore to conclude, hereupon it commeth, that the same root bruised and applied with oile, is a soueraigne and present remedie to them who are stung by the foresaid Aspis.

CHAP. XXXII.

¶ Of *Corchorum* and *Cnicus*.

C THEY of Alexandria in Egypt vse to eat ordinarily of *Corchorum*. This herb hath leaues inwrapped and infolded one within another, after the maner of the Mulberry. Good it is (as they say) for the midriffe and the parts about the heart: also to recouer haire that is fallen away by some infirmitie; and likewise for the red pimples or sauce-flegme in the face. I reade moreover, that the skab or mange in kine and oxen is most speedily cured thereby. And *Nicander* verily doth report, that it helpeth the stinging of serpents, if it be vsed before it be in the floure. As touching *Cnicus*, otherwise called *Atractylis* (an herb appropriate to the land of Egypt) I would thinke it meet not to vse many words about it, but that it yeeldeth a soueraigne remedie against the poison of venomous beasts; yea, and the dangerous Mushrooms if a man haue eaten them. This is certain, and an approued experiment, That whoeuer are wounded by the sting of Scorpions, shall neuer feeble smart or paine, so long as they hold that herb in their hand.

CHAP. XXXIII.

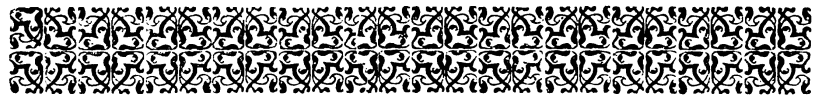
¶ Of *Perfoluta*.

T HE Chaplet-makers in Egypt set great store by *Perfoluta* also, which they sow and plant in their gardens onely for to make Coronets and Guirlands. Two kindes there be of it, the male and the female. It is said, That the one as well as the other, if it bee put vnder man or woman in bed, they shal haue no minde nor power at all to play at *Venus* game, and specially the man.

CHAP. XXXIV.

¶ Of Measures and Weights.

E AND so far as much as we shall haue occasion oftentimes in setting downe weights and measures, to vse Greeke vocables, I care not much euen in this place to interpret those words once for all. First and foremost, the Atticke Drachma [for all Physitians in manner go by the poise of Athens] doth peise iust a Roman silver denier: and the same weigheth also six Oboli: now one Obolus is as much in weight as ten Chalci. A Cyathus of it selfe alone cometh to ten drams in weight. When you shal reade the measure of *Acetabulum*, take it for the fourth part of Hemina, that is to say, fifteen drams. To conclude, Mna, which we in Latine call Mina, amounteth iust to an hundred drams Atticke.



THE TWENTY SECOND BOOK OF THE HISTORIE OF NATVRE,

WRITTEN BY C. PLINIVS

SECVNDVS.

The Proeme.



Man would thinke who did but reade the former Booke, That dame Nature and the Earth both had done their parts, and shewed their wonderfull perfection sufficiently; if he considered with all the admirable vertues of so many herbes which they haue brought forth and bestowed vpon mankind, as well for pleasure as profit. But see what a deale of riches more is yet behind, and how the same, as it is harder to be found, so it is in effect more miraculous! As for those Simples whereof wee haue already written, for the most part they are such as haue serued our turne at the board: or else in regard of their beauty, odor, and smell, haue endued vs to search further into them, and to make triall of their manifold vertues and operations in Physick. But yet there remain behind many more, and those so powerfull, that they proue incidently vnto vs, how Nature hath produced nothing in vaine and without some cause: although the same be occult and hidden many times from vs, and reserved only in her closet and secret counsell.

CHAP. I.

¶ Of certaine Nations which vse herbes for procuring and preserving of beauty.



Eertes I do find and obserue, that there be forrein Nations who time out of mind haue been euer accustomed to annoint their bodies with the iuice of certain herbes, for to imbellish and beautifie them, as they thought. And verily in some of these * barbarous countries ye shall haue the women paint their faces, some with this herbe, and others with that: yea and among the Dakes and Sarmatians, in Transyluania, Valachia, Tartaria, & those parts, the men also marke their bodies with certain characters. But to goe no farther than into Gaule, there groweth an herb there like vnto Plantain, and they call it Glastrum, [i. Woad] with the iuice whereof the women of Britain, as well the married wiues, as yong maidens their daughters, anoint and dy their bodies all ouer, resembling by that tincture the color of Moores and Ethiopians: in which manner they vse at some solemne feasts and sacrifices to go all naked.

CHAP. II.

¶ That Clothes be died with certaine Herbs.

AND now of late dayes, we know there hath been taken vp a strange and wonderfull manner of dying and colouring clothes. For (to say nothing of the gown brought out of Galatia, Africke, and Portugal, whereof is made the royall Skarlet, reserved for princes only and great captains to weare in their rich mantles of estate and coats of armes:) behold, the French inhabiting beyond the Alps, haue inuented the means to counterfeit the Purple of Tyrus, the Skar-

- A Skarlet also and Violet in graine, yea, and to set all other colours that can bee deuised, with the iuice only of certain hearbs. These men are wiser (beleeue mee) than their neighbours of other nations before them: they hazard not themselves to sound and search into the bottome of the deepe sea for Burrets, Purples, and such shell-fishes. These aduerture not their liues in strange coasts and blind baies, where neuer ship hath rid at anker, offering their bodies as a prey to feede the monstrous Whales of the sea, while they seeke to beguile them of their food in fishing for the said Burrets: & all to feed that, whereby as well vnehaist dames of light behauiour might set out themselves and seeme more proper, to allure and content adulterous ruffians: as also those gallants again, squaring and ruffing thus in their colours, might court faire ladies and wedded wiues, yea, and with more ease entrap and encompasse them to yeeld to their pleasure: but these men stand safe vpon drie land, and gather those hearbs for to die such colors, as an honest minded person hath no cause to blame, nor the world reason to crie out vpon. Nay our braue minions and riotous wantons, it might beseeeme also to be furnished therewith, if not altogether so glorious to the eye, yet certainly with lesse offence and harm. But no part it is of my desseigne and intent to discourse vpon these matters at this present: neither will I stand on the thrift and good husbandry that may be seen in such a thing as this, least I might seeme to colour any vanitie with a shew of commodity and frugality: and to limit excesse and superfluitie within the tearms of profit and cheapnesse, which indeed will not be gaged and brought within any compasse. Besides, I shall haue occasion hereafter in some other place to make mention both of dying stones, and also of painting walls with herbes. As for the art and mysterie of Diers, if euer it had been counted any of the liberal Sciences, beseeeming a gentleman either to professe or practise, I assure you I would not haue ouerpassed it in silence. And yet I promise you, this feat grows to credit euery day more than other: and the * hauens abroad where those fishes be taken which furnish them with colors, are mightily frequented and in greater name and request than euer they were. In which regard, I cannot chuse but shew and declare what account we ought to make of these dumbe tinctures in that behalfe; I meane such hearbs and simples, whereof there is but base reckoning or none at all made: for those great princes which were the first founders and establishers of the Roman Empire, did mighty things therewith, and employed these herbes in the highest matters of state. For in the affaires of greatest importance, namely, either in publick sacrifice for the auerting of some heavy judgement of the gods threatened: or in expiation of any gricuous sinne and offence committed (whether they performed diuine seruice to their gods, or dispatched honourable embassages to other States) they vsed their Sagmina and Verbenæ, by which two words verily was meant one and the same thing, euen some plain and common grasse plucked vp with ceremoniall deuotion, turfe and all, from their castle hill or citadel of Rome. And this at all times was observed religiously, that they neuer sent their heralds to the enemies of the people of Rome for to clarigat, that is to say, to summeone them with a loud voice for to make restitution of that which they deteined of theirs, without a turfe and tuft of the said grasse: and euermore there accompanied these heralds in their train, one speciall officer who had the charge to carie and tender that hearbe, who thereupon was called Verbenarius.

CHAP. III.

¶ Of grasse Chaplets.

- N O Coronets verily were there euer at Rome better esteemed, either to testifie the triumphant majestie of that victorious citie (the soueraign lady of the whole world) or to giue testimony of honour and reward for some notable seruice performed for the Commonweale, than those which were made simply of green grasse. The crownes of beaten gold, and enriched with pearle, the Vallare and Murall Chaplets bestowed vpon braue knights and valiant souldiers, who either entred the fortified camp of the enemy ouer trench & rampier, or mounted the wals in the assault of a city, came nothing neer to this: the Nauall garlands giuen to admirals and generals at sea, for obtaining victory in that kind of seruice: the ciuick coronets also presented vnto such as had rescued a Romane citizen, and saued his life, came behind these: and in one word, the Chaplet triumphat, which they ware who entred with triumph into Rome, was nothing comparable to these. And yet all these Guirlands abouenamed haue notable prerogatiues, and differ one from another in many respects. In a word, those Coronets and Chaplets of honour

* Portibus au-
gentur an-
tibus.

* All such as be
neither within
Greece nor
Italic.

M

honor, all saue these made of grasse, were giuen many times by some priuat and particular persons, are by the captains and generals themselves vnto their soldiery; yea, and otherwhiles from one Generall to another, when they were ioined together in equall commission, in testimony of vertue and valour.

CHAP. III.

¶ *The singularitie and rare examples of such Chaplets made of grasse.*

NOW, whereas other Garlands of honour and Coronets of triumph, were alwaies either ordained by a decree from the Senat in time of peace, and after the troubles of warre ouerblowne; or granted by an act of the people, being quiet and in repose, when dangers were past; this Chaplet of grasse afore said, it was neuer any mans hap to haue, but in some extremity and desperat case of the whole state: nor at any time adiudged to a man, but by the whole army, confessing with one voice and generall consent, That by him alone they were all saued from the edge of the sword, or famine. As for the rest, the capitaines and generals vsed to giue them: this onely was presented by the souldiers to their chiefe leader. The same was called also an Obditionall coronet or siege-garland; namely, when some capitaine had forced the enemies to raise the siege and dislodge, and thereby saued either a whole towne or campe from vter shame and finall destruction. And Certes, if there were to great account made of a ciuicke garland for rescuing the life of one only citizen of Rome (and such an one perchance as was of all others the meanest) that whose fortune it was to obtain it, he was honored euer after with many priuiledges and immunities, and counted sacred: how highly then is he to be esteemed, who by his own valour and proesse hath saued many thousands, and a whole army of such citizens? This Chaplet then, so singular and excellent, was made of the green grasse, or herbes taken and gathered from the very place where a man had saued & deliuered the besieged. For in truth, the greatest signe of victory in old time, and of yielding to the mercy of the enemy, was this. If the vanquished did take vp grasse, and tender it vnto the conqueror: for this serued as a confession and protestation, That they rendered vp all their interest which they might challenge in the earth (the mother that bred and fed them) yea, and the very right of sepulture in her: which custome I vnderstand, the Germans do retaine and obserue, euen at this day.

CHAP. V.

¶ *What capitaines they were, who alone received the honor of a grasse Chaplet.*

LVCIUS SICIUS surnamed *Dentatus*, was crowned but once with this Coronet of grasse: notwithstanding it was his good fortune to deserue and obtaine foureteene Ciuick garlands: to fight with his enemy in a hundred and twenty battels, and euer to return out of the field with victory: whereby we may see how rare a thing it was in times past, to see an army thus saued through the valour of their capitaine, for to recognize by this publick present their only fauor. And some leaders and captains haue bin honoured this way oftener than so: as for example, *P. Decius Mus* receiued two such Coronets: for being a Colonell and knight Marshal of the camp, he behaued himselfe so valiantly, that one was giuen him by the regiment or army which himselfe led; and another by those who had bin besieged within their fort. And how highly he esteemed of this honourable reward, hee testified by his religious deuotion and the sacrifices which he offered thereupon to the gods: for no sooner had hee receiued these Coronets; but whereas the armie afore said besieged, and by him deliuered, had bestowed vpon him ouer and aboue for his braue seruice, one white Oxe, and an hundred others, which were brended, hee sacrificed them all vnto god *Mars*. This was that *P. Decius*, who afterwards being Consull together with that surly and imperious colleague of his [*T. Manlius*] surnamed *Imperiosus*, deuoted and yielded himselfe to all the diuels of hell for the safety of his armie, and the obtaining of victory. Moreover, that noble and renowned *Fabius*, who set vp right again the declining state of the Romane Commonweale, with lying off and not fighting at all with *Annibal*, was crowned therefore with such a chaplet, by authority from the Senat and people of Rome: such an honor in my judgement as no man in this world can reach and attain to higher. True it is, that before time he had performed good seruice, & namely, when being Dictator, he rescued & saued his

A his high^{*} Constable or grand master of the Cauallery, together with his whole army: and yet was he not thus highly rewarded then, with this Coronet of green grasse. For in testimony of thankfulness, this gratuity they whom hee had saued, thought at that time better, namely, to crowne him (as it were) with a new name & title to his former stile, calling him with one voice, Father: but the honor aboue named was giuen vnto him (as I said) by the generall consent as well of Senat as people, at what time as he chased *Annibal* out of Italy. And in truth, neuer man yet was in this wise knowne to be crowned by the hands (if I may so say) of the whole Empire, but himselfe alone. This peculiar honor obtained he aboue all others, that this Chaplet alone was offered and presented vnto him by all the states of Italy.

CHAP. VI.

¶ *What he was, who alone of all Centurions received this Chaplet of grasse.*

BESIDES those abouenamed, I find that *M. Calpurnius Flammia*, a Colonell of a regiment of souldiers in Sicily, was in this manner rewarded and honored with a grasse garland. But neuer was there known to this day any one to haue bin crowned in this wise, of so base degree and condition as *C. Perreus Attius*, in that war wherein the Cimbrians were defeated, who indeed was no better than a simple Centurion. This Centurion hauing by his place the conduct of the formost band of a regiment of souldiers vnder Colonell *Catulus*, seeing vpon a time certain companies excluded out of their owne campe, by reason that the enemies had put themselves between them and home, and there incamped; perceiving his capitaine or Colonell *Catulus* afore said, timorous and doubtfull to breake through the enemies camp; put on a resolute mind, slew his own Colonell, exhorted and encouraged the companies to quit themselves like men, and follow his ensigne; and so he defeated his enemies and deliuered his own legion. I reade moreover in the Chronicles, That the same Centurion ouer and aboue the foresaid braue ornament of a grasse Coronet, had this honor done vnto him, that being clad in a long robe of purple imbrodered, and assisted with both the Consuls for the time being, *Marius* and *Catulus*, he was allowed to sacrifice vnto the gods with a noise of fifes and haut-boies sounding hard by the hearth or altar fire. Furthermore, *Sylla* the Dictator hath left in writing, That when he was lieutenant Generall vnder the Consuls, and had the leading of the army in the expedition or journey against the Marsians, the whole army presented vnto him a Chaplet of grasse, before the city of Nola. And in very truth hee caused this to be pourtrayed in a painted table within a house of pleasure which he had in Thufculum, the same that afterwards *M. Tullius Cicero* was master of. Which if it were true, the more shame deserued he in my conceit: and I hold and pronounce him so much the more accursed and detestable, for taking this crowne from his own head, and losing such a braue badge of honor, in proscribing, ouerthrowing, banishing, and murdering afterwards, a greater number of citizens (without all comparison) than those souldiers came to, whose liues he saued, at what time as he took that garland first vpon his head. Let him vaunt as much as he wil of the said Coronet, as also of the proud and vain glorious title of *Felix*, happy (which addition or surname he took vpon him & caused to be put into his stile) yet, when as through his tyranny he held besieged those Roman citizens whom he had proscribed and confined into all parts of the world, surely he forewent all and yielded that crowne vnto *Sertorius*. Moreover, *M. Varro* doth report, That *Scipio* surnamed *Emilianus*, was honoured with an Obditionall Coronet in Africk (the same yere when as *Manlius* was Consull) for sauing three cohorts besieged; as also three companies besides which he led forth to deliuer the other, and by whose means he forced the enemy to break vp his siege. This is to be seen and read in a Table, which *Augustus Caesar* late Emperor of famous memory, caused to be hanged vp at the base or foot of the said *Scipios* statue erected in the Forum or publick hall which himselfe built. As for *Augustus* himselfe, the Senate crowned him with an Obditionall Chaplet, vpon the thirtieth day of September, that yere when he was Consull with *M. Cicero*, the son of that great *Cicero* the Orator. Whereby we may see, that a Ciuick Chaplet was not thought sufficient nor anywaies comparable to this Coronet. And setting aside these aboue named, I do not find in histories, of any one who was crowned with a green chaplet of grasse. Now, this you must note withall, That there was not one certaine herbe set out & appointed for these honorable Guirlands; but look what kind of herbage grew then in the place besieged & where the danger was, that

that very fame they tooke, were they neuer so base weeds and of no reckoning: for as contemptible otherwise as they were, yet being once imploied to this vse, they innobled & adorned the person himselfe who ware them in a Chaplet. And certes, the lesse maruel I haue if these things be vnknowne to vs now adaies, seeing as I doe, how little or no account is made euen of those things which make to the maintenance and preseruatiō of our health; to the cure of all dolorous griefes and maladies of the body, yea, and to the preuention of death it self. But what man is there well giuen and honestly minded, who can containe and hold his peace, hauing so iust cause to reproue and rebuke the manner of the world in these our daies: first and foremost, our life was neuer so costly as now it is, in regard of the dainties, delights, and superfluities, which must be maintained, if will liue to the fashion of the time: and for to ioy these pleasures onely, we hold our liues more sweet and precious. Neuer were men more desirous of long life, and neuer lesse carefull to entertaine the means of long life. The gouernment of our health we commit to the charge of others, and strangers we credit with our owne bodies, and yet slacke enough and negligent are they, to ordain according to our trust and confidence, that which indeed should do vs good. Thus the Physitians are prouided well for; they thrive alone and go away with the gains by this means. Oh good God, to see the folly and vanity of man! Nature hauing put so many good things into our own hands as she hath, and willing that we should inioy them for our health and pleasure: yet we (to our great shame and rebuke be it spoken) are so vnhappy, as to commit our felues to other mens tuition, & liue vnder their warrantize and assurance. Full well I know, that I for my part also, shall haue but small thanks of many a one for all my paynes taken in writing this history of the world and Natures works: nay, I am assured that I make my selfe a laughing stocke, and am condemned of them for spending and losing my time in such a frivolous piece of worke as this is. Howbeit, this is yet my comfort and no small contentment I take herein, that my labors and trauels (excessiue and infinit though they be) cannot be despised, but the contempt will redound likewise to dame Nature her selfe. And yet she againe, as a kind and tender nurse ouer mankind, hath not failed (as I wil declare hereafter) for our good, to indue the very weeds which we tread vnder foot with medicinall vertues, yea, & hath bestowed vpon those which otherwise we hate & dare not approach, but with careful heed (for the shrewd pricks and thorns which they carry about them) singular properties to cure diseases. For ouer and besides those wherof I made mention in the booke going next before this, there be other herbs of that pricking kinde, which are so wonderfull in their operation and effects, that I can neuer admire sufficiently and comprehend her prouidence appearing in them. Furnished shee had the earth, with smooth & pricklesse plants enough, in the nature of meates, for to content our tooth, & satisfie our appetite, she had ingrauen and liuely painted in floures, notable properties in physick for to recouer & maintain our health; & by the singular beauty which she gaue vnto them, to allure the heart and eye of man to look toward them, saying (as it were) Come and gather vs: wherein she had made a good medley of profit and pleasure together. And when she had thus done, she staid not there, but deuised to bring other herbs, hideous to the eye, and vnttractable in hand. As if in the forming of them in that fashion, wee might heare her to giue a reason, Why shee sodid: saying after a sort vnto vs in an audible voice, That shee made them with pricks and thornes, because shee would not haue the foure footed beasts (as hungry and greedy after meate as they be) to eat them down, That the shrewd hands of some vngracious folk, who can let nothing stand, might not be euer & anon plucking and twitching at them for wantonnesse, that people should not go carelessly trampling vpon them with their feet: finally, for feare that birds pecking & feling aloft vpon their tender branches would flie them down or knap them asunder. Therefore (I say) with these prickles, seruing in stead of weapons as wel defensiu as offensiu, shee hath both protected and also armed them: and al to keep them safe and sure, for the health of man, and to do him seruice. Lo, how euen that which wee hate and seeme to abhorre in these herbs, was deuised for our comfort and benefit, if we had the grace to see it.

CHAP. VII.

¶ The medicinable vertues of other floures and herbs seruing for Chaplets. Also of Erynge.

* Sea holly.

A MONG those hearbes which beare pricks, * Erynge or Eryngion, is singular: for a soueraigne hearbe it is against serpents, and all poysons whatsoeuer, as if it grew for nothing els. But to come

A come to particulars, for stings & bitings of venomous creatures, the roote therof to the quantity of one dram, is taken in wine. And in case (as most times it falleth out) that a feuer follow vpon such accidents, then the patient must drinke it with water. A speciall and effectfull property it hath against certain land-snakes called Chersydri, and venomous todes, if it be reduced into a liniment, and so applied to the sore. But *Heraclides* the Physitian is of opinion, That if the said roote be boiled in the broth of a goose, it is of more efficacie than all other, against the Toxica and Aconita. But whereas others do boile it in sheere water against the poisons Toxica, *Appolodorus* would haue a frog sodden withal. The herb it selfe is of substance hard, branching much, full of leaues, and those beset with prickles. A stem or stalk it carieth, parted by knots and joints, a cubit high & somewhat more. Moreover, as there is white Erynge, so you shal haue of it blacke: B The roote is odoriferous. Eryngion verily commeth vpon ordinarily of seeds and by setting. But it groweth also in rough and stony places of the own accord. And that which we see along the sea shore is harder and blacker than the rest, leaued also like common Ach or Persely.

CHAP. VIII.

¶ Of the hearbe or thistle commonly called Centum-Capita, i. the hundred heads.

A S for the white Erynge, our countrymen call it in Latine Centum-capita. But they be all of one and the same operation and effect. And the Greeks verily make their ordinary meat as well of their stalks as roots, both waies, to wit, either raw or boiled, as they list. Certes, there be wonders reported of this herb; namely, That the roote of this white Eryngion (which is very eason and hard to be found) resembleth one while the male sexe, and otherwhiles the female of our kind. But if it chance that a man do meet with that Eryngion which is like to that member which distinguisheth him from a woman, he shall be very amiable and beloued of women. Which was the reason (men say) that lady *Sappho* was so enamoured on the yong knight *Phao* of Lesbos. And verily, as touching this herb, not only the Magitians, but the disciples also and followers of *Pythagoras*, tell vs many vain and foolish tales. But to come indeed to the vse of it in Physick. Ouer and besides those vertues and properties which I haue related already, good it is to resolute ventosities: it easeth the gripes and wrings in the belly; it cureth the diseases and debility of the heart; it helpeth the stomach and liuer. For the midriffe and precordial parts, it is very wholsome taken in honied water: and for the spleen, in vinegar & water together. Also drunk in mead or honied water aforesaid, it is singular for the kidneies, the strangury, the cramp or crick that pulleth the head of a body backward: for other spasmes also and convulsions: for the loines, the dropsie, and the falling sicknesse. Soueraigne it is moreover for womens monthly fleures, whether they do stay vpon them, or contrariwise run excessiue from them: and in one word, it cureth all the accidents & infirmities of the matrice. Being applied as a liniment with hony, it draweth forth any offensive thing sticking within the body. And if it be laid too with salt, lard, or hogs grease, and so incorporat into a cerot, it heales the kings euill, the swelling kernels within the eares, and the flat biles and botches. It reioineth also the flesh that is gone from the bone, & finally, souldereth and knitteth broken bones or fractures. Taken before a man sit downe to eat or drink, it preserueth him from surfet or drunkennesse: and bindeth the belly. Some of our Latine writers would haue it to be gathered a little before the summer-solstice, saying moreover, That if it be applied with rain water, it helpeth all the infirmities incident to the nape of the neck; and by their report, if it be bound to the eyes, it cureth the pin and the web.

CHAP. IX.

¶ Of *Acanus* and *Liquorice*.

SOME there be who take *Acanus* for a kind of Eryngium. And they describe it to be a low herbe, and yet growing broad and large, full of prickles and thornes, and those likewise bigger than ordinary; being applied outwardly, wonderfull effectfull: it is (by their saying) to stanch blood. Others there are, who haue thought Erynge and Liquorice to be all one, but they are deceived. Howbeit, for some resemblance that is between them, I think it not amisse to set down the description therof immediately after these Erynges. Doubtlesse this Liquorice also is

* *Echinatis*. It seemeth that *Phily* neuer saw *Liquorice*, but read *in* for *phily*, *Lentis*: & indeed the leaues are like to those of the *Lentiske* tree.

* *In lingue sub-* *dis*: such as be of the *Ecligmata* or *Lochs*.

to be counted among these thorny plants, for that the leaues stand *pricking vp sharp pointed; the same are fatty, and in handling gummy and glewie. It putteth forth many branches, and those two cubits high: it carrieth a floure in manner of the Hyacinth, and beareth fruit resembling bals of the bignesse of those which hang vpon the Plane tree. The excellent *Liquorice* is that which groweth in Cilicia; the next for goodnesse commeth from Pontus: and hath a sweet root which only is vsed in Physick. Taken vp this is and gathered at the setting or occultation of the Brood-hen star, and is found running along in the ground in manner of the Vine root: in colour like to the Box tree. That which is dusky and somewhat black, is thought to be the better: like as the lithe & pliable root which wil wind and turn euery way, is preferred before that which is brittle and easie to break. Great vse there is of it in those medicines which be *held vnder the tongue, so to resolue & melt leafully, namely, after it hath bin sodden to the thirds: yea, and otherwhiles boiled to the height and consistence of hony. Sometimes they vse to bruse it, and in that manner they do lay it vpon wounds, where it doth much good: as also if it be applied to all the diseases and accidents befalling to the throat and iawes. The juice of *Liquorice* reduced to a thick consistence, if it be put vnder the tongue, is singular for to cleare the voice. In like manner it is supposed very wholesome for the brest and liuer. And therewith (as I haue sayd before) both thirst and hunger may be slaked and allaid. Which is the cause that some haue called it *Adipon*: and in that regard ministred it to those persons who be fallen into a dropsie, for to preuent and take away their thirstinesse. Therefore it is thought to be a proper remedy for the diseases of the mouth, if it be either chewed, or otherwise cast and strewed vpon the vlcers therein: and so it cureth the excrescences also and exulcerations about the roots of the nailes. Moreover, it healeth the excoriation & sorenesse of the bladder, assuageth the paine of the kidneies, cureth the swelling & aking piles, the fissures also in the seat, and finally the vlcers of the priuy parts. Some Physicians haue prescribed to drink in a quartaine ague, the weight of two drams of *Liquorice*, & one of *Pepper*, in a draught of water to the quantity of a smal pint or hemina: this root being chewed, staith bleeding in a wound. To conclude, some haue written that it expelleth the stone and grauell.

CHAP. X.

¶ Of the *Caltrop* thistle *Tribulus*. The sundry kinds thereof, and the medicines which they yeeld.

Some of these Thistles come vp in gardens: others grow in and about riuers only. The juice which is drawne from these, is thought to be good for the eyes: for this herb being as it is of a cooling nature, is a singular remedy for inflammations and gathering of imposthumes. A good medicine for all vlcers, but those especially which break out of themselves in the mouth: it cureth likewise those of the Amygdales or almonds of either side of the throat. If it be taken in drink, it fretteth & breaketh the stone. The Thracians dwelling vpon the riuer *Strymon*, feed their horses fat with the leaues of this herb: and liue themselves with the kernels or fruit thereof, making a kind of sweet bread therewith, which also bindeth the belly. The root if it be gathered by the chaste and pure hands of a virgin discusseth and dissolueth the kings euill. The seed if it be tied to the swelling vains, assuageth their pain. Lastly, being beaten into powder and cast into water, it killeth the fleas in any place where that water is thrown or sprinkled.

CHAP. XI.

¶ Of *Stabe*, and the medicines which it affordeth.

* A kinde of *Marfellon* or *Knapweed*.

Stoebe, * which some call *Phleon*, boiled in wine, is a foueraigne remedy for cares that run with atter: likewise for bloudthorten eyes, especially vpon a stripe or stroke giuen. Being ministred by way of clyster, it is good for the bloudy flux and the exulceration of the guts.

CHAP. XII.

¶ Of *Hippophyes* and *Hippope*, with their medicinable vertues.

Hippophyes is an hearbe growing in grauelly and sandy places, and namely along the seaside, armed with white prickles or thornes: it beareth berries by clusters after the manner of

A of *Iuice*, and those be partly white & partly red. The root is ful of a certain juice, which is good either to be condite and confectioned alone, or els to be reduced into Trofchs with *Eruile* meale: this being taken to the weight of one *Obolus*, purgeth cholericke humors; and a most wholesome medicine it is, especially with honied wine.

Another herb ther is, named *Hippope*, which neither riseth vp in stalk, nor beareth floure, but hath leaues only, and those small. The juice also of this herb, is wonderfull good for those who are in a dropsie. Where it is to be noted, That these two herbs should haue some especiall properties respectiue to the nature of horses, considering both their names are deriued from nothing else; for in very truth, some things there be which Nature hath brought forth as appropriate remedies for certain particular beasts, whereby we may see her diuine power, and how well appointed she is and provided for to bring forth medicines of all sorts; so as the depth of her providence cannot be founded, neither are we able sufficiently to admire her wit and description in disposing and digesting her remedies according to sundry kinds of creatures, according to diuers causes, and different seasons: insomuch as the remedies seruing one, are not fitted for another, neither are they of the same effect and operation at all times: nay, there is not a day almost in the yere throughout, but it yeideth a remedy respectiue vnto it.

CHAP. XIII.

¶ Of the *Nettle*, and the medicinable vertues thereof.

C S there any thing more hated and odious than the *Nettle*? and yet to say nothing of the oile made of it in Egypt (according as we haue shewed heretofore) indued therewith is and furnished with many good properties seruing for Physick. For first, as touching *Nettle* seed, *Nicander* affirms, That it is a very counterpoison against *Hemlock*, venomous musthrums, and *Quicksilver*. *Apollodorus* addeth moreover, and saith, That being boiled in the broth of a *Tortoise*, it is singular good for the poison of *Salamanders*: also that it is contrary to the pernicious nature of *Henbane*, and the deadly poyson of serpents, & namely, of scorpions. Euen that very bitterness and mordacity which the *Nettle* hath, causeth the *Vula* in the mouth which is false, to knit vp againe: the matrice also which is ouer-loose and beareth downe, to arise into the place, yea and the tuill or fundament in children hanging forth of the body, to return & abide where it ought to be, only with touching these parts therewith. If the legs be rubbed, and the forehead especially with *Nettles*, it is a good meanes to awake them out of their drowlie and dead sleep, who are surprised with a lethargy. The same being applied with salt, is passing good for the biting of dogs. If it be bruised and put vp to the nostrills, it stancheth bleeding at the nose; but principally the root of it. If it be tempered with salt, it mundifieth cancerous and foule filthie vlcers; likewise it helpeth dislocations and bones out of joint; it discusseth or ripeneth botches in the emunctories, and the swelling kernels behind the eares; and healeth vp the places where the fleshy parts be gon from the bones. *Nettle* seed taken in wine cuit (as a drinke) openeth the matrice when it is ready to strangle or suffocate a woman: and being applied with wine, it staith bleeding at the nose. If one drinke *Nettle* seed after supper, with hony and water, to the quantiv of two oboles weight, it openeth the passages & maketh way for to vomit with greater facility: but the weight of one *Obolus* taken in wine, refresheth those who haue a lassitude or wearinesse vpon them. The same being parched against the fire and drunk to the measure of one *Acetabulum*, is singular for the imperfections of the matrice: and in cuit, it withstandeth the ventosities and inflations of the stomack. Giuen inwardly with hony in the form of a loch, it doth them good who labor for wind, and cannot take their breath but sitting vpright; and after the same manner it cutteth scame and clenseth the brest of it. Being applied in a bag, together with line-seed, it taketh away the stich and pain in the sides: but some put *hyssope* thereto, and a little pepper. A liniment made therewith, cureth the spleen. Being parched or roasted and giuen with meat, it keepeth the body soluble. And *Hippocrates* affirmeth, that the said seed is very good to be taken in drink, for to cleanse the matrice in women: and being so parched and giuen to the quantity of one *Acetabulum* in sweet wine cuit, it allaieth the griefe and paine of the said part, in case withall there be a cataplasme applied to the region thereof, together with the juice of *Mallows*. If it be taken in hydromel, or honied water, together with salt, it expelleth

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(by his saying) the worms in the belly. Applied in a liniment to the bare and naked places of the head, it causeth the haire to grow again, and bringeth all to the former beauty. Many doe use to make a cataplasme of Nettle-seed and old oile, or els stamp the leaues together with Bears greafe, for the pain of the gout, and verily for that purpose, as also for the spleen, the root poune with vineger, is no lesse effectuell. Being boiled in wine, it discusseth and driueth down risings in the groine, and such like emunctories, so it be laid too with old hogs greafe salted. But the same root dry, is a very depilatorie, and fetcheth haire off. *Phanias* (the naturall Philosopher and Physitian) in a feuerall treatise which he made in the praise of Nettles, professeth, That he knoweth not the like remedy to the Nettle, boiled first and then condite, for the windpipe, the cough, the distillation and flux of the belly, the stomacke, the biles and botches in the emunctories, the swelling and inflamed kernels behind the eares, and kided heels. The same with oile procureth sweat, and soddeth with muscles, and such like shell-fishes, it moueth to the stoole: with prisane or barley broth, it purgeth the brest, and sendeth down womens termes: applied with salt, it restraineth vlcers that be corrosiue and apt to run & spread farther. The juice also of the Nettle, serueth to many vses, for being pressed forth & laied as a liniment to the forehead in a frontall, it stancheth bleeding at the nose. The same taken in drinke, prouoketh vrine, and breaketh the stone: but if one gargle with it, it staies the Vvula from falling: as for the feed, it ought to be gathered in haruest time: & that which is brought from Alexandria, is esteemed best: for all the particular diseases aboue rehearsed, the kinder and gentler Nettles also, euen those that be yong and tender, are knowne to be of good operation; but principally that wild kind before said; and this property moreover it hath, To rid away the leprosie out of the face, if it be taken in wine. Finally, if a foure-footed beast will not abide to be couered or serued with the male of that kind, an ordinary practise it is, to rub the nature or shap with a Nettle, for that will make her stand to the fellow.

CHAP. XIII.

¶ Of *Lanium*, and the medicinable vertues thereof.

AS touching that dead-Nettle, which among the other kinds we named before *Lanium*, *i. Archangel*, it is the mildest of all others and most tractable, for the leaues bite not nor sting at all. The same, if it be applied with some corns of salt, to contusions and bruises, to deep burns, the Kings euill, swellings, gouts, and wound's, cureth them all. The white that it hath in the mids of the leafe, is singular for *S. Anthonies* fire, the shingles, and such like. Some there be of our Latine writers, who treating of Nettles, haue couched them in their ranks respectiue-ly to the time, saying, That the root of a Nettle which commeth in the Autumne, cureth the tertian ague; but it must be tied fast to the Patient: and these ceremonies are to be obserued also in the taking it forth of the ground, That the party be named for whom it is gathered; the feuer also, of what type or kind it is; yea and who be the parents of the sick person; and then hee or shee shall be sure to be deliuered of that disease. The said root, with the same circumstances, is of the like operation to driue away the quartan ague also. The selfesame authors do asseme moreover, That the root of a Nettle being applied with salt, draweth forth all thorns and shiuers that stick within the flesh. Also, that a cataplasme of the leaues and hogs greafe incorporat together, doth resolueth the scrophules or swelling kernels called the Kings-euill: or if they are come to suppuration, eateth and worketh them forth, and doth incarnat & fil vp the place again

CHAP. XV.

¶ Of the herb *Scorpius*: the sundry kinds thereof, and the medicinable properties.

THere is an herb called * *Scorpius*, which took that name of the resemblance that the head hath to a scorpions taile. Few leaues it beareth, but (according to the name) it is good against the sting of scorpions. Another herb there is of the same appellation, & of like effect to the other; but it sheweth no leaues at all; the stalke is smooth, and resembleth garden Sperage: in the top or head whereof, there is a pricke to be seen like a sting, which gaue occasion of the foresaid name.

CHAP.

CHAP. XVI.

¶ Of *Leucacantha*, and the vertues thereof good in Physicke,

THe Greeks, some call this Thistle, *Leucacantha*, or the white thistle; others, *Phyllon*: some *Ichias*, others, *Polygonaton*; but be the name what it will, it hath a root resembling that of * *Cyperus*, which if it be chewed in the mouth, allaieth the tooth-ache. *Hicestus* saith likewise, That if either the seed or the juice of the root thereof, be taken in drinke to the weight of eight drams, it assuageth the pain of the sides and loins. The same also cureth ruptures, conuulsions and crampes.

CHAP. XVII.

¶ Of *Helxine* or *Perdicium*, called also *Parthenium* or *Sideritis*, and the vertues medicinable.

AS for *Helxine*, some call it *Perdicium*, because Partridges delight most to feed thereupon; others name it *Sideritis*, and many giue it the name of *Parthenium*. Leaues it carrieth of a mixt form and resemblance, between Plantain and Horehound. The branches or small stalks grow in thick tufts, and those be of a light reddish colour: the seed in the head, of a Bur kind which sticketh to folks cloaths, whereupon they would haue it to be called *Helxine*. But in the former booke I haue described the form of the right * *Helxine* or *Parietarie* indeed. The property of this herb is to giue a tincture or die to wooll: it healeth the shingles and *S. Anthonies* fire: it cureth swellings, and all apostemations of humours, yea and also burnes. The juice thereof incorporat with ceruse or white lead, and so applied, serueth greatly for biles and botches, *S. Anthonies* fire, tumors, gatherings and risings in the flesh; yea and helpeth them whose throat begins to swell. Also if a man take the quantity of one cyath thereof, it cureth inueterat and old coughs: it healeth all infirmities either occasioned by phlegmatick humors, or els incident to moist parts: like as with oile rosat it is a proper medicine for the accidents of the amygdals about the passage to the throat, and for the swelling of veins. Moreover, if it be reduced into the form of a cerot, with goats suet and wax of Cypres, and so applied, it cureth the gout. Moreover, *Perdicium* or *Parthenium* (for *Sideritis* is another herb) our countrey men call in Latine, * *Vrcolaris*, of others, *Astericum*. In lease it is like to Basil, saue only that it is blacker; it groweth vpon tile-houses, and old decaied wals, and such ruinous places. Being beaten into powder & applied with corns of salt, it hath the same operation that the Nettle *Lanium*, and cureth the self same diseases; and the one is vsed in like sort as the other: & if the juice be drunk hor, it is singular for inward and secret imposthumes full of filthy matter, and driueth them outward. Also it is excellent for vlcers, ruptures, and bruises, whether it be that one hath tumbled head-long from some high downsall, or that he hath bin crushed by the ouerthrow of some waggon or chariot. It fortuneth that a Page of *Pericles* a prince of the Atheniens (whom he loued intirely) hauing climed vp to the top of the lanterne or spire of a temple which the said prince built in the castle or citadell of Athens, fel downe from thence, who was cured by the means of this herb, reuealed vnto *Pericles* in his sleep by the goddesse *Minerva*: whereupon it tooke the name first of *Parthenium*, and is consecrat vnto the said goddesse: this is that Page whose molten statue is to be seen at this day made of brasse: this is (I say) that noble and famous image called * *Splanchnoptes*.

CHAP. XVIII.

¶ Of *Chameleon* the bearbe, the sundry kinds thereof, and the vertues medicinable.

CONCERNING *Chameleon*, some there be who name it *Ixias*: whereof be two kinds: the whiter hath the rougher leaues: it creept close by the ground, and setteth vp stiffe prickles in manner of an *Vrchin*: the root is sweet in tast, but of a most strong sent. In some places it ingendreth a white kind of gum or clammy glew, vnder the wings or arm-pits (as it were) of the leaues, after the same manner as *Frankincense* is said to breed, but especially about the

* Parietarie of the wall.

* Where, to say a truth, he describeth *Helxine* for *Jxine*, or *Chameleon* the white.* Diof. Cerato *Cyprie*.* or *Vitraria*, because it is vsed to scoure glasse and pipkins withall.

* Made with a duffie to blow coles & kinde fire for to roast the inward parts of beasts sacrificed: or as some thinke, it was the proper name of that youth.

rising of the Dog-star: & for that it is like to a kind of birdlime, it is called Ixia: our women vse this instead of Mastick. And the reason why this herb is named Chamæleon, is by occasion of the variable leaues which it beareth, for according to the nature of the soile where it groweth, it changeth hew; whereby in one place you shall haue it blacke, in another green; here you shall see it look blew, and there yellow, and euermore altering the color. Of which Chamæleons, the white cureth such as are in a drop sicke, if the root be boiled, and the iuice thereof taken to the quantity of a dram in sweet wine cuir. The measure of one acetabule of the same iuice, if one drink in a green harsh wine made of the hedge vnripe grape, wherein certain bunches of Origanum haue lien infused, it is thought to be a singular remedy to kill the worms that breed in the guts. It auaileth much also to help those who pisse with difficulty: and yet this iuice being giuen to dogs or swine in barly groats, killeth them. If there be water and oile mingled thereto, it draweth rats and mice to it, but it is their bane, vnlesse presently they drinke water. Some prescribe for to cut the root thereof into thin roundles, and to keep them enfiled vp, or hanging by a string, and then to seeth them; for to be eaten against the flux of humours, which the Greekes name Rheumatismes. Of the black kind, some hath named that the male, which hath the purple floure; and the female with the violet colour. They all grow vp with one stem and no more, and the same is a cubit high, and a finger thick. The roots are good to heale ringworms, tetter, and such like wild fires, if they be foddened together with brimstone and Bitumen: but if the said root be chewed in the mouth, or a collution be made therewith foddened in vineger, it fastens the teeth which shake and be loose in the head. The iuice of this root healeth the scab or mange in four-footed beasts. Herewith also folke vse to kill the ticks that breed in dogges: but it stoppeth the wind of heifers and young steers in manner of a squinancy: and therefore of some it is called Vlophonon and Cynozolon, in regard of the strong and stinking smell that it hath. These Chamæleons do beare a certain viscos gumme, most proper for vlcers. And the roots of all the sort of them, as well blacke as white, are singular against the poison of serpents.

CHAP. XIX.

¶ Of Coronopus or Harts-horne, with the medicinable vertues thereof.

Coronopus is an herb bearing long leaues, and those clouen into certain fissures and knags: and howsoeuer it groweth wild, yet otherwhiles it is set and sowne in gardens, for the excellency of the root, which being roasted vnder the ashes, is soueraign for the flux, & weakness of the stomacke.

CHAP. XX.

¶ Of Orchanet or Alkanet, as well the right as the bastard, and their properties in Physicke.

The root of Orchanet is much vsed about medicines: of the thicknesse it is of a finger: it will rend and cleaue in manner of the papyr reed: and it coloureth the hands of as many as handle it, with a red and bloody colour: it prepareth wooll and woollen cloth for to take rich and deep colours. If it be incorporat into the form of a cerot, it healeth vlcers, especially in old men; as also places that be burnt. It cannot be resolued in water, but it is oile that must dissolue it: and verily this is a good experiment of that which is true and nothing sophisticat. A dram thereof giuen in wine to drink, is singular good for the pain in the kidnies: but in case the Patient haue a feuer vpon him, then it ought to be taken in the decoction of *Balanos. In like manner is it to be vsed in the opilations or obstructions of the liuer, of the spleen, and in the laundise. A liniment made of it and vineger, cureth the leprosie, and the red pimples arising in the face. The leaues stamped with hony and meale vntill they be incorporat together, and so applied as a cataplasme, are thought to be good for dislocations: but if they be taken inwardly to the quantity of two drams in honied wine, they bind and knit the belly. The root boiled in water is said to kill fleas.

Another herb there is much like vnto it, and thereupon called Pseudanchusa [i. bastard Orchanet] of some, but of others Enchusa or Doris; and many other names it hath besides. More full of downe or hairy mosse it is, and lesse fatty; but the leaues are smaller, more ranke and feeble.

A feeble. The root yeeldeth no oleous substance, but a reddish iuice, wherein it differeth from the right Anchusa or Orchanet. The leaues or seed being taken in drinke, is a most effectual counterpoison against serpents. The substance of the leaues being applied to the places which bee stung, are soueraigne for to cure and heale them vp. The very herb it selfe chafeth away all poison of serpents. There is a drink made thereof, commended highly for the chine or ridge bone of the back. The Magicians do prescribe the leaues to be bound vnto some part of the Patient against a tertian ague, with this charge, That they be gathered with the left hand, & that in the gathering, the party or patient for whose sake they are gotten, be named.

CHAP. XXI.

B ¶ Of Onochiles, Anthemis, Lotos, and Lotometra: of Turnsole-Tricoccus: of Adiantum, and Callitricheon.

Another herb there is, particularly named Onochiles, which some call Anchusa; others Arcebion or Onochelis; some Rhexas, and many Enchusa: a small herb this is, it carrieth a purple floure, leaues and branches rough: a root in harvest time as red as blood, otherwise black; and groweth in sandy grounds: effectually it is against serpents, and Vipers most of all others, both in the root and leafe, as well eaten with meat as taken in drinke. In the full strength it is in harvest. The leaues if it be bruised or stamped, do yeeld the sauer and smel of a Cucumber. If the matrice of a woman be slipt downe, a draught of three cyaths thereof, doth reduce it vp into the place: and together with hyssope, it driueth out the broad wormes in the belly. For the pain of the kidnies or the liuer, it ought to be taken in mead or honied water, if the Patient haue an ague withall; otherwise in wine. The root brought into a liniment, cureth the Lentils or red spots, yea and the infection of the leprosie. And it is said, That as many as haue it about them, cannot be stung by serpents. There is yet another Orchanet or Anchusa like vnto this, in regard of the red floure which it beareth, howbeit a lesse herb than the other, hauing the like operation, and imploied in the same vses. It is reported, That if one chew it in his mouth, & spit it forth vpon a serpent, the same will surely die thereupon.

As touching Anthemis [i. Camomile] Asclepiades the Physitian doth highly praise and commend it. Some name it Leucanthemis, others Leucanthemus; & there be, who giue it the name D Eranthemion, because it flourisheth in the Spring; others againe name it Chamæmelon, for the sent or sauer that it hath of an Apple: many call it Melanthenon. Three kinds there be of it, differing onely in the floures (for none of them exceed an hand-breadth in height) which be small, and in forme resemble those of Rue: howbeit, these floures be either white, yellow, or red. In a lean ground and neer to beaten paths, this herb loueth to grow: gathered it is in the spring, and layed vp for to serue in garlands: at which time the Physitians also stampe the leaues and make them vp into Troches: so do they also by the floure and the root. This vertue they haue, That if they be all mingled together to the weight of one dram, they are thought to be a soueraigne remedie against the sting of all serpents. This herbe expelleth dead infants within the mothers wombe, if it be taken in drinke. It bringeth downe also the monthly fleurs of women; prouoketh vrine, and sendeth forth the stone and grauell. Being chewed, it dissolueth ventosities, it cureth the obstructions and defects of the liuer, it helpeth the jaundise, healeth the fistules between the angle of the eye and the nose, and generally all running sores and mattering vlcers. But of all these kinds, that which beareth the red purple floure hath most effectually operation for the stone: and indeed, both the leaues, and also the branches of this Camomile, are somewhat larger than of the rest: and some there be, who giue this a name it selfe, and call it Eranthemion. As for those who take Lotos to be a tree only, may be conuincied euen by the authority and testimony of Homer, who among other herbes growing for the delight and pleasure of the gods, hath named Lotos as principall. The leaues of this herbe incorporat with hony, and so applied, cureth the cicatrices or scars in the cie; the spots also appearing therein, and dissolueth the cloudy skins which ouercast the sight: there is a kind of Lotos named Lotometra, comming of the garden Lotos: it carrieth a seed like to Miller, whereof in Egypt the Bakers make bread: but they work & knead the floure of this seed with water or milk. There is nor any bread in the world (by report) more wholsom and lighter than this, so long as it is hot; but being once cold, it is harder of digestion, & becometh weighty & ponderous. This is known for certain,

*Haply liee
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in caneth
the Ægyptian
Date: for Oxy-
phalices, our
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agues.

that as many as liue thereof are infested & troubled neither with the dysenterie or bloody flux, ne yet with the trouble some offers and strains to the sieg without doing any thing, nor any other diseases of the belly: and therefore it is counted a principal remedie for those maladies. Concerning Turnsol, I haue oftentimes related the wonderfull nature thereof, namely, how it turneth about with the sun, although it be a close and cloudy day (so great is the loue of this herb to that planet:) and in the night season forwant of the Suns presence, as if it had a great misse thereof, * it draweth in and shuddereth the blew floure which it beareth. Two kinds there be of this Heliotropium or Turnsol, of which the lesse is called Tricoccum, the other Helioscopium: of the twain, this later is the taller (and yet neither of them both exceedeth halfe a foot in height) and putteth forth branches from the very root. The seed of this greater sort lieth within a little cod, and is gathered in harvest time: it groweth not but in a fat soil well manured, whereas Tricoccum comes vp every where. I find, that if it be boiled it is a pleasant and delectable meat; but foddren in milk it loosneth the belly gently and with ease: for otherwise the bare colature of the decoction in water, if it be taken, purgeth most extremely. The juice of the greater kinde ought to be drawn or gathered in summer at noontide; which, if it be tempered with wine, becommeth more strong and effectual. A property it hath being mingled with oile of roses, to mitigate the head-ach. The juice drawn out of the leafe, medled with salt, takes away werts: whereupon our herbarists haue called the herb in Latine Verrucaria. Wertwort: whereas indeed for other better effects and operations that it hath, it deserueth to haue some denominations correspondent thereunto: for, a countre-poison it is against serpents and scorpions, if it be drunk with wine or honied water, as *Apollonphanes* and *Apollodorus* do report in their writings. A liniment made of the leaues cureth the rheumes and distillations of the braine in children, which disease they call * *Siriasis*. Likewise it helpeth contractions of sinues, and the drawing in of joints, although the patient be taken after the manner of the falling sicknesse: and for such as be thus afflicted, a fomentation made of the decoction of this herb, is very wholesome and comfortable: but if one drink the colature thereof, it thrusteth forth the wormes in the belly, and scoureth out the grauell in the kidnies. If Cumin be put thereto, it breaks the stones ingendred and confirmed there already. Boiled it ought to be root and all, the which with the leaues and goats tallow, being reduced into a liniment, is singular good for all kinds of gout.

* This is called *Arder capitis* by Pliny himselfe, and is an hot distemperature of the head.

The other kind which we call Tricoccon, and is otherwise named Scorpion, hath not only smaller leaues, but also they incline and bend downward to the ground. A seed it beareth resembling the figure of a scorpions taile, whereupon it took that name. A liniment made therewith is powerfull against all venomous beasts, and namely the perillous spiders Phalangia, but specially against the poison of scorpions. And in truth, look who carry this herbe about them shall not be stung. If a man make a circle or compasse vpon the earth with the branch of this herb, a scorpion (as some say) being within the same, shall not haue the power to get forth: nay, if the herb be laid vpon a scorpion, or if with the same being wet a man besprinkle the said scorpion, it wil surely die out of hand. It is said, that foure grains of the seed taken in drink, do cure the quartan, and three the tertian: or if the very herb it selfe be laid vnder the patients head, after it hath bin thrice caried about the bed, it worketh the like effect. The seed is of power to stir vp carnal lust. Applied with hony, it discesseth biles rising in the emunctories. Yea & this Heliotropium for a certaintie causeth werts to fall off by the very roots: as also it taketh away all excrescences in the fundament. It draweth down by vrin the corrupt blood in the reines and loins, lying cluttered about the ridge bone, in case the seed be either applied as a liniment, or foddren in the broth of a cock or capon, and so supped off, or else with Beers and Lentils. As for the utmost rind of this herbe, it is singular for to recouer the fresh and natie colour in places black and blew with stripes. The Magicians and Wife-men do prescribe for the quartan & tertian agues, That the Patient should tie the herbe Heliotropium, with three knots in a tertian, and with four in a quartan, praying withall and making a vow, That he would vndo those knots after he were once cleare of the feuer: but this he must do before the herbe be taken out of the ground.

* Maidenhair.

Another property as strange and miraculous is reported of * *Adiantum*: in Summer it is green: in winter it withereth and decaith not: it checketh all water, for being bespreint, dashed, and drenched quite therewith, yet it looketh as if it were dry: so great is the antipathy or contrarietie between them: whereupon the Greeks gaue it that name. And otherwise a plant

- A it is fit for Viner-workes and knots in a garden. Some call it Callitrichon, others Polytrichon, both which names were giuen it for the effect that it worketh. For it colareth the hair [black] And for this purpose it is foddren in wine with the seed of Ach or Persley: and a good quantity of oile is put thereto, for to make the haire curled and to grow thick, by which meanes it keeps the hair from shedding and falling off: 2 kinds there be of it, the white and the black, which also is the shorter. The greater kind they call Polytrichon: the other, Trichomanes. Both of them haue pretie fine branches shining with a blacke color, and the leaues resemble fearn, in which, the nether sides vnderneath be rough, dusky, and browne: but all the leaues stand directly one against another in order, fastened to the stalkes by slender steles. No root at all these Capillar hearbes haue: but they grow vpon shadowie rocks and walls, dashed and beaten on with water: but most of all they seek after pits or holes of wels and springs, and stony places wherout fountains issue: and that is a strange & marvellous thing, considering they be not wet with water, nor haue any sence or feeling thereof. They haue a wonderful faculty, and the black especially, to break the stone, and to expel it out of the body. For which cause, rather than for growing on stones and rocks, I beleue verily it was by our countrymen called in Latin Saxifrage. To this purpose, as much as 3 fingers be able to pluck vp, is ordinarily taken in wine: they prouoke vrin: and resist the poison of serpents and venomous spiders. Being boiled in wine, they stay the flux of the belly. A Chaplet made of them, allaieth the head-ach. And a liniment thereof is thought good to be applied against the sting of the Scolopendres: but it must be often taken off and renewed, for feare the hearbe become ouer-drie and lose all the vertue. In this wise it is to be vsed where the haire is fallen away by some infirmite. These hearbes discesse and resolute the kings euill: they dispatch and rid away the scales or dandruffe in the visage, and heale the skals of the head. A decoction of these Maiden-haires, is singular good for those who are short winded: for the liuer also, the spleene, the jaundise, and the dropie. An ointment made with Maiden-haire and Wormewood, easeth the paines of the kidney: and in case of strangurie, procureth ease and free passage of vrine. They bring downe the after-birth in women, and their monethly tearmes. Howbeit, drink them with vinegre or the juice of the blackberrie bramble, they stanch blood. A proper liniment is made thereof with oile Rosat, to annoynt young children that haue the red gum and be all broken out: but first they would be bathed in wine. The leaues of Maiden-haire stamped with the vrine of a man child vnder foureene yeares of age, and yet not vndergrowne, together with the some of salt petre, is said to keep the bellies of women from wrinkles and riuels vpon child-bearing, if they be annoynted therewith. To conclude, men say, That Partridges and cockes of the game will fight more lustily, in case this hearbe bee entermingled with their meat. And the same also is very good for sheepe to graze vpon about their folds.

CHAP. XXII.

¶ Of *Picris*, *Thesium*, *Asphodell*, *Alimus*, *Acanthus* or *Erankursine*, *Elaphoboscum*, *Scandix*, *Isosone*, *Of* *Caucalis*, *Sium*, *Silybum*, *Scolymus*, or *Zimontium*, *Sonchus*, *Chondrillum* or *Chodrilles*: and of *Mushromes*.

- E The hearbe * *Picris* tooke the name (as heretofore we haue said) of the notable bitterness which it hath. The leaues thereof be * round. Excellent good it is to take away werts. *Thesium* likewise commeth nothing behind for bitterness: but it purgeth the bellie: for which purpose it must be stamped, strained, and taken in water.

As touching the *Asphodell*, it is one of the soueraign & most renowned herbs in the world. Some haue giuen it the name Heroion. And *Hesiodus* hath written that it growes in the woods. *Dionysius* saith, That there is both male and female of it. Certain it is, that the bulbous roots of the asphodell foddren with husked barley, is a singular restorative for those bodies which are wasted with a consumption, & especially of the lungs: and bread made of them, wrought together with corne meale of flour into a dough, is most wholesome for mans bodie. As for *Nicander*, he vsed to giue either the stem which we called *Antherichon*, or the seed, or els the Onion bulbous roots thereof, in wine, to the quantitie of three drams, as a preservative against serpents & scorpions: and to preuent the feare and daunger of these harmefull and pestilent creatures, hee appointed the same to be laid vnder folks heads as they lay asleep. Visually also is this herb giuen against venomous fishes of the sea, and the Scolopendres of the land. In Campaine, the shell-snails

* A kind of Cichorie. * So are none of our Cichories.

haue a wonderfull ull spight against the maine stalk of this hearbe Asphodel, for they neuer lin sucking it, vntill they haue made it as drie as a kex. The leaues also are reduced into a liniment, for to be applied to enuemenomed wounds, occasioned by such serpents & hurtful beasts. Likewise an ointment may be made of the bulbous roots thereof, stamped together with Barley groats, for to annoint the sinews and joynts. Good it is also to cut them into roundles, and therewith together with vinegre, to rub ring-wormes and tetteras. In like manner if they be applied with water, they doe cleane putrid and rotten vlcers, yea, and the hot apostemations of the paps and the cods. Beeing foddren in wine lees, and so laid to the eies with a fine linnen rag betweene, they cure the flux of humors thither, which causeth the eyes alwaies to water. Generally in any disease whatsoeuer, Physicians vse the root of this hearbe boiled for the most part, rather than otherwise: likewise for the mor-males and vgly sores in the legs, they vse the powder of them dried: as also for the fissures and chaps appearing in any part of the body. Now, the only fit and conuenient season to gather these roots is in Autumne, at what time they bee most in force. Being stamped raw, or foddren, there is a iuice pressed forth of them: which is soueraigne with honey, for any paines of the bodie, whether it be the collicke, or seated in the muskles. And the same being mixed with the drie root of Flower-de-lis, and a little quantity of salt, is passing good for those that affect a sweet smell, and would palliate the ranke sauer of any part of the body. Moreover, the leaues of the Asphodel serue for all the former maladies, as also for the kings euill: for red and flat biles, gout-rofar, sauce-fleame, ale-pocks, and such like vlcers in the face; if the same be foddren in wine, and therewith the grieved parts bathed. The ashes of the root burnt, bring hair againe vpon the head where it was lost and gon, and healeth vp the chaps and rifts in the feet. The iuice of the root foddren in oile, is good for libed heles, for burns or skals. To help the hardnes of hearing, the same iuice is to be dropped into the eares, but to assuage the tooth-ach, it must be infiltred into the ear of the contrary side. The same root taken in drink moderately, is singular for to procure vrine, to prouoke womens moneths, and to mitigate the paine of the sides or pleurisie. But giuen in wine to the weight of one dram, it cureth ruptures, conuulsions, or cramps and coughs. The same being chewed, helpeth forward vomites, and causeth them to come with more ease. The seed, if it be taken inwardly, troubleth and wringeth the belly. *Chrys-sermus* the Physician vsed to boile the root in wine, and therewith cured the swelling kernills and inflammations behind the eares: also, with an addition of * Cachrys and wine, he healed the kings euill. Some say, that if one take the Asphodel root, and lay one part thereof to those swelling kernills called the kings euill, and remoue it vpon the fourth day, letting the other part to hang in the smoke, the said kernills wil drie away, euen as the root doth in the chimney. *Sophocles* (for the gout) vsed the root both waies, as well raw as boiled. In case of humble-heels he applied it foddren in oile: but to them that were fallen into the jaunise or dropcie, he gaue it in wine. Some writers haue set down in their books, that if either the members of generation be anointed with a liniment made therewith and wine and hony together, or if the same be taken in drink it will mightily prouoke fleshy lust. *Xenocrates* affirmeth, That a decoction of the root in vinegre taketh away the ring-worms, tetteras, & running scabs. *Item*, If the root be boiled with Henbane and Tar, and therewith the armholes and parts between the legs be well rubbed, it wil rid away the strong and rank sauer which commeth from thence, and if the head be first shauen, & afterwards rubbed with the said root, the haire comming afterwards will curle and frizzle the better. *Simus* the Physician boileth it in wine, and so giueth it in drinke, for to scoure away the stones of the kidnies. *Hippocrates* prescribeth to giue the seed against the hardnes of the spleen and the flux proceeding from thence: furthermore, the root being brought to a liniment, or the very iuice thereof foddren and vsed accordingly, healeth the farins, mange, and scab, in horses, and reduceth the place to bear hair againe as faire as before. Asphodel hath a property to chase away mice and rats: and if their holes be stopped vp therewith, they die within.

Some are of opinion, that *Hefod*. called *Alphodel*, a limon; which I take to be a meer vnttruth: for ther is an herb by it self called *Alimon*: about which writers haue erred not a little: for some say, that it is a shrub growing thick, of a white color, without any prick or thorn, bearing leaues like the Olive tree, but they be softer: & this plant is entertained in the kitchen, being sodden and dressed for to be serued vp as meat to the table: the root taken to the quantity of one dram in honied water, dispatcheth the torments of the belly: it cureth also conuulsions and ruptures. Others affirme, that * *Alimeth* is a sea-wort, of a salt and brackish tast, whereof it had the name.

The

A The leaues be round, and yet after a sort long withall: and the whole herb is highly commended for the pleasant tast, and good to be eaten. Moreouer, there be two kinds of it: for the one is wild, the other is of a more ciuill and gentle nature. And both of them, by their saying, are good to be eaten with bread for the bloody flixe, euen when the guts be already exulcerate: but with vinegre, for to comfort and help the stomack. A liniment made of Alimon raw, is singular for old festered vlcers, and the same mitigateth the symptomes that follow green wounds: as also assuageth the pains ensuing vpon sprains and dislocations of the foot: yea & pacifieth the grief of the bladder. The wild of this kind hath smaller leaues, but more effectuell it is in the remedies before said: and withall, healeth the scab as well in man as beast.ouer and besides, they do affirm, That if the body be rubbed with the root, the skin wil be the fairer and more smooth: or

B if the teeth be so ferued they will be the whiter. Also that whosoever hold the feed thereof vnder their tongues, they shall not be dry nor feel thirst. This kind is likewise eaten at the board, and both of them are kept and preserved condite. *Criteus* hath made mention of a third sort, which hath longer leaues than the rest, and more rough in the hand, in smel resembling the Cipres tree, who saith, that it delighteth principally to grow vnder the Yuie tree: which if it be taken to the weight of 3 oboli in a sextar of water, helpeth those that haue their heads & bodies drawn far back, and such as be troubled with the contraction and shrinking of sinues.

As touching Acanthus or Brankurfine : an herb it is cherished much in gardens, proper for vinets and story-works, bearing vpright and long leaues, wherewith beds-sides and borders of quarters in gardens are decked and beautified. Two kinds there be of it : one with prickly leaues in manner of thistles, and the same jagged, which is the lesse & lower of the twain : but the greater, which some in Greeke call Paderos, others Melamphyllon, is smooth leaued. The leaues of this Brankurfine being applied, are wondrous good for burns and dislocations. Also being sodden with meat, and especially with Ptisane or husked barley, it is singular for those who are bursten, troubled with the crampe, and subiect to the consumption of the lungs. Also if they be stamped and reduced into the form of a liniment, and laid too hot, they cure the gouts proceeding from an hot cause.

The herb *Bupleuron is reckoned by the Greeke writers in the number of woits that grow of themselves : a stem it hath of a cubit in height, many leaues, and those growing long in a spoke-tuft or rundle in the head, in manner of Dill ; highly commended by *Hippocrates* for good meat, but *Glycon* and *Nicander* praise it as much for the vse thereof in Physick: and in very truth the seed is powerfull against serpents. The leaues also or the very iuice incorporate with wine into the form of a liniment, they imploy for to bring down the afterbirth of women newly deliuered : as also the leaues with salt and Wine are vsed by way of cataplasme, for to dissolue the swellings called the Kings eith. As for the root, it is vsually giuen in wine against venomous serpents, and to prouoke vrine.

* Buprestis is an herb about which the Greek writers haue shewed themselves, namely, how inconstant and light of credit they be ; in that they haue so highly praised it to be a speciall wholsum meat, yea and a singular remedie against poisons. For the very name sheweth evidently that it is a poison it selfe, of kine and oxen at leswise. And they themselves do confesse, that if such cattel tast of * Buprestis it wil make them enraged, and fall a gadding vntil they burst in sunder. And therefore I wil not speake any more of this herb, for there is no reason that may induce me to describe these venomous weeds among those that serue for the green garlands aforesaid made of gresse: vnlesse haply it be this, That some one or other would seek after this herbe to weare it in a chaplet for lust-fake : * which indeed they say it wil prouoke no lesse that way, than if it were taken in drinke.

* Elaphoboscon is an herb growing vp with a main stem, after the manner of Fenel-giant: the same is full of knots and joints as thick as a mans finger. The seed is made after the fashion of berries hanging downe in manner of Sili or Siler-mountaine; howbeit nothing bitter they are, and the leaves resemble those of Alifanders. This herb is taken for a commendable meat; and in truth is kept also and preferred a long time confected and condite, for a singular remedie to procure vrin, to allay the pain of the sides in the pleurisie, to heale ruptures, to cure convulsions and cramps, to discusse ventosities, to assuage the dolorous torment of the collicke, yea, and as a very countre-poyson against the sting of serpents and all other creatures armed with stings: for the report goeth, That stags and hinds by feeding thereupon withstand the venom of Serpents.

* Some name
it Hares care.

Нѣсуче бѣнрство
оноу хвртиса имъ
се сѣмат веметна-
тми:

* But they
meane the ve-
rionous Insect
BUTTERFLIE.

* In truth the flies Buprestes, which some take to be Cintharides, are thought to have some operation in that kind.
* Which some take for a kind of wild angelica or *Crataegi dei*.

pents. The root also reduced into a liniment with Sal-nitrum put thereto and incorporate together, cureth old sores called fistulae. But the said root ought to be dried first for those purposes, to the end that it should not be full of the own juice and moisture: and yet this humour dulseth not the vertue thereof, nor maketh it lesse effectually against the sting of serpents.

Touching the herb * Scandix, the Greeks haue ranged it also among the wild worts, or pot-herbs good for to be eaten, according to *Opion* and *Erasistratus*. The same being sodden, knitteth the belly and stoppeth a laske. The seed taken with vinegre presently stayeth the yox or hiequer: it prouoketh vrin, and serueth well in a liniment to heale vrburns. The juice of it being boiled to a juleb, is good for the stomach, liuer, kidnies, and bladder. This is the herb which *Aristophanes* the Comedian twitted the Tragical Poet *Euripides* by, obiecting vnto him merily by way of a scoffe, that his mother, who was a gardener, vsed to sit in the market and sel neuer a good wort or pot-herb indeed, but made her markets only of Scandix. And verily I would say that * Anthriscus were the same herb, if it had smaller, tenderer, and sweeter leaues. This peculiar praise and commendable propertie it hath, that if the body be overlaid and wearied with the vse of women, it restoreth the spirits and refresheth them again. Yea & such as be wel slept in yeares, and begin to droup, it maketh lusty and able to perform the act of generation youthfully. It stayeth the flux of the whites in women.

Moreouer, * Iassione is counted also a wilde wort, comming vp of it selfe and good to be eaten. This herb creepeth by the ground, full of milke it is, and beareth a white floure which some call Concilium. The like name and commendation there goeth of this herbe for stirring vnto letcherie. Being taken raw with meat in a vinegre sauce, it breedeth plenty of milke in women. A singular restorative it is for them that feeble themselves wearing & decaying by a consumption. A liniment made therewith and applied to the head of yong infants, causeth hair to come vp thicke: and by shutting the pores of the skin more close, it is a means to retain the hair till that it shed not easily.

As for * Caucais, an herb like to Fenel, but that it hath a short stalke and a white floure: it is good also to be eaten, and is besides counted a cordial. A drink likewise is made of the juice thereof, passing comfortable to the stomach, of power to prouoke vrin, to expel grauel & stone, and to stay the itching within the bladder: it doth subtiliar the grosse and rough flegm which causeth obstructions in the spleen, liuer, and kidnies. The seed being taken inwardly helps toward the monthly sicknesse of women when it stayeth vpon them, and drieth vp the cholericke humors which flow after child-birth, or the after-burden. It is giuen also to men for the spilling of natural feed, or the running of the reins. *Chrysippus* is of opinion, that it is singular good to help women for to conceiue, if they be desirous of children. But the maner is to drinke it in wine next the heart fasting. And as *Petrus* the Poet hath deliuered in verse, a liniment of this herb is singular against the poisons of venomous sea-beasts.

Among these herbs is reckoned * Sion, a plant growing in waters of it selfe, with leaues like Parsly or Smallach, but that they be larger, fatter, & of a deeper blackish green: it beareth seed plentifully, and in tast resemblerth water-Cresses. It is thought to be excellent good for those that cannot make water, for the diseases of the reins, and paine of the spleene, yea and for women whose monthly termes are suppressed; whether the substance thereof be taken as meat, or the juice of the herb decocted, or the seed drunk in wine to the weight of two drams. It breaks the stones ingendered within the body, and notwithstanding it groweth in water, yet it euacuateth those aquosities and waterie humors which ingender the same. Being elixerized it helps those that haue the bloody flux. If women anoint their faces with a liniment made of it ouer-night, it doth embelish their skin at one instant and with one dressing: yea, it taketh away the pimples and spots that disfigure the face, in maner of Lentils. This ointment is held also to be good for the farins and such sores, in horses and such like beasts, and to mitigat the grienous paines and trouble of any ruptures.

As concerning Silybus, an herbe like vnto the white Chamæleon, and as full of thornes; it groweth abundantly in Cilicia, Syria, and Phœnice: and yet in these countries they make not so much account of it as to bestow the dressing of it, it asketh so much adoe in the kitchen, before it be in case to be serued vp in the hall. And for physicke there is no goodnesse in it at all.

The plant * Scolymus is vsed also much to be eaten in the East parts, where they call it by another name Limonia: It neuer exceedeth a cubit in height: the leaues be crested: the root blacke,

A blacke, but yet sweet. *Erastophenes* commendeth it as a principal dish for a poor mans table: and it is said that it hath a special vertue to prouoke vrine: and with vinegre if it be applied, to cure the foule tettars called Lichenes, and the leprosic also by the testimony of *Hesiodus* and *Aleues*, if it be taken in wine, it inciteth to wantonnesse and fleshly pleasures. These Poets doe write, That when this herbe doth flourish and is at the best, then grasshoppers chaunt loudst and sing most shrill: and as women at such a time be most desirous of mens company and hottest in lust, so contrariwise men are most loth to turn vnto them, and least able to content their appetites: as if Nature to satisfie the pleasure of these good wifes, had prouided against that faint season, the help of the Artichoke, as a viand most powerful at this time to fet their husbands in a heat, and to enable them to that businesse. Moreouer, an ounce of the root cleafed from the pith, B sodden to the thirds in three hemines of the best Falerne wine, and either taken in drinke vpon an empty stomach, presently after that one hath sweate, and is new come forth of the Baine: or else to the quantitie of one cyath immediately after euery meale, doth correct and take away the stinke and ranke smell of the arme-pits. And a straunge thing it is, that *Democritus* affirmeth vpon his owne experience, and promisseth, That this decoction is of such efficacie, that it causeth the said strong sent to passe away by the vrine.

Moreouer, the * Sowthistle is an hearbe for to be eaten, for we read in the Poet *Callimachus*, * Sonchus. That the poore old woman *Hecale*, at what time as prince *Thescus* fortun'd on necessitie to take his repast in her simple cottage, made him a feast, and set before him a principal dish of Sowthistles. Two kinds there be of them, the white, and the black: both, like vnto lettuce, but that they are full of prickles. They run vp into a stalke of a cubite in height, the same is cornered and hollow within, but brake it, and you shall see it run out with milke plentifully. The white, which hath that bright colour of the milke within it, is thought to be as good as Lectuces, for those that be streight winded, and cannot take their breath but vpright. *Erasistratus* sheweth plainly, That if it be eaten, it expelleth grauel by vrine: and chewed only, it correcteth the stinking sauer of the mouth, and causeth one to haue a sweet breath. The juice thereof drawn to the measure of three ciaths, made hot in white wine and oile, and so taken, helpeth women in labor, that they may be soone deliuered, but presently after they haue drunk it, they ought to stir their bodies and walke vp and down their chamber. Also it is vsed to be sodden in broth, and so supped vp. The very stalke therof being boiled, maketh milch nourses to haue good store of milke, and the children at their breast to be better coloured. But most excellent it is for such nourses as feeble their milk to cruddle in their breasts. The juice thereof dropped into the ears, doth them much good, and a measure of one cyath drunk hot, is as good for the strangurie. But in the fretting and gnawing of the stomach, it would be taken with Cucumber seed and Pine-nut kernells. Applied in form of a liniment, it cureth the apostemations in the fundament. A drinke is made thereof, which is a countrepoyson against serpents and scorpions: but then the root also must be laid outwardly vnto the sore place. The same root boiled with oile within the pill of a pomgranat, is a good remedie for the paines and maladies of the ears. Note, that all these vertues must be vnderstood of the white Sowthistle. And *Cleomporus* doth accord hereunto as touching the white, but he alloweth in nowise to eat of the black, for he is of opinion, that it breedeth diseases. *Agathocles* also prescribeth the juice of the white Sowthistle to them who haue drunk Bulls blood, and suspect themselves poysoned therewith. Howbeit, they be all agreed, that the blacke is refrigeratiue: in which regard it ought to be applied outwardly with Barly groats. *Zenon* declareth, That the root of the white Sowthistle, cureth the strangurie.

As for * Chondrilla or Chondrille, it hath leaues like to Endiue or Cichory leaues gnawed or eaten round about: a stem not a foot high, and the same full of a bitter iuice: a root like vnto * Beans, and otherwhile there be many of them together. This hearbe putteth forth close to the ground a certain kind of gum like Mastick, swelling out to the bignesse of a Bean, which being applied to the naturall parts of women, is said to draw down their monthly courses. The same hearbe being stamped root and all together, and digested into trosches, is thought to be singular good against serpents: and a probable reason herof is collected, because the field mice and rats when they are stung by serpents, haue recourse to this herbe, and eat thereof. The juice drawne out of this herbe, after it is sodden in wine, bindeth the belly. The same is singular good to redifie, couch and lay even the disorderly hairs of the eye-lids, as effectually as the best gum in the world. *Dorotheus* the Poet hath deliuered in his verses, that it is good for the stomach, and helpeth

* Gum Succi coria.

* Dioscorides, it is full and fresh: but it seemeth that Plinie read it otherwise.

helpeth digestion. Some hold opinion, That it is naught for women & hurtful to the eies, also that it is contrarie to the seed of man and doth hinder generation.

Among all those things which are earen with danger, I take that Mushromes may iustly be ranged in the first and principal place: true it is, that they haue a most pleasant and delicate tast, but discredited much they are and brought into an ill name, by occasion of the poyson which *Agrippina* the Emperesse coueighed vnto her husband *Tiberius Claudius* the Emperour, by their means: a dangerous president giuen for the like practise afterwards. And verily by that fact of hers, she set on foot another poyson, to the mischiefe of the whole world and her owne bane especially (euen her own sonne *Nero*, the Emperour, that wicked monster.) The venomous qualitie of some of these Mushromes, may be soone known by their weak rednesse, their mouldy hew so vnpleasant to see to, their leaden and wan colour within-forth, their chamfered streakes full of chinks and chaps, and finally, their edges round about pale and yellow. For others there be that haue none of all these markes: but are drie, and carie certain white spots like to drops or grains of Sal-nitre, putting forth in the top out of their tunicles. And in truth, before that the Mushrome is formed, the earth bringeth forth a certain pellicle or coat first, called in Latin *Volua*, for this purpose, that the Mushrome should lie in it: and then afterwards shee engendreth it enclosed within, much like as the yolke of an egge crunched within the white. And so long as the Mushrome is young and not come forth, but lieth as a babe within, the said core or tunicle is as good meat as the Mushrom it selfe: but so soon as the Mushrom is formed, this membran breaketh, and incontinently the body or substance therof is spent in the stele or foot that beareth it vp: and seldom shall you see 2 Mushromes vpon one of these steles or feet. Moreover, these mushrooms take their first originall and beginning of a slimy mud, and the humor of the earth that is in the way of corruption: or els of some root of a tree, & such for the most part as beare Maist. It seemeth at the first, as if it were a kind of glutinous some or froth, then it growes to the substance of a pellicle or skin, and soone after sheweth the Mushrom indeed, bred, formed, and consummat within, as is aforesaid. And verily all such are pernicious and vterly to be rejected neer to which when they come new out of the ground, there lay either a grieue-stud or leg harneis-naile or some rustie yron, or so much as an old rotten clout: for looke what naughtinesse foucer was in any of them, the same they draw and conuert into venome and poyson. But none are able to discern these hurtful Mushromes from others, how curious and circumspect foucer they be, save only the peasants of the country where they grow, and such as haue the gathering of them. And here is not at all the mischiefe that lieth in them: For dangerous they be otherwise, and meet with more meanes to make them deadly, namely, if a serpents hole or nest be neare by, or if at their first discouerie and comming forth, a serpent chance to breath and blow vpon them: for so prepared they be and disposed as a fit subject, to enter, that presently they will catch and entertain any poyson. And therefore on any hand we must not be bold and lusty with them before the time that serpents be retired into the ground, & there taken vp their harbor. Which is an easy matter to know, by the tokens of so many herbs, trees, & shrubs, which from the time that they first came abroad above ground, vntill they haue taken vp their winner lodging again, looke alwaies fresh and Greene: and principally by the leaues of the Ash, alone, if there were no more trees: for Ashes neither bud and spring forth, but after that serpents come abroad, nor shed and fall away, before they be gone into the ground again. In summe, this would be noted, That Mushromes be vp and down, come and gon, alwaies in a feuen-night space. Thus much of the Mushromes named in Latine *Boleti*.

CHAP. XXIII.

¶ Of other Mushromes or Tad-stoles called *Fungi*. Of *Silphium*, and *Lasfer*.

As touching those excrescences in manner of Mushromes, which be named *Fungi*, they are by nature more dull and slow. And albeit there bee many kinds of them, yet they all take their beginning of nothing els but the slimy humor of trees. The safest and least dangerous be those, which haue a red callositie or outward skin, and the same not of so weak a red, as that of the Mushromes called *Boleti*. Next to them in goodnesse are the white, and such as haue a white foot also, beir a head much resembling the *Flamins* turban or mitre, with a tuffet or crest in the crown. As for the third sort that be called *Suilli*, as one would say, Swine-Mushromes

A rooms or Puffs, they are of al others most perilous, and haue the best warrant to poison folk. It is not long since that in one place there died thereof, all that were of one household; and in another, as many as met at a feast and did eat thereof at the same bourn. Thus *Annius Serenus*, capitaine of the Emperour *Nero* his guard, came by his death, with diuers coronels and centurions, at one dinner. And I wonder much, what pleasure men should take thus to venture vpon so doubtful and dangerous a meat. Some haue put a difference of these mushrooms, according to the severall Trees from which they seeme to spring, and haue made choise of those that come from the Fig-tree, the * Birch, and such as beare gum. For mine own part, as I haue said before, I hold those good that the Beech, Oke, and Cypress trees doe yeeld. But what assurance can a man haue hereof, from their mouths who sit in the market to sell them? for all the sort of those Puffs and Toadstooles look with a leaden hew and wan color. Howbeit, the nearer that a Mushrome or Toadstoole commeth to the color of a fig hanging vpon the tree, the lesse presumption there is that it is venomous.

Touching the remedies for to help those who suspect they haue eaten these dangerous mushrooms, I haue said fomewhat already, and wil say more hereafter. Mean while this would be noted, that as perilous as they be, yet some goodnesse there is in them, and diuers medicines they doe yeeld. First and foremost, *Glaucias* thinketh and affirmeth, That the Mushromes *Boleti* be good for the stomacke. As for the swine mushrooms, named in Latin *Suilli*, they are hanged vp to dry insiled vpon a rush running through them, as wee may see in those that come out of *Bithynia*. And these are supposed to be singular for those fluxes and catarrhs that take a course to the belly and breed fluxes, called by the Greekes *Rheumatismes*: these cure the excrescences of the flesh, that rise in the fundament; for they eat them down, & in tract of time consume them quite: also they are good to take away the pimples and freckles that appeare vpon the skin, like to Lentils, yea and the deformities and spots in womens faces that disfigure their beauty: these mushrooms be * washed as lead, for to enter into collyries and eye-salues: and a liniment is made thereof, which being applied with water, cleanseth filthie sores and vicers, cureth the skals that breake out in the head, and healeth the wounds occasioned by the biting of dogs.

And now for that our fine mouthed and dainty wantons who set such store by their tooth, take so great delight to dresse this only dish with their own hands, that they may feed thereon in conceit and cogitation all the while they bee handling and preparing the same, furnished in this their buisnesse with their fine knives and rasors of amber, and other vessels of siluer plate about them: I for my part also am content to frame and accomodate my selfe to their humorous fantasie, and will shew vnto them in general, certaine obseruations and rules how to order and vse them, that they may be eaten with security. Marke then those mushrooms, which in the seething proue hard and tough, such be all of them hurtfull: Lesse dangerous they be, if some salt-nitre be put to them whiles they be a boiling ouer the fire; provided alwaies, that they be fully sodden before they be taken off. Also, a man may be more bold to eat those which be sodden together with flesh meat, or with the tailles or steles of peares. The eating also of peares immediatly after one hath fed vpon Mushromes, doth kil or dull all the malice that they may haue. Also vinegre is of a contrary nature vnto them, and doth extinguish or mortifie their venomous qualitie. To conclude, all these mushrooms do come vp and are engendred in rain. Semblably, good showres doe breed *Silphium*.

This *Silphium* came at the first from *Cyrene* (as I haue before written) but now adays, since time that all the *Cyrenaick* *Silphium* is destroied and gon (as hath bin said) the greatest store thereof is brought out of *Syria*: howbeit so good it is not as that which *Parthia* yeelds, though it be better than that which the merchants bring ouer with them out of *Media*: this * *Silphium* is of great vse in Physicke; for the leaues are sodden in white odoriferous wine: of which decoction, there is made a drink for to cleanse and purifie the matrice, and to expell the dead infants therein; so it be takn to the measure of one *Acetabulum*, immediatly after the woman hath bin in the stoue, and there swet. The root is singular for to cleare the windpipes, and to take away all the asperity and roughnes in those parts; and being applied in form of a liniment, it helpeth *F* impostumat inflammations proceeding from the ranknes and ebullition of the blood: & yet as many as take it at the mouth and eat therof, find that it is hard of digestion; for it breedeth ventosities and causeth much belching. Hurtful also it is and contrarie to the free passage of vrine. A liniment made thereof together with wine & oile, is a most familiar and agreeable medicine

N

for

* *Betula*, non *Ferula*.

* *Lavatur ut plumbum*, some read *Linuntur ad plumbum*, (i.e.) a liniment is m. de of the for lead-shorte eyes, &c. vide cap. 13. lib. 25.

* or *Laserpisium*.

for the black and blew marks remaining after stripes: but if the same with some addition of wax, be reduced into a cerot, it healerth the Kings euil. The piles or werts growing in the fundament, with a suffumigation of Silphium oftentimes vsed, will fall off.

As for the liquor Lafer, issuing from Silphium (in that maner as I haue shewed) it is holden for one of the most singular gifts that Nature hath bestowed vpon the world, and entrench into many excellent confections and compositions. Of it selfe alone, it reduceth those to their naturall heat, who are staruen and benumbed with extreame cold. Taken in drinke, it allaieth the accidents and griefes of the nerves. It is both giuen to women in wine, and applied also in soft locks of wooll to their natural parts, for to bring down their mensrual purgation. If it be mixed and incorporat with wax, it draweth and fetcheth out by the roots, the agnells or corns in the feet, if so be they be scarified round about before with the lencer. Being dissolued in some convenient liquor and taken to the quantity of a cich pease, it prouoketh vrin. *Andrew the Physician* doth assure and warrant vs, That if it be taken in greater quantity, it breedes no windinesse in the stomacke, but helpeth digestion mightily both in women and also in old men: Who saith moreover, that it is better and more wholesome in winter than in summer, and for those especially who drinke nothing els but water: only they must look to this and take heed, that there be no exulceration within the body. A great restorative it is with meat, and quickly setteth them on foot, who haue lien along and bin brought low by sickness: for Lafer if it be applied in due time, is as good as a potentiall cautery * to raise a blister: but better it is for them who are acquainted with it, than for those who haue not bin vsed to it. Outwardly applied, no man makes doubt but it is of singular operation, and worketh many effects: taken in drinke, it extinguisheth the venome left in the bodie, either by poisoned dart, or serpents sting: and if the wounds be anointed with the same, dissolued in water, it is the better: but particularly for the prickles of scorpions, it would be applied with oile. Also in case that vlcers will not grow to any maturati-
on, nor yeeld from them concocted matter, a pulres made of Lafer, together with barley floure or figs, is a singular digestiue. Being laid too with Rue, or hony, or by it selfe alone (so the place be anointed ouer it with some viscus gum to keep it too that it run not off) it is excellent for the carbuncle, and the biting of dogs. If it be sodden in vinegre with the rind or pil of a pomegranat, it is passing good for the excrescences rising about the tiwil, if the place be bathed with that decoction. Being incorporat with Sal-nitre, and well wrought withall beforehand, and so applied, it taketh away the hard horns and dead cornes arising in the feet, which commonly be called in Latin Morticini. Tempered with wine & saffron and pepper, or if it be but with micedung and vinegre, it is a good incarnatiue in vlcers: & an excellent drawer to the outward parts for to fil vp the skin and make a bodie fat. A good fomentation there is made of it and wine, for to bath kided heels: for which purpose, it is boiled in oile and so applied. In like manner, it serueth to soften hard callosities in any place whatsoeuer: and for the foresaid corns of the feet especially, if they be scarified & scraped before, it is of great efficacy. Singula it is against vnwholsom waters, pestilent tracts, and contagious airs, as in times suspected of infection. Soueraigne it is for the cough, the fall of the Vvula, and an old jaunise or ouerflowing of the gall: for the dropsy also and hoarsnesse of the throat; for presently it skoureth the pipes, cleers the voice again, and maketh it audible. If it be infused and dissolued in water and vinegre, and so applied with a sponge. It assuageth the gout. Taken in a broth or thin supping, it is good for the pleurisie, especially if the patient purpose to drinke wine after it: being couered al-ouer with wax to the quantity of one cich pease, it is giuen very well in case of contractions & shrinking of sinewes, and namely to such as cary their heads backward perforce, by occasion of some crick or cramp. For the squinancie, it is good to gargarize therewith. Semblably it is giuen with leeks and vinegre, to those that wheaze in their chest, and be short winded, & haue had an old cough sticking long by them: also with vinegre alone, to such as haue supped off and drunk quailed milke, that is cluttered within their stomack. Taken in wine, it is singular for the faintings about the heart; as also for colliquations and such as are saln away and far gone in a consumption, & those that be taken with the falling sicknes: but in honied water, it hath a special operation respectiue to the palsie, or resolution of the tongue. Vvith sodden honey and Lafer together, there is made a liniment, very proper to anoint the region of the hucklebone, where the Sciatica is seated; and the small of the backe, to allay the pain of the loins. I would not giue counsel (as many writers doe prescribe) for to put it in the concauitie or hole of a rotten tooth, and so stop vp the place close

* He meaneth by Cauterium, a medicinall medicine, which doth draw humours and the blood to the habit and outward parts: a necessarie course to be taken in Atrophie, and namely after long diseases, that the body may be equally nourished.

A close with wax, for feare of that which might ensue thereupon: for I haue seene the fearfull sequel of that experiment in a man, who vpon the taking of that medicine, threw himselfe headlong from an high loft and brake his necke; such intolerable paines he sustained of the toothache: and no maruell, for do but anoint the muffle or nose of a Bull therewith it wil set him on a fire & make him horn-mad: and being mingled with wine, if serpents (as they are most greedy of wine) chance to lap or lick thereof, it wil cause them to burst. And therefore I would not aduise any to be anointed with it and hony of Athens incorporat together, howsoeuer there be some physicians who set down such a receit. Certes, if I should take in hand to particularize of the vertues that Lafer hath, being mingled with other matter in confections, I should neuer make an end. But my purpose is to deale with simples only, wherein Natures work is most apparent & euident to be seen; whereas in compositions we go altogether by coniectures which some physitions vs: neither can a man be assured of their operation; for who is able to obserue the iust proportion in these mixtures, either of the contraries and repugnances, or the concord and agreement of the ingredients in Nature? But of this point I will write more at large hereafter.

CHAP. XXIV.

¶ Of the nature and properties of Hony. Of honied water or Mead called Hydromel. How it cometh to passe that the manners and behaviours of men be altered by meat and vintages. Of honied wine named Melittes, and of Wax. Also against the abuse in composition of medicines.

Hony, were it not so common as it is, and euery where to be had, would be as high esteemed and of as great price as Lafer. As for this drug, Nature hath framed and made it immediately her own self; but for the getting and working of hony she hath created a liuing creature of purpose, as we haue already said: by means whereof we haue this celestial liquor, which serueth for an infinite number of vses, considering how often it entrench into mixtures and compositions. And first to speak of that cereous substance Propolis, which, as it hath bin shewed already, offereth it selfe first to be seen at the very entry of the Bee-hiue. These vertues medicinable it hath, namely to draw forth all prickles, thorns, and what offensive thing soeuer sticketh within the flesh of a body; to dissolue and dissipate all tumours and swelling bunches, to concoct and mollifie any hardnesse, to assuage the pains of sinewes, and finally to incarnate, heale vp, and skin any desperat vlcers.

As touching Hony it selfe, of this nature verily it is, That it wil suffer no dead bodies to putrifie, notwithstanding it be of a sweet and pleasant tast, far from any aegrenesse, and contrary to the nature of salt: for the throat, the kernels of each side thereof called the Tonsils or Amygdals; for the squinancie, and all the accidents befalling to the mouth; as also for the drinnesse of the tongue through extremite of heate in feuers, it is the most soueraigne thing in the world. Hony boiled is singular for the inflammation of the lungs, and for the pleurisie: also it cureth the wounds inflamed by the sting or teeth of serpents; and helpeth those who haue eaten venomous mushrooms. Being taken in dulcet or honied wine, it cureth those that lie of a palsie; although indeed the said honied wine alone hath many gifts and properties by it selfe. Hony together with oile of Roses dropped into the ears, cureth their ringing and pain. Good it is also for to kil lice and such like vermin in the head, and to rid away nits: where note by the way, that if hony be dismured, that is to say, skummed and clarified, it is euermore the better for any vse. Howbeit, the stomack it puffeth vp and maketh to swell with ventosities: it ingendred and encreaseth cholerick humors, and taketh away appetite to meat: yea and some are of opinion, that being vsed simply alone, and not compounded with other things, it is hurtfull to the eyes: and yet others giue counsel to touch and anoint the corners of the eyes therewith, when they be exulcerat. Touching the materiall cause whereof honey is ingendred, the maner how the diuers sorts, the countries where it is made, the price also and value, with the sundry proofs and tria's thereof, I haue writtten already once in my treatise of Bees; and a second time in my discourse of the nature of Floures: for so the order and course of this my Worke forced me to treat distinctly of those matters; which, they that be desirous to know exactly the nature of Simples, may put together and mingle again at their pleasures. By the same reason also, since we are en-

tered into the vertues and operations of Honey, I must of necessitie handle and declare the qual-
tie of Hydromel or honied water, so neere a dependant thereto.

Of which there be two kinds: the one is fresh and new made in haile vpon occasion, and presently vsed: the other is kept and preferued. As touching the former Hydromel, if it be made as it should be of dispumed and clarified hony, it is of singular vse in that exquisit & spary diet fit for sick persons, and namely in meats of light digestion, such as is a thin gruell made of naked frumenty washed in many waters: also to be ioyned in restoratiues for to recouer the Patients strength much enfeebled. Moreouer, good it is for the mouth and the stomacke, to mitigate the fretting humors fetled and bedded therein, & to cool the extremity of heat: for I find in good authors, that to ease and mollifie the belly, it is better to be giuen cold than otherwise:.

• Somerade
μαρμαρις.
out of Dioscor.
having a faint
& weak pulse.
• *Corpusculus*
verum.

also that it is a proper and conuenient drink for those who chile and quake for cold: likewise for such as be heartlesse & haue smal or no courage at all, whom those writers call * Micropsychos.

Moreover, there is a reason rendred full of infinite subtiltie, and the same fathered first vpon *Cato*, Why the same things feel not alwaies bitter or sweet alike in euery mans tast? for he saith that this diuersitie proceedeth from those little mores or * bodies that go to the making of all things: whiles some of them be smooth, others rough & rugged, some cornered, others round: in sum, according as they be more or lesse respectiue and agreeable to the nature of each man: this is the cause, that those persons who are ouer-wearied or exceeding thirsty, be more cholericke and prone to anger. Good reason therefore, that such asperity of the spirit, or rather indeed of the vital breath, should be dulced and appeased by the vse of some sweet and pleasant liquor which may lenifie the passage, and mollifie the conduits of the said spirit, that they do not cut, race, and interrupt it going in & out in drawing or deliuering the wind. And in very truth, euery man may find by experience in his own self, how meat and drink doth moderate and appease anger, sorrow, heauinesse, and any passion or perturbation of the mind whatsoever. And therefore those things would be obserued which make not onely to the nourishment and health of the body, but also serue for to rectifie and reform the maners and demeanour of the mind.

Now to return again vnto our Hydromel or honied water, very good, by report, it is for the cough, and being taken warm it prouoketh to vomit: put oile thereto, and it is singular against the poison of Ceruse or white lead. A countre-poison also it is and a preferutiue to such as haue eaten Henbane and Dwale, especially taken with asses milk, as I haue obserued hertofore. Instilled into the ears, or poured into the fistulous sores of the secret parts, it is thought to be excellent. Incorporat with the crums of soft bread, and reduced into the form of a pessarie, and so put vp, it is singular for the infirmities of the natural parts of women; and being applied accordingly, it taketh down all sudden swellings [occasioned by windines,] cureth dislocations, and in one word, mitigareth all pains. Thus much of Hydromel new made: for our moderne physicians haue vtterly condemned the vse of that which is kept vntill it be stale. And this they generally hold, That it is not so harmlesse as water, nor so solid and powerfull in operation as wine. Howbeit let it be long kept it turneth into the nature of wine, and (as all writers do accord) then is it most hurtfull to the stomack, and contrary to the finewes.

As for honied wine, the best and most wholesome is alwayes that which is made of the oldest wine, that is hard: and indeed with it you shall haue it to incorporate very easily; which it will neuer do with any that is new & sweet: and being made of green, harsh, or auster wine, it doth not fill and charge the stomacke, no more it doth being made of boiled honey; and ingendreth lesse ventosities, which is an vnaul thing with hony. This honey bringeth them to appetite of mearwhome haue lost their stomack. Taken actually cold, in many it loosneth the belly; but being hot it stayeth and bindeth the same. The honied wine is very nutritiue and breedeth good flesh. Many haue held out a long time fresh and lusty in their old age, with the nourishment of honied wine alone without any other food: whereof we haue one notable example of *Pollio Romanus*, who being aboue an hundred yeres old, bare his age passing well: whereat the Emperour *Augustus* of famous memorie maruelled much; and being vpon a time lodged as a guest in his house, he demanded of him, what means he vsed most for to maintain that fresh vigour both of body and mind? to whom *Pollio* answered, By vsing honied wine within, and oile without. *Varro* saith, that the yellow jaundise was called a * Kings disease, or a sicknesse for a King, because it was cured ordinarily with this honied wine, called Mulse.

As touching another kind of honied wine, named Melitites, how it is made of Must, or new wine

A wine & hony together, I haue declared sufficiently in my treatise of wines. But I suppose there hath bin none of this sort confected these hundred yeares past and above, for that it was found to be a drink which bred ventositities in the stomacke and other inward parts. Howbeit, the manner was in old time, to prescribe it for to bee giuen in agues, to make the bodie soluble; prouided alwaies, that it had the due age: also to those who lay of the gout: to such likewise as had weake and feeble sinews: and to women who abstained altogether from meere wine.

Next after Honey, the treatise of Wax (which is correspondent to the nature of honey) by good order followeth. Concerning the original working and framing thereof, the goodnesse, the several kinds according to diuers countries, I haue written in conuenient place. This is generally obserued that all sorts of wax be smelting, burning, and consuming.

Beneficially considered, that all sorts of wax be emollient, heating, and incarnative; but the newer and sweeter they are, the better they are thought to be. Wax taken inwardly in a supping or broth, is singular for the bloudy flux and exulceration of the gurs: so be the very honey-combes giuen in a groll made of frumenty, first parched and dried at the fire. Contrarie it is to the nature of milk: for take ten grains of wax, made in smal pills of the bignesse of miller corne, in some conuenient liquor, they will not suffer the milke to cruddle in the stomacke. If there be a rising or swelling in the shate, the present remedie is to sticke a plaistre of white wax vpon the groune. Moreover, to reckon vp and decipher the sundry yses that wax is put vnto in matters of Physicke, as it is mixed with other things, it is no more possible than for Physitions to

Cize of other simples and of their whole virtues, according as they enter into many compositions which proceed all (as I haue said) from the wit and artificiall inuention of man: for we neuer find, that Cerors, Cataplasms, Emollitiues, Plasters, Collyries or Eye-salues, Antidotes or Preseruatife confections, were euer of our great mother daine natures making: who indeed is the diuine worke mistresse of all things, these are the deuises of Apothecaries, nay they are rather tricks proceeding from avarice and couetousnesse. As for Nature, she hath made nothing vnperfect, her workes be absolute all and accomplished in their essence: ordained hath shee no compounds, vnlesse it be very few, wherein she proceedeth vpon good cause and reason, and goeth not by blind aime and doubtfull coniectures: as namely, when according to her rule and order, shee doth incorporate some things of a drie constitution and substance, with a liquor, that they may pierce & enter better within the pores of the body, or els when the giuer of life

D to liquid matters by some bodily substance, which may vnite and knit them together. To goe about for to compasse the vertues of euery simple ingredient in these compositions curiously by scruples and graines, fauoureth of impudencie rather than a worke grounded vpon humane conjecture. For mine owne part, I haue nothing to doe with these drugs and far-fet wares that come from India and Arabia: I meddle not (I say) with these medicinable spices brought out (as it were) of another world. These simples growing so far off in such remote countries, please me not, neither do I thinke them meet for to cure our maladies: they were neuer brought forth by Nature for vs, no nor for them neither, where they grow: otherwise they were not such fooll (I trow) as to sell and passe them away as they doe. Buy them, and spare not, for sweet pomanders, perfumes, and delicate ointments: ye may buy them also (if you please) vpon a superstitious deuotion for the worship of gods, for that now we cannot sacrifice, pray, & serue God (forsooth) without Fragments.

without Frankincense and Costus. And that our daintie ones and effeminate persons should be the more ashamed of themselves, I will the rather shew and prooue, That we may both preferre and recouer our health well enough without the exotical and foraine drugs: and that ech region is furnished sufficiently with home-physicke of their owne. But now, since we haue taken so much paines as to collect the medicabile vertues of guirland-floures, of pot-herbes also, harden woorts, and fallad hearbes, How may I for very shame leaue out the properties of corne and grain seruing for Physick: and therefore in this place it shall be well done, to discourse of them likewise.

CHAP. XXV.

¶ *The medicinable vertues and properties of corne and graine.*

First and foremost this is holden for certain, that they be the most ingenious and wisest creatures of all others, which live of corn. The grains of the fine blanched wheat Siligo, being burnt, brought into powder, and applied with Ammoniac wine in manner of a liniment, doe

restraine the flux of humors to the eies. Also the cornes of the ordinary wheat *Triticum*, being parched or roasted vpon a red hot yron, are a present remedie for those who are scorched and findged with nipping cold. The meale of the said wheat sodden in vinegre, and applied as a cataplasme, helpeth the contraction and shrinking vp of the sinews: but wheat brans, with oile of roses, drie figges, and sebesten sodden together, make a collution, the gargarizing wherewith, is good for the inflammation of the Tonsils or Amygdales, and to cure all the accidents of the throat. *Sextus Pompeius*, who in his daies was one of the principal peers of high Spain, & left a sonne behind him, who afterward was lord Pretour of Rome, sitting on a time before his barnedores to see his corn winowed, was surprised sodainly with a fit of the gout, and whether it were by chance, or in a rage for the extremitie of paine, thrust his legs about the knees into the heap of wheat lying thereby: but finding his legs mightily dried hereby, and himselfe wonderfully eased of his paine by that means, he neuer vsed any other remedie afterwards, but so soone as he felt a fit of his gout comming, he plunged his feet and legs into a heap of wheat. Certes wheat is such a desiccatiue, that it wil draw and drie vp the wine or any other liquor in a barrell which is buried within it. Moreouer, the best experienced Chirurgians in the cure of ruptures, affirm, That there is nothing better, than to lay the chaffe of wheat or barley hot to the griued place, and to foment the same with a decoction wherein it was sodden.

As for the bearded wheat Far, there is a certaine worme breeding in it like to a moth or the grub that eateth wood, which is singular good to make rotten teeth to fall out of the head; for if the same be lapped within wax, and so put into the hole of the faultie tooth, it wil drop out: or if the found teeth be but rubbed therewith, they will shed and fall forth of the head.

Touching the graine Olyra, we haue said already that it is called also Arinca. The Egyptians make thereof a certaine medicinable decoction or gruell, which they call Athara, passing good for young babes; yea and it serueth to bath and annoint elder folke withall.

Barly meale either raw or boiled, doth discusse and resolu, assuage & ripen, all impostumes engendred either by way of gathering and collection of humours, or by some deflux and rheumatick descent. The same otherwhiles is sodden in honied water, or els with dried figs: but for the paines of the liuer, it had need to be boiled with Oxycatre, i. water and vinegre together, or els with wine. But when the case standeth so, that the tumor must be partly dissipated, & partly brought to maturation, then it is better that it be incorporate in vinegre, or the lees of vinegre, or at least waies in sodden peares or sodden quinces. Being tempered and medled with hony, it is very good for the biting of the cheelips or many-foot worms, called Multipedes: but for the sting of serpents, it is better to mix it with vinegre; as also to keep sores from festering and rankling, but in case it be needful and requisit to cleanse them from suppurat matter therein gathered, then it would be applied with vinegre and water, with rosin also and gal-nuts added thereto. For inueterat and old vlcers, to bring them to maturation, it is laid too with rosin: for to soften hard tumors, it is vsed either with pigeons dung, or with drie figs, or ashes. Being applied with Poppie or Melilior, it is singular for the inflammation of the nerues, of the guts & sides: also for the paines of mens priuie parts: or when the flesh is departed from the bone. Incorporate with pitch, and the vrine of a boy not yet vndergrowne nor fourteene yeares old, it is a proper medicine for the swelling kernels named the Kings euill: with oile and Fenigreeke, it helpeth the tumors of the midriffe and precordiall parts: or in case the feuer be busie with the Patient, then it must be vsed with honey or old greafe. But if those swellings tend to maturation, then wheat meale is commonly more lenitiue, and assuageth pain better. The same being reduced into a liniment with the iuice of Henbane, is good for the nerues; but with honey and vinegre, it taketh away the red pimples and spots appearing in the skin, called Lentils.

Touching *Zea, whereof is made the ordinary frumenty as I haue said: the meale of it is counted better in operation than the other of barley, but that of the three-moneth corn is more moist and emollatiue. Tempered with red wine, and so applied warm, it is commended for the pricke of Scorpions: also for them that reach and spit vp blood: and all accidents happening to the throat and windpipes: but with goats suet or butter, it is good for the cough. The floure or meale of Fenigreeke, is the softest of all other: it healeth running vlcers, it skoureth dandruffe or scales in any part of the body, it appeaseth and assuageth the paines of the stomack, it cureth the maladies incident to the feet and paps, if it be sodden with sal-nitre and wine, and so applied accordingly.

The

A The meale of Yurain or Darnell, doth cleanse old vlcers and gangrenes more than any other: Tempered with raddish, salt, and vinegre, it cureth ring-worms, tetteras, shingles, and such like: with Sulphur-vif or quick brimstone, it scoureth away the leprosie. Applied in a frontall to the forehead with Goose-greafe, it helpeth the head-ache. Boiled in winewith Pigeons dung and other biles which be long ere they gather to an head and do ripen.

Of the sundry sorts of Barly groats or grossemeale called Polenta, I haue said enough in my Treatise of corn, which did require also the discourse of such things as be made of corn. It differeth from Barly meale, in that it is torrifed or parched: in which regard it doth the stomack good. It bindeth and staith the flux of the belly: it represseth also and smiteth back the flu-

B shing of humors, to the breeding of red and angry tumors. It serueth for a liniment to the eies, and easeth head-ach, if it be applied with *Mints, or some other cooling herb. In like manner it cureth kibed heels, and the wounds occasioned by serpents: also it healeth burnes and scalds if it be laid too with wine: and in that sort it keepeth them from blistering. If meale be driuen through a fencer or boulder, and so reduced to floure, and afterwards made with dough or paste, it is a great drawer of noi som humors to the outward parts: which is the cause that being applied to such places which look dead & mortified, by reason of the blood spread vnder the skin, it draweth out the same, so that the very linnen bands wherewith they be lapped & rolled, become bloody again. But if wine cuite be ioined therewith, the operation is more effectually. Moreouer, the said floure is good to be laid vnto the callosities and corns of the feet. For the fine floure of meale being sodden with old oile and pitch, and applied so hot as the patient may abide it, doth wonderfully cure the swelling piles and all other griefs about the fundament. As touching the thick gruell or paps made with floure, it nourisheth much, and causeth the body to feed wel: the past made of meale, wherewith they vse to glew Papyr, is ordinarily giuen warm to good effect, for the reaching and spitting of blood.

As for the frumenty called Alica, it is a meere Roman inuention, and not long ago first deuised: for otherwise the Greeks if they had known of it, would neuer haue written as they did in the commendation of husked Barly named Prifana, rather than of it. And I thinke verily, that the vse thereof was not taken vp in the daies of Pompey the great, and therefore the followers and disciples of *Asclepiades* haue left little or nothing thereof in writing. That it is a soueraign and most wholsom thing, no man verily maketh doubt or question, whether it be washed and so giuen in honied water, or whether it be sodden and so vsed in a thin supping, or boiled higher to the consistence of a thick gruell or pottage. The same for to stay the belly, and stop a lask, is torrifed: and then afterwards sodden with virgin wax, as before I haue shewed. But a peculiar vertue it hath by it selfe to restore those that are consumed and fallen away through a long & languishing sicknesse: and then it must be ordered thus. Take three cyaths of the said Frumentie, seeth it in a sextar of faire water ouer a soft fire gently, vntill by little and little all the water be consumed: now after this inbibition, when that the Frumenty hath thus drunk vp all the water, there must be added thereto a sextar of Ewes milk or Goats milk, and in the end a little hony. This the patient is to take for certain daies together. And in truth, such a broth or supping is this, as there is not in the world a more soueraigne restoratiue for all colliquations and consumptions whatbeuer, nor that will sooner set vpon their feet again those who be far gone and spent that way.

To come now to Millet, it is a grain, which being torrifed aforehand for the purpose, stoppeth the lask, and dispatcheth all collick pains and torments of the belly. Being fried and laied too hot in a bag, there is nor a better thing for the grieve of the sinews, or to alay any other pain: for, most soft it is, and lightest of all other, and nothing in the world retaineth heat so well. No maruell then if Millet be vsed ordinarily in those cases, where heat is to do good. To conclude, the meale or powder thereof incorporat with tar, is a singular plaister to be laid vpon sores, occasioned by the sting of Serpents or the pricke of the vermine named Multipeda.

F As for the Panick, *Diocles* the Physitian called it Mel-frugum. The same operations and effects it hath that Millet. Being taken in wine, it is good for the dysentery or bloody flux: to such tumors as need to euaporat and be resolu, it is singular good for to be applied hot, by way of fomentation. Sodden in Goats milk, and giuen twice a day to drink, it bindeth the belly, & staith flux: and in that manner it assuageth the torments and wrings in the collicke.

Sesama

Vide Galen,
lib. i. de Natu-
ralibus facult-
atibus.

Spela

* Cum Mentha,
rather Melle,
i. honny, accord-
ing to Colum-
ella: for
Mints be hot.

Sesama stamped or beaten into pouder, and so taken in wine, restraineth immoderat vomits. G Reduced into a liniment, and so applied, it doth mitigat the inflammation of the ears, & cureth any burne or scalt place of the body. The same effects it hath when it is green & groweth in the field.ouer and besides, a cataplasme made thereof, being boiled in wine, is good for sore eyes. To be eaten, it is no wholsome meat for the stomach: and more than that, it causeth a stinking breath. Howbeit, they hold it excellent to withstand the venomous sting of the Stellions, and the dangers that it may inferre: as also to heale the old cancerous and maligne vlcers, named Cacoethe, & Morimals. There is an oile made thereof, which as I haue before shewed, is good for the eares.

Touching Sesamocides, which taketh that name of the resemblance that it hath to Sesama, but that the graine thereof is bitter, and the leafe lesse, and it groweth in grauelly grounds: the same being taken to drink in water, purgeth chollerick humors. A liniment made of the seed, doth assuage the heat of S. *Anthony's* fire, and doth discusse and resolute biles. And yet there is another Sesamocides growing in Anticyra, which thereupon some do call Anticyricon: otherwise much like it is to the herb Groundswell, whereof I will speake in place conuenient. The graine or seed of this Sesamocides is giuen in sweet wine, as a purgatiue of chollerick and flegmatick humors; to the quantity of as much as may be contained with three fingers: but to quicken the same, the Physitians vse to put one Obole and an halfe of the white Ellebore-root or Neefewort: which purgation they vse in case of madnesse, the melancholicke disease, the falling sicknesse, and the gout. By it selfe alone, the weight of one dram is a sufficient laxatiue, & doth euacuat the belly.

The best Barley is that which is whitest. The iuice of Barley boiled in rain water, is made vp into certain trofches, which is singular good to be either conueied into the guts by way of clyster, for the exulceration thereof, or els injected into the Matrice by the merrenchyle, for the vlcers therein. The ashes of Barly burnt, are good in a liniment for Burnes, for places where the flesh is gone from the bones, for wheales, and small pocks, and for the biting of the Hardishrew mouse. The same with a little sprinkling of salt, and some honey amongst it, is counted a good dentifrice, to make the teeth look white, and the breath to smel sweet. There is an opinion commonly received, That whosoever vse to eat Barly bread, shall not be troubled with the gout of the feet. And they say, that if a man take nine barly corns, & with euery one of them draw three imaginary circles about a felon with his left hand: and when he hath so done, throw them all into the fire, presently it shall be cured. There is an herb which the Greeks call Phoenicea, and our countrymen in Latine Hordeum * Murinum. This herb or weed being beaten to pouder, & taken in wine, is singular to bring down the course of womens fleurs.

Hippocrates the famous Phyitian, hath made one * intire book in the praise of Ptisana, which is a groat made of Barly: but all the vertues and properties thereof are now attributed vnto our Frumenty Alica, and that goeth away with all the commendation. * And yet a man may see how much more harmlesse it is than Alica. *Hippocrates* commended it only for a supping, as being slippery & easie to be taken, good to put away thirst, nor swelling in the belly, passing quickly and easily through the body, and such a kinde of meat as might alone of all others be giuen twice a day in a feuer to those who were vsed to it: so farre was hee in opinion from them who would famish all diseases, & cure them by * fasting & vtter hunger. Howbeit, he forbade to giue it whole in substance to be supped off, & allowed nothing but the very simple iuice and broth of Ptisane or husked Barly: neither allowed he it in the beginning of an ague fit, so long as the feet continued cold, for during that time he would not admit so much as a thin potion thereof. Now besides the Alica or frumenty made of Zea, there is another which commeth of the common wheat, more glutinous and better indeed for the exulceration of the wind pipes.

As touching Amylum or starch pouder, it dimmeth the eyesight, & is hurtful to the throat, and is nothing good to be eaten, contrary to the common received opinion. It staith the inordinat flux of the belly, refresheth the rheum into the eyes, it healeth vlcers, and cureth pushes, wheales, and blains, and restraineth fluxes of blood. It mollifieth the hardnesse growing in the eye-lids. To such as cast vp blood, it is vsually giuen in an egge. In pain of the bladder, halfe an ounce of Amylum made hot ouer the fire vntill it suer, with one egge and as much cuir as will go into three eg-shells, taken immediately after the bath or hot house, is a singular remedy: moreover, oatmeale foddren in vinegar, taketh away moles and freckles of the skin.

The

A The very ordinary bread, which is our daily food, hath an infinit number of medicinable faculties. Bread crumbs being applied with water and common oile, or els with oile of Roses, doth mollifie impostumes: & with honied water assuageth any hardnes, wonderfully. Giuen in wine, it is good to discusse and resolute. It is of force also to bind and knit where need is, and so much the rather, if it be giuen with vinegar. Also it is singular against the sharp & eager flux of fleame, which the Greeks call Rheumes: likewise for bruised places vpon stripes or blows; yea, and for dislocations. And in very deed, for all these purposes, leauened bread, called of the Greeks Autopyros, & downright made, is better than any other. Moreover, a liniment thereof applied with vinegar, is good for whitflaws and the callosities of the feet. Moreover, stale bread and bisket, such as sea-faring men do eat, being stamped & sod again, is good to bind the belly: for singing men and choristers who are desirous to haue a cleare voice, for such also as be subject to rheums falling from the head, it is the wholsomest thing in the world, to eat dry bread in the beginning of meals. The Sitanian bread, & that which is made of three months corn, being incorporated with hony, is a faire medicine to cure either the black prints remaining after strokes, or the scalling and pilling of the face. White bread crumbs foked either in hot or cold water, yeeld vnto sicke men a meat of light digestion. The same being applied with wine, cureth swelled eyes. And so it healeth the breaking out in the head, especially if dry Myrtles be put thereto. It is an ordinary thing to prescribe vnto them that are giuen to shaking, for to eat fasting bread foked in water, presently after they come forth of the bath. The perfume of bread burnt, taketh away all other euill smells that may be in a bed chamber: & being put into those Hippocras bags through which wines be strained, it altereth the naughty tast which they haue.

Furthermore, euen Beanes haue their properties which serue in Physicke: for being fried all whole as they be, and so cast piping hot into sharp vinegar, they help the collicke and pangs of the belly. Bruised and so eaten, or foddren with Garlick, they be excellent good against coughes that were thought past cure and remediless; yea, and imposthumes in the breast grown to suppuration; but the patient ought to feed thereof continually euery day. Also if one chew them fasting, and so apply them to a fellon, they are thought passing good either to ripen or to discusse the same. Boiled in wine, and so laid too, they assuage the swellings of the cods and priuy parts seruing to generation. Bean floure foddren in vinegar, doth ripen and breake all tumors: in like manner it dissolueth black bruised blood lying vnder the skin, and healeth burns. *M. Varro* is of opinion, that it is good for the voice. Bean stalks and bean cods burnt to ashes, and so incorporated with old Swines seame, is good for the Sciatica and all inueterat pains of the sinews. The very husks of beane alone foddren to the thirds, do stop the lask and running out of the belly.

The best Lentils be they that are most tender, and ask least seething: also such as drink much water. Lentils verily do dim the cie-sight, and breed ventosities in the stomacke: but taken in meat they stay the flux of the guts, and the rather if they be thoroughly foddren in rain water: but in case they be not fully boiled, they do open the belly and make the body laxatiue: the efcars or rofts remaining vpon cauterized or blistered sores, they break and make to fall off: & those vlcers which are within the mouth, they mundifie and cleanse. Applied outwardly, they appease the pains of all imposthumes, especially if they be exulcerat and full of chaps: and reduced into a cataplasme with melilote or a quince, they are singular for to repress the flux of humors to the eyes: but for to keep impostumes and tumors from suppuration, they are laid too with Barley groats, or the grosse meale thereof torried. The iuice of Lentils after they be foddren, is good for the exulcerations of the mouth, and the genitors: likewise with an addition of oile Rosat or Quince, for the inflammation of the seat or fundament. But if the parts affected and exulcerat do require stronger and sharper remedies, the same would be applied with the rinde of a pomgranat, and a little hony put thereto. And to the end that the said cataplasme shal not dry quickly, they vse to put thereto Beet leaues. Lentils foddren thoroughly in vinegar, serue for a cataplasme to be laid vpon the swelling kernels called the Kings euill, and other fell biles, whether they be ripe or in the way only of maturation. Applied with honied water, they be very good for any clifts and chaps: but with the pill or rinde of a pomgranat, for Gangrenes. In like manner, with barly groats they be appropriat for the gout, the kidnies, the naturall parts of women, for kibes, and such vlcers as be hardly brought to cicatrice. Thirty grains of Lentils swallowed down by way of Boile, are singular for the feeblenesse and dissolotion of the stomacke. In dysenteries or bloody fluxes, in the violent rage of chollerick humors which cause euacuations both vpward & downe.

* It groweth indeed commonly vpon new wals, although the name seemeth to come from *Mures*, i. Mice and Rats: rather than *Muri*, i. Walls. * This booke goeth now vnder this title, *De ratione vitæ in morbis acutis*. * Contra, quanto innocenter est alica. * He glanceth at *Diatritos*, i. fasting three daies together

downward, Lentils do effectuall their operation much more, if they be sodden in three waters. For which purpose also better it is to torrefie them first, and then to pound or beat them small, that they may be giuen to the patient as fine as may be, either by themselves alone, or els with a Quince, with Pears, Myrtle berries, wild Cichory, black Beets or Plantain. Howbeit, note thus much, That Lentils are nought for the Lungs, for head-ache, for all neruous parts, and the gall, and this ill property they haue besides, to keep the patient from sleep. Being sodden in sea-water, they are good for pusses and angry wheales, for *S. Antonies* fire, and the accidents that befall womens breasts; but if they be boiled in vinegar, they discusse all hard tumors, & the kings euil. They that haue but weak and bad stomacks, vse verily to put Lentils to thicken their portage and gruels, instead of Barly groats, and find thereby much ease. If they be halfe sodden in water, afterwards braied or stamped, & then let passe through a tamise, that the brans might be separat from the rest, they are thought very good for burns: but then, within a while as the cure goeth forward, they must be applied with honey also put thereto. Finally, if they be sodden in Oxycrat or water and vinegar together, they help the swelling bunch of the throat called Bronchocele.

There is a kind of marish or moory Lentils [called Ducks meat] growing of it selfe in standing waters. This herb is by nature refrigeratiue: in which regard, it serueth to make a liniment vsed for inflammations and hot imposthumes: but principally for all manner of goutes, either alone or mingled with Barly groats. The same hath vertue to knit & consolidat ruptures, when the bowels are fallen downe.

Moreouer, there be wild Lentils, called by the Greeks *Elelisphacos*, by others, *Phacos*. These be lighter than the tame Lentils which are sowed, bearing a smaller leafe, drier also, & more odoriferous than the other. Of which wild Lentils, there is a second sort, carying a strong smell: in somuch as the former kind is counted the milder. These Lentils haue leaues formed to the fashion of quince leaues, but that they be lesse and white, and commonly they are sodden branch and all together. Their medicinable vertues be, to bring down the monthly sicknesse of women, to prouoke vrines, and to heale the wounds occasioned by the venomous prick of the sea puffin or fork-fish. Now the nature of this fish is to benum and mortifie the place which is stricken. Of these Lentils and Wormwood, there is a drink made, good for the dysentery, or bloody-flux. The same taken with wine, draweth down womens fleurs that stay vpon them: but if their bare decoction be drunk, it will stay them when they flow immoderately. The herb alone applied outwardly, represseth the ouermuch bleeding of fresh wounds: it cureth the itch occasioned by the stinging of serpents. The decoction thereof in wine, doth mitigate the itching of the cods, if they be bathed and fomented therewith.

Our moderne Herbarists in these daies, doe call that in Latine *Salvia*, (*i.*) *Sange*, which the Greeks name *Elelisphacos*. An herb it is much resembling Mints, of a gray and hoary colour, and withall odoriferous. Being applied to the naturall parts of women, it fetcheth away the dead infant within the womb: it ridderth the ears also and festered vlcers of those wormes and vermin which breed therein.

Moreouer, there is a kind of wild Cich-peafe bearing leaues like to the other of the garden, and which be sowed, saue that their smell is strong & vnpleasant. If a man feed largely of them, they stir the belly and moue to the siege, they breed ventosities, cause the collicke and wringing of the guts. Howbeit, if they be parched or torrefied they are reputed the wholesomer.

The Cichling or pety Cich-peafe, is thought to be better and more wholesome to the belly than the other: but the meale as wel of the one as the other, doth heale the running sores & scales of the head: howbeit, the wild better than the rest. Moreouer, these ciches are taken to be good for the falling sicknesse, the swellings of the liuer, and the sting of Serpents. They procure womens termes, and prouoke vrine, and especially the grain it selfe rather than the leafe. The same are singular for tetters and ring-worms, for inflammations of the cods, for the jaundise & drop-sie. But all the sort of them be hurtfull to the bladder and kidnies, especially if they be exulcerat. For gangrenes and those morimall vlcers called *Cacoethe*, they be better, in case they be tempered with honey. Some there be, who for to be ridde of all kinde of Warts, take as many Cich-peafe as there be warts, and with euery one of them touch a wart, and that, vpon the first day after the change of the Moon: which done, they tie the foresaid Peafe or Ciches in a little linnen bag, and sling them away backward behind them: and they are perswaded that the warts will

A will be gone by this means. But our Latine Physitians are of opinion, That the blacke ciches which be called *Ram-ciches*, should be well and thoroughly sodden in water and salt: of which decoction they prescribe vnto the patient for to drinke two cyaths, in difficulty of making water, for to expell the stone, and rid away the jaundise. Their leaues and stalks of straw being sodden in water ouer a good fire, yeeld a decoction, which being vsed as hot as may be suffered, doth mollifie the callosities & hardnesse growing about the feet: so doth a liniment also made of the very substance it selfe, stamped and applied hot.

The Columbine ciches sodden in water, are thought to lessen and shorten the shaking fits in tertian and quartan agues. The black cich-peafe being beaten to powder with halfe the quantity of gall-nuts, and incorporat with sweet wine cuit, called *Passum*, and so applied, cureth the vlcers of the eyes.

As touching Eruile, somewhat I haue said already touching the properties thereof, when I made mention of it among other kinds of pulse. And indeed the old writers haue attributed as great power & vertue vnto it as to the Colewort. Being laid to with vinegar, it cureth the hurts that come by the sting of serpents, or the teeth of man & crocodile. There be writers of approved authority, who affirm for certain, That if a man doe eat Eruile fasting euery day, it will diminish and wast the swelling of the spleen. The meale of Eruile (as *Varro* reporteth) taketh away the spots and moles of any part of the body. And in truth, this pulse is singular to repress corrofue and eating vlcers: but aboue all, it is most effectuall in the sores of womens breasts: applied with wine, it breaketh carbuncles. Being torrefied and incorporat with hony, and reduced into an electuarie or bole, and so taken as much as an hazell nut, it amendeth the suppression or difficulty of voiding vrine, dissolueth ventosities, openeth obstructions, and helpeth other accidents of the liuer, the prouocations and proffers to the stoole without doing any thing: reuiueueth those parts that milke and feele no benefit or nutriment of meat, which they cal in Greek *Atropha*. In like manner it cureth shingles, ring-worms, and tetters, if it be first sodden in vinegar so applied, and not remoued vntil the fourth day. If it be laid too with hony, it keepeth bites from suppuration. A fomentation made with the decoction thereof in water, helps kided heels, & the itch. And it is generally thought, That if a man drink it euery day next his heart vpon an empty stomach, it will make the whole body looke with a better and more liuely colour. Contrariwise, the common opinion is, That it is not good to be eaten ordinarily as meat, for it moueth to vomit, troubleth the belly, lieth heauy vpon the stomach, and fumeth vp into the head:

C it breedeth ache and beauienesse in the knees. But if it haue lien many daies in sleepe, after that imbibition of water, it becommeth more mild, and is a most wholesom prouender for horse and oxen. The green cods of Eruile before they waxe hard, if they be stamped with their stalkes and leaues together, do colour and die the hairs of the head * blacke.

As touching wild Lupines, they be inferior to those which come of seed, in all respects, but only in biternesse. And verily there is not a thing more commendable, wholesome, and light of digestion than white Lupines, if they be eaten dry. They are brought to be sweet and pleasant by hot ashes or scalding water. Being eaten at meales vsually, they make a fresh colour and chearfull countenance. Bitter Lupines are very good against the sting of the Aspides. Dry Lupines husked & clenfed from their skins & applied to black & mortified vlcers, full of dead flesh, sodden in vinegar, discusse the kings euill, and the swelling kernels & impostumations behind the ears. The broth or collature of them being sodden with Rue and Pepper, may be giuen safely, although it were in an ague, to those that bee vnder thirty yeares of age, for to expell the wormes in the belly. As for young children who haue the wormes, it is good to lay Lupines to their bellie whiles they be fasting. All others are to take them torrefied, either by way of drink in a kind of wine cuit, or els in electuary after the maner of a *lohoch*. The same do giue an edge to the stomacke, and quicken the appetite to meat. The meale or powder of Lupines wrought with vinegar into a dough or paste, and so reduced into a liniment, and vsed in a bain or stoupe, represseth and keepeth down all wheales and itching pimples which are ready to breake forth: and of it selfe is sufficient to drie vp vlcers. It bringeth to the natie and liuely colour al places blacke and blew with stripes. Medled with Barly groats, it assuageth all inflammations. For the weaknesse of the huckle bone, the haunch, and loins, the wilde Lupines are counted more effectuall than the other. A fomentation with the decoction of these wild Lupines, maketh the skin more

* For that colour in old time was best esteemed, and thereby chaste Matrons were knowne from wanton harlots, who affected yellow haire. *Alex. ab Alex. c. 18. l. 5.*

more smooth and beautifull, taking away all spots and freckles. But if the same or garden Lupines be boiled to the height and consistence of hony, they do cleanse the skin from black morpew and the leprosie. These also if they be applied as a cataplasme, do break carbuncles, bring down, or els ripen the swelling kernels named the kings euil, and other biles and botches, which of their nature be long ere they gather to head. Boiled in vineger, they reduce places cicatrized, to their naturall colour, and make them look faire & white again. But if they be thoroughly foddren in rain water, of the collature that passeth from them, there is made an absterfue and scouring lie in manner of sope, most excellent for to soment, gangrenes, small pocks, & running vlcers. A drink made thereof, is singular for the spleene: and if hony be put thereto, it prouokes womens fleurs, which make no halt downward. Take raw Lupines, stamp them with drie figges and vineger into a cataplasme, and apply them to the spleen, it is an excellent remedy. The root also foddren in water, prouoketh vrine forcibly. Lupines boiled in water with the herb Chamæleon, do cure the diseases incident to sheep and other such smal cattell, if they do but thinke of this decoction. Let them be foddren in the mother or lees of wine, or mingle both their decoctions therewith: they do heale the farfins, scab, and mange of all other foure-footed beasts what fouer. The fume of them as they burne, killeth gnats.

Concerning Irio, I said before in the treatise of corne and pulse, that it was like Sefama, and named by the Greeks Erysimon, whereas the Gaules do call it Velarum. This plant brancheth very much, and beareth leaues like to Rocquet, but that they be somewhat narrower, and brings forth seed resembling that of Cresses. This Irio taken with hony in form of a lohoch, is excellent good for the cough, and those who reach out filthy matter from their chest. Given it is for the jaundise, the diseases of the loins, for the pleurisie, the torments and wrings of the collicke, and the fluxes occasioned by the debility and weaknesse of the stomacke. Applied in form of a liniment, it is singular good for the inflammations behind the ears, for the cancerous vlcers also, and the symptoms thereto belonging. Laid to the cods with water, and otherwhiles with hony, it altereth their distemperature of heat, and the inflammations whereto they are subject. And foueraigne it is for infants. Likewise a cataplasme made of it, with figs and hony, is singular for the accidents and griefes of the fundament, as also for the gout and pains of the joints. Taken in drink, it is an effectuall counterpoison. It cureth those who are short winded. Applied outwardly with old hogs-grease, it helpeth fistulous sores, so there be care had that none of it go into the vlcers.

* *res. n. 3* for
meant, i. Hor-
hound.
* He confoun-
deth (as it
should seeme)
the vertues of
Hormium,
i. Clarie the
hearbe, with
the graine cal-
led also Hor-
minum.

As for the graine Horminum, it hath a seed resembling Cumin, as I haue said before: otherwise it is like to * Porret: and groweth to the height of a span or nine inches. Two kindes there be of it: whereof the one hath a blacker seed than the other, and somewhat long. * This hath power to prouoke lust, and is much vsed for the pin and web, for the perle also in the eye: the other hath a whiter seed and rounder. Both the one and the other if they be stamped, draw forth pricks and thornes out of the body, if a liniment be made of them alone, and applied with water. But a cataplasme of the leaues with vineger, or alone by themselves, or else with honey, discusse and resolute biles without suppuration. In like manner they dispatch fellons, if they be taken before they grow to any head, and generally all tumors proceeding from sharp and hot humors. And thus much of grain.

A strange thing that Nature hath so ordained, That the very pestilent weeds which plague corne, should haue their vse in Physicke. For first and formost there is Darnel, which albeit Virgill termeth Infelix, i. unhappy, yet if it be ground and foddren in vineger, and so applied, it cureth tectars and dry scabs joined with a great itch: and the sooner doth it the deed, the oftner it is removed and changed. Darnell floure laid too, with Oxymell, cureth the gout & other pains. And to say a truth, the manner of this cure differeth from the rest. For the preparing of which medicine, the said floure must be ordered in this manner, & after this proportion: for euery sextar of vineger, it sufficeth to dissolue therein two ounces of hony; take then three sextars of this mixtion, and put thereto two sextars of Darnell meale, foddren to a thicke consistence: which done, temper all together, and apply this cataplasme to the grieved and pained members. The same meale draweth forth spoils of broken and shuiered bones.

A weed there is, called Miliaria, for that it killeth the grain Millet. Beat this to powder, and mingle it with wine, then poure this drench with an horne downe the throat of laboring jades: they say it will cure their gouts.

As

A As for Bromos[i. wild Otes] which the Greeks take for the seed of a certain spiked or eared weed, counted it is for one of the imperfections growing among corne, and may be ranged with the kinds of Otes: for blade and stalk, it commeth neere to wheat; it beareth in the haw or bea: certain grains hanging down, which resemble small locusts; the seed is good to be vsed in the cataplasms, into which barley and such like do enter; the iuice or liquor made of it, is singular for the cough. A weed there is which we named Orobanche, for that it choketh Eruiile and other pulse: some call it Cynomorion, for the resemblance that it hath to the cullions and pizle or genitall member of a dog. It riseth vp in a small stem without any leaues or blade: fatty it is and red: sometimes it is eaten alone; otherwhiles it is serued vp tender foddren, between two dishes, with other viands. Moreouer, there do ingender in pulse, certain little venomous vermins, who will pricke and sting their hands who are imploied in the plucking, yea and put them in danger of their life: a kind they are of these Solifugæ or Solpugæ. The remedies for all these, be the same which are set downe against Spiders, and Phalangia.

Thus much as touching all kinds of graine, as far forth as they concerne Physick. But this moreouer is to be noted, that of corne there be certain drinks made, as namely, Zythus in Egypt; Coelia and Ceria in Spaine; Ale and Beere and many more sorts, in Gaule and other prouinces. Now the froth or barme that riseth from these Ales or Beers, haue a property to keepe the skin faire and cleare in womens faces. But for the operation that Ale and Beere hath in them who drink thereof, I mean to passe them ouer here; for I thinke it better to proceed to the treatise of wine: but first I will discipher the medicinable vertues of trees, and begin with the vine.



THE TWENTY THIRD BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS

SECVNDVS.

The Proeme.

Thus far forth haue we gone ouer the upper face of the earth, and shewed what medicinable vertues there be in all kinds of graine, as well corne as pulse: as also what Physicke may be found in woorts and pot-herbs: yea and in those garden plants, which by reason of their faire floures and sweet odours, serue mans turne for garlands and chaplets. It remaineth now to speak of lady Pomona and her gifts, who certes commeth not behind dame Ceres with all her riches. And verily this Nymph and goddess Pomona, not content thus to protect, maintaine, and nourish vnder the shade of her trees, those fruits of the earth above named; but displeased rather and taking scorn, that such plants which grow farther from the Cope of Heauen, and began long after trees to come vp and shew themselves, should seeme to haue so many vertues: hath likewise furnished the fruits hanging vpon her trees, with their properties, and those of no small operation and effect in Physicke. And in truth, if we consider and weigh the cause aright, shee it was that afforded to mankind the first food from those her trees, inducing vs thereby to lift vp our eyes and looke to Heauen-ward: yea and shee giueth the world to vnderstand, that if Ceres and Flora both should faile, shee with her goodsonly were able euen still to sustaine and feed vs sufficiently. And to beginne with the Vine, which ought by right to be ranged in the highest ranke of all those plants that beare the name of Trees: This countifull Ladie not satisfied herein, that shee had done pleasure vnto man in furnishing him with noble perfumes, odours, and delicate Ointments, by means of the grape ver-

juice.

juice, the Vine-floure Oenanthe, and namely the wilde Vine Massaris in Africke (according as I have discouered more at large heretofore) hath therefore bestowed vpon Vines those medicinable vertues in greatest measure, and withall vnto men in this manner: Call to minde (quoth shee) how many benefits and pleasures thou receivest at my hands; Who is it but I, that haue brought forth Wine, that sweet juice of the Grape? Who but I, haue giuen thee Oyle, that daimie liquor of the Olive? From mee, come Dates and Apples: from mee thou hast all Fruits of such varietie, that impossible it is to number them. Neither doe I deale by thee as dame * Tellus doth, who bestoweth nothing vpon thee without labour and sweat of thy browes; nothing (I say) but before it doth thee any good, requirerth tillage by Oxe and Plough, thrashing with flail vpon the floore, or trampling of beafts feet vnto the mow, and then the Mill-stones to grinde it in: Such adoe there is, and so long a time first, before thou canst enjoy the benefit thereof for thy food. But contrariwise, whatsoeuer cometh from mee, is ready at hand; there needes no intreating of the Plough, nor any great labour and industrie to haue and in oyle my fruits, for they offer themselves of their owne accord: yea, and if thou thinke much of thy paines to climbe, or to put vp thy hand and gather them, loe they are ready to droppe downe and fall into thy mouth, or else to lie vnder thy feet. See how good and gracious Nature hath bene vnto vs herein, and how shee hath strewn with herselfe, Whether she should profit, or pleasure man more! & yet I take it, that she affected Commoditie rather than Delight.

For to come vnto the vertues and properties of the vine, The very leaues and tender burgeons thereof, applied with barley groats, doe mitigate the paine of the head, and reduce all inflammations of the bodie vnto the due temperature. The leaues alone of the vine, laid vnto the stomack with cold water, allay the vnto kinde heats thereof: and with barley meale, are singular for all gouts and diseases of the ioints. The tendrils or young branches of the vine being stamped and applied accordingly, drie vp any tumors or swellings whatsoeuer. Their iuice imicted or poured into the guts by a clyster, cureth the bloody fluxe. The liquor concreat (which is in manner of a gumme issuing from the vine) healeth the leproie and all foule tetter, scabs and manges, in case the parts affected were prepared and rubbed before with salniter. The same liquor or gumme is likewise depilatorie, for if the haire be often annointed with it and oyle together, they will fall off: but the water especially that sweateth out of greene vine branches as they burne, hath a mightie operation that way, inasmuch, as it will scatch off Warts also. The drinke wherein young vine tendrils haue lien infused, is good for those who reach vp and spit blood; as also for women who being newly conceived and breeding childre, haue many swannes come ouer their heart, and be eftsouenes subiect with faintings. The vine barke or rinde, likewise the dried leaues stanch the bleeding in a wound, yea and doe consolidate and heale vp the wound it selfe. The iuice drawne out of the white Vine being stamped greene, and Frankincense together, take away shingles, ring-wormes, and such like wilde-fires, if it bee applied thereto. The ashes of the vine-stocke, vine-cuttings, and of the kernels and skinnies of grapes after they be pressed, applied with vineger vnto the seat or fundament, cure the piles, swellings, fissures, chappes, and other infirmities incident to that part: but incorporate with oyle. Rosat, Rue, and vineger, they helpe dislocations, burnes, and swellings of the spleene. The same ashes strewed with some aspersions or sprinkling of wine, vpon S. Anthonies fire, without any oyle, doe cure the same: as also all frets and galls betwene the legges, and besides cat away the haire of any place. The ashes of vine-cuttings, besprinkled with vineger, are giuen to drinke for the diseases of the spleene; so as the Patient take two cyatts thereof in warme water, and when hee hath drunke it, lie vpon the spleene side. The very small tendrils of the vine whereby it climbeth, catcheth, and claspeth about any thing being punned and taken in water, staerth and represseth vomiting in those, whose stomacks are ordinarily to be heektilsh and soone to ouerturne. The ashes of vines tempered with old hogges greafe, is singular to abate swellings, to cleanse fistulous vlcers first, and soone after to heale them vp cleane: likewise for the paine of sinewes proceeding of cold, and for contraction and shrinking of the nerues: also for bruisings, being applied with oyle. Moreover, they cat away all excrescence of proud flesh about the bones, being tempered with vineger and niter: and last of all, mixed with oyle, they heale the wounds made by scorpions or dogs. The ashes of the vine-barke alone, cause the haire to come againe in a burnt place.

How grape verinice should be made, when the grapes are young and nothing ripe, I haue shewed in the Treatise of Perfumes and Ointments. It remaineth now to discouise of the medicinable vertues thereof: and first to begin withall, it healeth all vlcers that happen in moist parts, and namely those of the mouth, Tonsils or Almond-kernels on either side of the throat, and of the priuie members: the same is soveraigne for to clarifie the cie-sight: it cureth the asperitie and roughnesse of the cie-lids, the fistulous vlcers in the corners of the cie, the cloudes or films that shadow and coner the sight, the running sores in

A in any part of the body whatsoeuer: the corrupt and withered cicatrices or scars, and the bones charged with purulent and skinny matter. Now if this verinice bee too tart and eager, it may be delaid with honey or wine-cut: and so it is good for bloody fluxes, and the exulceration of the guts for those who reiect and reach vp blood, and for the Squinance.

Next after the wine-verjuice Omphacium, I cannot chuse but write of Oenanthe, which is the floure that wild vines doe beare, whereof I haue already made mention in my discours of ointments. The best Oenanthe is that of Syria, especially along the coasts and mountaines of Antiochia and Laodicea. That which groweth vpon the white vine, is refrigeratiue and astringent: being powdered and strewed vpon wounds, it doth very much good: applied as a liniment to the stomack, it is exceeding comfortable. A proper medicine it is for the suppression of vrine, the infirmities and diseases of the liuer, the head-ache, the blondie flux, the imbecility of the stomack, and the loosenesse proceeding from it: also for the violent motion of cholerick humours proceeding upward and downward. The weight of one obolus thereof taken with vineger, helpeth the loathing that the stomacke hath to meat, and procureth appetite. It drieth vp the running scales breaking out in the head: and most effectuall it is to heale all vlcers in moist parts, and therefore cureth sores in the mouth, priuie members, and the seat or fundament. Taken with hony and saffron, it knitteth the belly. The scurfe and roughnesse of the cie-lids it doth cleanse and make them smooth: it represseth rheume in watric eies. Giuen in wine to drinke, it comforteth and confirmeth feeble stomacks; but in cold water, it staies the casting and reaching vp of blood. The ashes thereof is much commended in collyries & cie-salues, also for to mundifie filthy and vlcereous sores; to heale likewise whitlawes rising at the naile roots, and either the going away of the flesh from them, or the excrescence thereof remaining about them. For to bring it into ashes, it must be torried in an Ouen, and so continue vntill the bread be baked and ready for to bee drawne.

As for Massaris, or the Oenanthe in Africke, it is imploied onely about sweet odours and pomanders: and both it, as also other floures, men haue brought into so great name, by making haste to gather them before they could knit to any fruit: so inuentiue is mans wit, and so greedy to hunt after nouelties and strange deuises.

CHAP. I.

D The medicines which grapes fresh and new gathered do yeeld. Of Vine branches and cuttings: of grape kernels, and the cake remaining after the presse. Of the grape Theriack. Of dried grapes or Raisins. Of Aitaphis: of Staphis-acre, otherwise called Pituitaria. Of the wild vine Labrusca: of the wild vine both white and blacke. Of Musts or new wines. Of sundry kinds of Wine, and of Vineger.



F Grapes that grow to their ripeness and maturitie, the blacke are more vehement in their operation than the white: and therefore the wine made of them is nothing so pleasant: for in very truth the white grapes be sweeter far, by reason they are more transparent and cleare, and therefore receiue the aire into them more easily. Grapes new gathered do puffe vp the stomacke and fill it with winde; they trouble also the belly, which is the cause that men are forbidden to eat them in feuers, especially in great quantity; for they breed heauinesse in the head, and induce the Patient to sleepe ouermuch, vntill hee grow into a lethargie. Lesse harme doe those grapes, which after they be gathered hang a long time: by which means they take the impression of wind and aire, and so become whoosome to the stomacke and to any sicke person; for they doe gently coole and bring the Patient to a stomacke againe. Such grapes as haue bin condite and preferred in some sweet wine, are offensive to the head and fume vp into the brains. Next in request to those abovesaid, which haue hangd a long time, be such as haue bin kept in chaffe: for as many as haue lien among wine-mare, or the refuse of kernels & skins remaining after the presse, are hurtfull to the head, the bladder and the stomacke: howbeit they doe stop a laske, and nothing is there better in the world for those that doe cast and reach vp blood: and yet those grapes that haue bin kept in must or new wine, are much worse than such as haue lien in the mare aforesaid.

Moreover, wine cuir, if they have come into it, maketh them hurtfull and offensive to the stomack. But if they must needs be preferred in some liquor, the Physicians hold them most whole some which haue bin kept in rain water, although they be least toothsome: for they do the stomack a great pleasure in the hot distemperature thereof; they be comfortable when the mouth is bitter, by occasion of the regurgitation of choler from the liuer and the burse of the gal; they giue great contentment also in bitter vomits, in the violent and inordinat motion of cholerick humors raging upward and downward, as also in case of dropisie, & to those that lie sick of burning feuers. As touching grapes preferred in earthen pots, they refresh and season the mouth which was out of taste: they open the stomack, and stir vp the appetite to meat: howbeit this in- convenience they bring with them, That they are thought to lie more heauy in the stomacke, by reason of the breath and vapor which exaleth from their kernels. If hens, capons, cocks, and such like pullen, be serued among their meat with the floures of grapes, so as they once tast and eat thereof, they wil not afterwards peck or touch any grapes hanging by clusters vpon the vine.

The naked branches and bunches wherupon there were grapes, haue an astrictiue vertue, and indeed more effectuall that way be such as come out of the pots aboue said. The kernels or stone within the grapes, haue the same operation: and in very truth, these be they and nothing els, whereby wine causeth head-ach. Being torrifed & beaten to powder, and so taken, they be good for the stomack. Their powder is usually put into the pot in manner of barley groats for to thicken broth and suppers, which are ordained for them who haue the bloody flux, who are troubled with a continual loosenesse following them by occasion of the imbecillity of the stomack; and for such as are ready to keck and heaue at euery little thing. Their decoction serueth very wel, to foment those parts which are broken out and giuen to bleache and itch. The stones themselves are lesse hurtful to the head or bladder, than the little kernels within. The same beeing driuen into powder, and applied with salt, are good for inflammations of womens breasts: the decoction thereof, whether it be taken inwardly, or vsed by way of fomentation, helpeth as well those who haue gone a long time with a dysentery, or bloody flux, as them who through imbecillity of stomack, do scoure and purge downward continually.

The grape Theriace, whereof we haue written in due place, is good to be taken as a counterpoison against the sting of serpents: & it is a common received opinion, that the burgeons and branches of that vine, should likewise be taken inwardly as meat, & applied outwardly for the same purpose: as also that both wine and vinegar which is made of them, is of singular operation to the same effect.

The dried grape or raisin, which they call *Astaphis*, would trouble the stomack, belly, and in- trails, but for the kernels that are within the stones, which serue as a remedy to preuent and cure those inconueniences; which being taken forth, raisins be thought good for the bladder: but particularly for the cough, those of the white grapes be the better. Soueraigne are they also for the wind-pipe and the reins: like as the sweet cuir which is made thereof hath a speciall power and vertue against the Hemorrhoids alone, of all other serpents. A cataplasme made of them, together with the powder of Cumin or Coriander seed, applied to the cods, cureth their inflam- mation. Likewise, if they be stamped without their stones or kernels, together with Rue, they are singular good for carbuncles and gouts: but before this cataplasme be laid to any vlcers, they ought before hand to be bathed and fomented with wine. Applied with their stones, they heale chilblanes and bloody falls, yea and ease the paines and wrings which accompany the bloody flux. Of them boiled in oile, there is a liniment made, which being applied with the outward rind of a radish root and hony, helpeth gangrenes: but if there be Panace or Loue-ach added thereto, the liniment cureth the gout, and confirmeth nails which be loose. Being chewed alone with some pepper, they purge the head and the mouth.

Astaphis agria, or *Staphis*, which some (though vntruly) call *Vva Taminia* (for this is a feue- rall kind by it selfe, growing vp with straight black stalks, and carying leaues like to the wilde vine *Labrusca*) beareth bladders or little cods more like than grapes, of a green color, & resem- bling eich-peale, within which is to be seen a three-cornered kernel: it waxeth ripe and begin- neth to change colour and looke black, at vintage time: whereas we know that the grapes of the *Taminian* vine be red: also we are assured, that *Staphis* acre loueth to grow in Sun-shine pla- ces, but the *Taminian* grape nowhere but in the shade. The said kernels I would not aduise to be vsed for a purgation, considering the doubtfull euent and danger that may insue of choking

and

A and strangulation: neither for to draw downe fleame and waterish humors into the mouth, for surely they be enemies to the throat and weasin pipe. The same, if they be done into powder, rid lice out of the head & all parts of the body besides: which they do the better & with more ease, in case there be *Sadaracha* or *Orpiment* among. In like manner, they kill the itch and the scabs. For the tooth-ache, they vse to be foddren in vinegar, for the disease is also of the ears, for rheums and eating cankers of the mouth. The floure beaten into powder and so taken in wine, is singu- lar for the biting and stinging of serpents: for I would not giue counsell to vse the seed, so exceed- ing hot it is and so fiery a nature. Some call this herb *Pituitaria*, and apply it as a liniment to the sores occasioned by the biting of serpents.

As for the wild vine *Labrusca* it carieth also a floure named in Greeke *Oenanthe*, whereof I B haue written enough before. The wild vine which the Greekes name *Ampelos Agria*, hath thick leaues, and those inclining to a white colour: the stalkes or branches be diuided by joints and knots, & the bark or rind is all ouerful of chinks & crenisses: it beareth certain red grapes much like vnto the berries wherewith they colour scarlet, which being stamped with the leaues of the same plant, and applied with juice of the oyle, are good to cleanse and beautifie the skin in wo- mens faces; and besides, do help the accidents and griets that may befall to the haunch, huckle- bone, and the loins. The root boiled in water, and so taken in two cyaths of the * wine of the I- land *Cocos*, doth euacuate watery humors gathered in the belly, and by consequence is thought to be an excellent drink for them who are in a dropsie. And this is the plant, which in my iudge- ment should be that vine which commonly is called in Latine *Vva Taminia*, rather than any C other. Vsed much it is for a counter-charme against all witchcrafts: and giuen it is to gargarise only with salt, thyme, and honied vinegar or oxymell, to them that spit and cast vp blood, with this caueat, To let none of it go down the throat: and therefore men feare to purge therewith, so dangerous it is thought to be. Another plant there is much like to this, called in Latine *Salica- strum*, for that it groweth in willow rews: and albeit these two carry diuers and distinct names, yet they be of the same nature and property, and be vsed to the like purposes. Howbeit this *Salicastrum* is taken to be more effectuall of the twain for to kill the scab, scurfe and itch, as well in men as in four-footed beasts, if it be bruised and applied with honied vinegar.

There is a certain wild white vine, which the Greekes call * *Ampelocela*, some *Ophiota- phylon*, others *Melothron* or *Pilothron*; some *Archezoftis* or *Cedroftis*, others *Madon*. This D plant putteth forth long and slender twigs, parted and diuided by certaine joints or knots, and these climb vp and clasp whatsoeuer they meet withall. The leaues grow thick and full of ren- drils or yong burgeons, as big as Ivy leaues, diuided & jagged in manner of other vine leaues: the root is white & big, like at the first to a radish, from which there spring certain thorns or spines resembling the buds of *Aparagus*: these yong sprouts foddren & eaten with meat, purge both by siege and vrine: the leaues and branches be exulcerating, and wil raise blisters vpon the body, and therefore applied with salt as a liniment, they be good for corne vlcers, gan-grenes, woules, and the old morrill sores in the legs. The seed or graine therof is contained within certaine berries hanging down thin here and there in small clusters, which yeeld a certain red juice or li- quor at the first, but afterwards it turneth to a yellow saffron colour: this know the curriers well E who dresse skins, for they vse it much. There is an ordinary liniment made therewith, for scabs, mange, and leprosie. The seed being boiled with wheat, and so taken in drink, causeth nurces to haue good store of milk. The root of this wild vine is very soueraigne, and serueth in right good stead for a number of purposes: first if it be powdered to the weight of two drams and giuen in drink, it is singular against the sting of serpents: it is excellent to scoure the skin of the face, to take away all spots and speckles, hecks and freckles, in any part of the body; the black and blew tokens of stripes, by reason of bruised blood lying vnder the skin; foul & vnseemly fver-skars, it reduceth to the fresh & naturall colour: these operations it hath, being boiled in oile: the deco- tion also is usually giuen in drink to those who be subiect to the falling euill: likewise to such as be troubled in mind & beside themselves: to as many as are giuen to dizzines & giddines of F the brain, and doween that euery thing turns round; but they must take the poise of one dram euery day throughout the yeare. The same root if it be taken in any great quantitie, * purgeth the fencies. But the principall and most excellent vertue that it hath is this, That if it be flam- ped with water, and so applied, it draweth forth spels of broken and shinered bones as well and effectually as the verie true *Bryonie*, which is the cause that some doe call it *White Bryonie*.

* Much like to our Maleney.

* Some take it to be *Bryonie*.

* For cataplasme to be put out of the seed and oyle of the root.

for there is another which is black, and of greater efficacie to the same purpose, if it be applied with hony & Frankincense. It is very good to resolute impostumes and biles which are in growing, and not yet come to suppuration; but if they haue continued and gather to an head, it bringeth them soone to maturation, and afterwards clenseth them. It bringeth downe womens monthly sicknesse, and prouoketh vrine. An electuary or lochoch made therof, to lick, and suffered gently to melt vnder the tongue and go downe leisurely, is singular good for such as bee short-winded and labour for breath: also for pleurisies or pains of the side, for conuulsions and inward ruptures. If one drink the weight of three oboli 30 daies together, it will waite and consume the swelled spleene. The same serueth in a liniment to be applied with figs to the excrescences or risings of the flesh ouer the naile, called Pterygia. Being laid too as a cataplasm with wine, it fetcheth away the after-birth in women: and taken to the weight of a dram, in honied water, it purgeth flegmatick humors. The juice of the root must be drawne before the fruit or seed be ripe: this juice either alone, or incorporat with Erule meale, if the body be annoited therewith doth illustrate the colour, make the skin soft and tender; and in one word it is such an embelishment, that it maketh any person better for the sale: * where by the way note, that it chafeth serpents away. [Moreover, the very substance of the root, if it be stamped with fat figs, doth lay the riuels and wrinkles of the skin plain and euene, if it be rubbed or annoited therewith: but then the party must walk immediately vpon it, a good quarter of a mile; for otherwise it will fret and burne the skin, vnlesse presently it be washed off with cold water. Howbeit the black wild vine doth this feat more gently and with greater ease, for surely the white setteth an itch vpon the skin. There is therefore a black wild vine, which properly they call Bryonia, some Chironia, others Cynecanthe or Apronia, like in all respects to the former, but only in the colour [of the root grape or berry] for it is black, as I haue before said. The tender sprouts & sions that spring from the root, *Droches* preferred to be eaten in a salad or otherwise, before the very crops and tender shoors of the true garden Sperage; and indeed they prouoke vrine and diminish the spleen far better: it groweth commonly in hedges among bushes and shrubs, and most of all in reed-plots. The root without-forth is blacke, but within of a pale yellow box colour; and this is of much more efficacie to draw out broken bones than the aboue-named white Bryony. Moreover, this peculiar property it hath besides, To cure the farcines or sores in horse necks and for this, it is thought to be the only thing in the world. Said commonly it is, that if a man do set an hedge or hay thereof round about a grange or ferm house in the country, there will no kites nor hawks, nor any such rauening birds of prey, come neere; so as the pullen and other fowl kept about the said ferme, shall be secure from their claws or talons. If it be tied about the ankles of a man, or the pasterns of laboring horses, vnto which there is a fall either of Phlegmatick humors, or of a blood, causing the gout in the one and the pains in the other, it cureth the same. Thus much concerning the sundrie sorts of Vines, and their properties respectiue to Physicians.

As touching Musts or new wines, the first and principall difference of them lieth in this, that some by nature are white, others blacke, and others again of a mixt colour between them both. Secondly, some Musts there be, whereof wine is made; and others, which serue only for cuit: but if we regard the artificiall deuises and the carefull industry of man about them, there be an infinit number of musts all distinct and different one from the other. Thus much may suffice to deliuer fully in generall terms concerning musts or new wines. As for their properties, There is no must or new wine, but it is hurtfull to the stomach, though otherwise pleasant to the veines and passages. Certes, if a man poure downe new wine hastily, without breathing or taking the wind between, presently as he commeth out of the bain or hot-house, hee doth enough to kill himselfe. Howbeit, of a contrary nature it is to the Cantharides, & saue those that are in danger by drinking them. A singular counterpoison is new wine in the lees, against all serpents, but principally the Hemorrhoids and the Salamanders. It causeth head-ache, and is an enemy to the throat and windpipes: whosome it is for the kidneys, the liuer, and the inward parts of the bladder, for it easeth them all of pain. But a singular vertue it hath against the venomous worm or flie Buprestis, about the rest: if one drink it with oile, and cast it vp againe by vomit, it is an excellent remedy for those who haue taken too much Opium: it helpeth those who are in danger of erudled milk within the body: such also as are poisoned with hemlock, envenomed with the poison Toxica & Doryenium. In sum, white new wine is not so powerful in operation as others.

* I see no reason of this clause here, but thinke it superfluous, according to some manuscripts.

Others. Likewise, the Must, whereof cuit is made, is pleasanter than the rest, & causes lesse headach. As touching the sundrie kinds of wine, which are exceeding many as also the vertues, and properties of euery feuerall sort in manner by it selfe, I haue sufficiently discoursed in a former Treatise. Neither is there any point more difficult to be handled, or that affoordeth greater variety of matter. And a man cannot readily say, Whether wine be more hurtfull or wholsome for our bodies? considering the doubtful euent and issue presently on the drinking thereof, for that sometime it is a remedy and a helpe, otherwhiles it proueth to be a mischief and a very poison. For mine owne part, according to my first design and purpose, I am to treat only of such things as Nature hath brought forth for the health and preseruauon of man. Wel I wote, that *Asclepiades* hath made one entire volume expressly, of the manner how to giue wine in drinke. Vpon which treatise or book of his, an infinit number there were who haue written their Commentaries. As for me, according to that grauity which becometh Romanes, and to shew affection and loue to all liberall Sciences, I will not discourse thereof as a Physician, but with great care and diligence write so distinctly, as a deputed iudge or arbiter delegat to determin of mans health, and the preseruauon thereof. To dispute and reason of euery feuerall kind, were a endles peece of work, and so intricat, as I wot not how a man should rid himselfe out of it, if he were once entred; so repugnant and contrarie are the Physicians one to another in that argument.

To begin first with the wine of Surrentum, our ancients haue held it simply for the best aboue all others. But our later and more modern writers, haue made greater account of the Albane and Falerne wines. In summe, euery one hath iudged of the goodnesse of wine, according to his owne conceit and fantasie: a most vnequall course of proceeding, without all reason and congruities, to pronounce definitively vnto all others that for best, that pleased and contented his owne tast most. And yet set the case and say, they were all agreed and of one opinion as touching the most excellent wines; How is it possible, that the whole world should enioy the benefit thereof, since that great lords and princes themselves haue much adoe to meet with pure and perfect wines, without one sophistication or other? In good faith, the world is grown to this abuse, that wines be bought and sold now at an higher or lower price, according to the name and bruit that goeth onely of the cellars from whence they come: whereas in truth, the wines were marred and corrupted at the first in the very presse or vatt, presently after the vintage and grape-gathering. And therefore it is, that now adaies (a wonderfull thing to be spoken) the smallest and basest wines are of all others least sophisticate and most harmelesse. Well, how fouer it be, and admit the noblest kinds of wine are most subject to those bruings and sophistication, which make indeed the ods that is; yet those wines beforenamed, to wit, the Falerne, Albane, and Surrentine, do still import and carrie away the victory and prife from all the rest, by the generall voice & constant sentence of all writers. As touching the Falerne wine, it is not wholsome for the body, either very new, or ouer old; a middle age is best, and that begins when it is fifteen yeres old, and not before. This wine is not hurtfull to a cold stomacke: but I cannot say of a hot stomack. If it be taken alone and pure of it selfe in a morning, and drunke fasting, it doth much good to them who haue bin troubled with a long cough, or vexed with a quartan ague. And verily, there is not a wine that stirreth the blood and filleth the veines so much as this. It staie the laske, & nourisheth the body. Howbeit generally receiued and beleueed it is, That this wine dimmeth the eyesight, and doth no good to the bladder and neruous parts. And indeed, the Albane wines agree better with the sinews. And yet the sweet wines that come from the vineyards of the same tract are not so wholsome to the stomack: but the harsh and hard austere wines of this kind, be in that regard better than the Falerne wines abouesaid. And in one word, these Albane wines charge not the stomacke any jot, nor yet fume vp in the head: nay, they restrain and repress the rheumaticke fluxions both of stomacke and guts. As for the wines of Cæcubum, they bee now past date, and none of them are made any more. But those of Setinum, that remaine still and be in some request, doe mightily aid concoction, and cause the meat for to digest. In a word, Surrentine wines haue most strength, the Albane drink harder, and the Falerne be more mild and nothing so piercing as the rest.

The Statane wines come not far behinde these abouenamed. As for the Signine wine, out of all question it is simply the best to bind the body, & stop a vehement flux: thus much for wines and their properties in particular. It remaineth now to speake of their vertues in generall.

First

First and foremost, wine maintaineth and fortieth the strength of man, engendreth good blood, and causeth a fresh and lively colour. And herein verily consisteth the principall difference betweene our temperat climat within the heart (as it were) and middle part of the world, from those intemperat Zones on either hand. And looke how much the distemperature of the two Poles, worketh in the inhabitants of those parts, and hardneth them to endure and support all kind of trauell: so much doth this sweet and pleasant liquor of the grape enable vs to abide and suffer the like labour. And because we are entred into this theame, note thus much moreouer, That the drinking of milke nourisheth the bones: of beere and ale, and such like, made with corne; feedeth the sinewes and neruous parts: but of water, maintaineth the flesh and brawnie muscles onely. Which is the cause, that such nations as drinke either milke, ale, beere, &c. or shere water, are nothing so ruddie of colour, nor so strong and firme to vndergoe painefull trauell, as those, whose ordinarie & familiar drink is wine. And in truth, as the moderat vse of wine comforteth the sinewes & helpeth the eyesight, so the ouer-liberal taking thereof offendeth the one, and enfeebeth the other. Wine recreateth & refresheth the stomack: wine stirreth vp the appetite to meat: wine allaieth sorrow, care, and heauinesse: wine prouoketh vrin, and chafeth away all chilling cold out of the body. Finally, wine induceth sleep and quiet repose. Moreouer, this good property hath wine, To stay the stomack & repress vomits, taken into the body: and without-forth applied with wooll embued and bathed therein, to dissipat and resolute all swelling apostumes. *Asclepiades* was so addicted to the praise of wine, that he bathed not to make comparisons & pronounce, that the power and puissance of the gods was hardly able to match and counteruaile the might and force of wine. Moreouer, this is to be noted, that old wine will beare a greater proportion of water than new, and prouoketh vrin more: although it withstand and allay thirst lesse. Sweet wines do not so much inebriate and ouerturne the brain, as others; but they stote aloft in the stomack: whereas austere and hard wines be lighter of digestion and sooner concocted. The lightest and smallest wine is that which soonest commeth to his age, and sheweth it most quickly. The wines which by age and long keeping, lay downe their verdure and become sweeter, are lesse hurtful to the sinewes than others. The grosse, fartic, and blacke wines, are not so good for the stomack; howbeit, they be most nutritive for the thin and bruske harsh wine nourisheth the body lesse; but yet more agreeable and nutritiue it is to the stomack. It passeth more speedily away by vrin, but sumeth vp so much the rather into the head. And take this for a generall rule once for all, not only in wines, but in any other liquors whatsoever, that be penetratiue, subtil, and piercing; That they be alwaies offensive to the head, howeouer otherwise they be piercing and passe soone away. Furthermore, wines that are laid vp in smokie places, therby sooner to seeme refined and old, are of all others most vnwholsome. But this and such casts were deuised by hucksters, vintners, & tauerners, after the wines were laid vp in their cellars. And now adaies good housekeepers also haue inuented means to renewe their wines, and make them seem fresh and new, after they haue by long lying gotten a fusty rotten tast, and gathered a mouldy mother of themselves, which is called *Caries* in Latin. And verily, our auncitors by vsing this teame, in wines ouerstale and kept ouer their due age, haue giuen vs counsell and taught vs sufficiently, how to take away this vnpleasant tast of wine, (i.) by smoake: for like as smoake eateth away and consumeth the moisture and mouldinesse in timber, which causeth rottennesse, so it doth in wines. But we forsooth, contrariwise are perswaded, that the bitternesse of smoake, when it hath caught the wine, maketh it to appeare stale & old. Such wines as be very pale and whitish, proue the better and more wholsome by age and long lying: the more excellent that the wine is and of the kindlier grape, the thicker and grosser it waxeth by age; and in this gathering turneth to a kind of bitternesse, which is hurtful to mans body. Also, as vnwholsome it is to mix, season, and coniect therewith some other wine, that is not so old, & so to keep or drinke them together. Each wine agreeth best with the stomack, and doth least harme, when it hath no other liquor nor tast, but the owne, and euery wine is most pleasant and delightfome when it is taken in due time, that is to say, neither old nor new, but of a middle age, which is the very floure. Such persons as would feed, and desire to be corpulent, or to keep their bodies soluble, and haue the riddance of their bellie at command, shall do well to drinke often at their repast: Contrariwise, they who feed ouermuch, and desire to be gant and slender, and withall, to be costliue, ought to forbear drinking at meales, so long as they eat, but after meat they may drinke moderately. To drinke wine vpon an emptie stomack fasting, is a new found deuise lately come

vp.

A vp, and it is most vnwholsome for the body, and namely for those who are to goe into the field for to fight a battell: for it hindereth the forecast of the mind, and dulleth the vigor and quicknesse of the spirit: fitter indeed to bring and lull men asleep in the bed of securitie: certes, it was a practise long agoe among such as desired rest and peace, and who loued to sleepe in a whole skin, for to drinke wine fasting: for so we read in *Homer*, how *Helena* that faire ladie, presented a cup of wine before meat. And hereupon came the prouerbe, That wine doth ouershadow and darken the light of wisdom & vnderstanding: verily we that are men haue this property aboue all other liuing creatures, and we may thank wine for it, That we drinke many times when wee be not dry nor a thirst. And therefore passing good it is to drinke fair water otherwhiles between. In like manner such as vse ordinarily to be drunk, & are lightly neuer sober, shall not do amisse to take a good draught of cold water presently vpon their liberall pouring in of wine, for it will forthwith dispat and disperse those fumes which cause drunkennes. *Hesiodus* giueth counsell to drinke wine somewhat delaied with water, for 20 daies before the rising of the Dog star, and as many after. True it is indeed, that Mere wine not delaied, is a remedy against hemlock, *Coriander*, the poyson *Aconite* or *Libard* baine, the venomous gum of the plant *Chamaeleon*, called *Ixia*, *Opium*, or the juice of *Poppie*, and *Quickefiluer* also, for such as haue been stung with Bees Wasps, and Hornets, the venomous spiders *Phalangia*, Serpents, and Scorpions, and generally, against all those poysons, which by reason of a cold quality moritifie naturall heat. But particularly it is a special countrepoyson against the venomous worms called Hemorrhoids & Presters, as also the deadly Mushrooms. Ouer and besides, singular good is wine against ventosities, gripings, and gnawings about the midriffe and precordiall parts about the heart: also for those, whose stomacks are ready euery while to ouerturne & cast: and where the belly or entrails be troubled with rheumatic fluxes. Semblably, wine a little delaied, is singular for the bloody flux: for such as be giuen to faint sweates, old coughs, and any violent fluxes either into the eyes or other inferior parts. But a fomentation of meere wine may be applied with a sponge to the left pap in the case of the Cardiacke passion, which is a feeblenesse and trembling of the heart. And in these cases white wine is better than any other, so it be of som reasonable age. Also it is found by experience, That horses and such beasts, either for the saddle and pack or draught, become very lusty, if their stones or genitors be bathed with wine hot: & when they be tired out, there is nothing (by report) better to refresh their courage, than to poure wine into them with an horne. Apes and Marmosets, and other four-footed beasts, whose feet are diuided into claws or toes, will not grow (men say) if they be vsed to drinke pure wine. But it is my purpose now to treat of the properties of wine, touching Physick and the cure of maladies. For gentlemen, well born and bred, who haue wherewith, and may haue what they wil, the wines of *Campaign* I count wholsomest, so they make choise of the smallest and the thinnest. But the common sort may be Physicians to themselves, and drinke euery man what wine he liketh most, and findeth best to agree with him. Howbeit to speake generally, the wholsomest wines both of the one sort and the other, and for all persons, be such as haue run through a strainer or *Ipocras* bag, and thereby lost some part of their strength. But this we must remember euery one of vs, That the liquor of wine gets all the force and strength that it hath by working, spurning, and seething (as it were) in the lees while it is Must. To mingle sundry kinds of wine together, can be good for none, either rich nor poore. Contrariwise, that wine is held most healthfull, that is of it selfe, and had nothing put thereto in the first vatt or vessell when it was new and meere Must of the grape, and the better will it bee, if there come no pitch into the barrells or vessells wherein it is tunned or filled. For as touching those wines, that are medicined with marble, plastre, and quicklime, what a man is he (were he neuer so healthy & strong) but he may be afraid well ynough to drinke thereof? wel then, wines either tunned vp or delaied with fi a water, be hurtfull to the stomack, sinewes, and bladder, as much as any other. As for the wines dressed and coniected with *Parrozzine*, they are thought to be wholsom for cold stomacks: but contrariwise, good they are not for such as are prone to vomit, no more than Must it selfe, or cuit, whether it be *sapa* or *passum* wine, wherein rosin hath bin newly put, is not for any man to drinke, for it causeth headach, swimings and dizziness in the brain: and no maruel if this mixture be called *Crapula*, for it intoxicateth the braine. Howbeit, these wines thus brued and dressed with rosin, are good for the cough and all rheumes; likewise, for feeble stomacks and the flux thereof ensuing, as also in dyfenteries or exulcerations of the guts, and their bloody flux, and last of all, for womens termes. In these kind

of

* Merum:

of wines thus mixed and sophisticated, the claret or deep red are more astringent and hot than all others. Lesse harme yet commeth of those wines which bee prepared with pitch alone, and nothing else. Neuerthelesse, we must not forget, that pitch is nothing else but the liquor that runneth from burnt Parrozin. And in truth, these wines that stand vpon pitch, doe heat the stomacke, helpe concoction, and purge offensive humours: they be good for breast and belly: also, comfortable to the matrice, for they doe allay the paines thereof, if the women haue no feauerous disposition; and doe cure Rheumes and Catarrhes, which haue continued their course a long time: they heale inward vicers, ruptures, spasms, and convulsions; impostumes bred within the interior parts, feebleness of the sinewes, ventosities, coughs, persuenesse, wheezing, and shortnesse of breath; and finally, helpe dislocations, beeing applied with vnwashed and greasie wooll, as it grew in the fleece. But note, that for all these infirmities abouenamed, the wine is more effectual, which naturally hath the tast of pitch, and therupon is called Picatum, than any other, that by artificiall meanes is dressed and prepared with pitch. And yet the wines made of the Heluenake grapes, if a man drink ouer-liberally of them, are wel known to trouble the head, notwithstanding they tast of pitch naturally. To come now vnto the disease, which we call the feuer or ague, this is certaine, That wine ought not to be giuen in that sicknesse, vnlesse the patient be well slept in yeres and aged, the disease chronike and of long continuance, or that the sicknesse begin to decline and weare away: for in hot, quick and sharpe feaues, which commonly be very dangerous, the sicke persons, be they young or old, ought to be restrained altogether from wine; except a man may evidently perceiue some remission or alienation of the disease: and the same rather in the night, than by day time; for certainly, the daunger is lesse by the one halfe, if they drinke wine toward night, and in hope to procure sleepe. Moreouer, women newly deliuered & brought to bed (whether they went the full time, or slipt an abortiue fruit vntime-ly) are not allowed in any case to drink wine: neither those persons who haue weakened their bodies with the immoderat vse of women, and thereupon fallen sicke: ne yet such as be subiect to the headach: no more than those, who during the fits of agues, feeble their legges and other extreame parts to be cold: or haue a cough ioined with their feauer. Moreouer, wine is an enemy to all those who haue a shaking and trembling of their joints, or be pained either in their sinewes or throat. Furthermore, in case the force of the disease be knowne to lie much about the * small guts and hypocondriall parts, the patient must altogether forbear to drink wine. They are to abstaine likewise when there is any hardnesse felt in the midriffe and precordiall parts: and when the pulses beat mightily, and goe faster than ordinarie. Semblably, in case the cramp doe draw the necke farre backe with a cricke, so as the head cannot stirre forward: or take the whole bodie so, as it is not able for to turne any way, but seeme as stiffe as if it were all of one peece; no wine must be giuen vnto such a patient. In like sort, those are forbidden to drinke wine, who are giuen to * vexing: and much more they, who in an ague labor for breath, and draw their wind hardly. But most of all must the sicke be kept from wine when their eies be set in their head, and their eye-lids stand stiffe and starke, with their eyes broad open: or bee shut, by reason that they are weake and heauie. Also, they must auoid wine (if they beewife) who in their sicknesse, as they winke or twinkle with their eyes, doe imagine that they sparkle & glitter againe: like as those who cannot lay their eyes together and close their lids, but sleepe open eyed. And euen so they ought to flie from drinking of wine whose eyes be red and bloud-shot-ten, or otherwise giuen to bee full of viscous and gummie matter. Neither are they permitted to drinke any wine, who estsoones flut and cannot pronounce their words perfectly, whether it bee, that their tongue bee ouer-light and spongy, or otherwise dull and heauie: no more than those, who hardly and with much difficultie, make water: who are affrighted suddenly at euery little thing that they heare or see: who are giuen to crampes and crickes: such also as otherwhiles lie benumbed, as if they were dead asleepe. And last of all, as many as shed their sperme involuntarily in their sleepe. True it is, and no man maketh any doubt, That the onely hope and right way to cure them, who in the Cardiake disease, for very faintnesse are troubled with the trembling and shaking of the heart and giuen vnto diaphoreticall sweats, consisteth in the drinking of wine. And yet in the manner thereof, Physicians are not agreed: For some are of aduise, not to giue it but in the very fit and extremitie of the disease: others againe prescribe it at no time else, but when the violence of the fit is past, and the patient at some ease. They who are of the former opinion, haue a regard to their sweat, for to repress it: but these haue

* Circa Jlin.

* Especially if it proceede from some hot or sharpe humor.

A haue an eye to the danger of the patient, being of this mind, that it is a more safer course to giue wine when the violence of the sicknesse abateth. And indeed of this judgement I see that most Physicians are. As touching the time to drinke wine, this is certaine, that good it is not but at meat: neither presently after sleepe, nor immediatly vpon any other drinke, which is as much to say, as neuer but when a man is drie and thirsty. Neither must a sicke man be allowed it, but in case of necessity or desperat extremitie. In summe, we graunt it to men rather than to women: to aged persons sooner than to young folke: and yet to a lustie young man, before a child: in Winter softer than in Summer, and to conclude, to such as bee accustomed thereto more than to those who haue not drunke thereof beforetime. A measure also and mean would be kept, in the allowance of wine, according to the strength thereof, and the proportion of water mixed therewith: and the common opinion importeth thus much, That to one cyath of wine it is sufficient to put two cyaths of water ordinarily. But in case the stomack be weak & feeble, so as the meat digest not nor passeth away downeward, meer wine is to be giuen to the patient, or at leastwise in greater proportion to the water.

But to return again to those artificiall and made wines, I haue heretofore shewed many sorts thereof: the making of them is at this day giuen ouer, as I suppose, and their vse needlesse and superfluous, considering that now we giue counsel & prescribe, to vse the very simples themselves in their owne nature, which go to their composition. Certes, beforetime the Physicians vpon a vain ostentation, because they would seem to haue their apothecary shops furnished with such variety, exceeded all measure in this behalfe: in so much, as they were prouided of a wine, made forsooth of Nauewes, bearing the world in hand, that it was singular good for militarie men, if they found themselves ouerwheared either with the practise or the bearing of arms, or in riding their horses: yea, and to say nothing of all the rest, they had the wine also of Iuniper: but is there any man so foolish, as to think and maintain, That Wormwood wine should be more profitable to our bodies, than Wormewood the hearb it selfe? What should I stand vpon the wine of dates; among others of this range, considering that it causeth head-ach, and is good for nothing els but * to ease the costuenesse of the body, & for such as reach vp bloud? As for that which we called * Bion, I cannot see or say, that it is an artificiall wine: for surely, al the art and cunning that goeth to the making of it, lieth in this only, That it is made and huddled vp in hast: & yet profitable it is for a weake stomack readie to ouerturn, or that is not able to concoct and digest the meat within it, wholesome for * women with child: comfortable to those who be feeble and faint: good for the palsey, the shaking of the lims, the swimming and giddines of the head, the wrings and torments of the belly, and the gout Sciatica: moreouer it hath the name for to haue a singular vertue to helpe in time of plague, and to stand them in great stead who are pilgrimes and traouellers into far and straunge countries. Thus much may suffice for Wines.

Moreouer, say that wine be turned, corrupted, and changed from the owne nature, yet it leaueth not to retain certaine vertues and properties requisite in Physicke: for vinegre also is medicinalle. Exceeding refrigeratiue it is, & cooleth mightily: howbeit, no lesse vertue and force it hath to discusse and resoluere: an euident proofe whereof we may see in this, That if it be poured on the ground, it will some and cast a froth. Concerning the manifold operations that it hath in composition with other things, I haue written oftentimes already, & wil write stil as occasion shall serue. But vinegre, euen taken alone by it selfe, fetcheth the stomack & appetite again to meat, and staieth the yex or hoecquet: and if it be smelled vnto, it stineth immoderat sneezing. Being held in the mouth, it preserues folk from fainting with extreme heat, while they are in the bain or hot house. Of it and water together there is made Oxyerat, which is a drink more mild than vinegre alone. And the same with water is comfortable to those who vpon the Suns heat haue gotten the headach or a day-feuer and be newly recovered: being vsed also in the same sort with water, it is counted most wholesome for the inflammation or rheum of the eies. A fomentation with oxyerat or water and vinegre, is singular good vpon * burns, scaldidgs, or rising of the pimples. In like maner it cureth the leprosie, scurfe, and dandruffe, running vlcers and scabs, bitings of dogs, stinging with scorpions, scolopendres, and hardishrews; and generally, it is good against all prickes of venomous beasts, or pointed darts, and any itch whatsoever. Likewise against the biting or prick of the * Cheeslip or Many-foot worme. Applied hor with a sponge to the seat, it is singular for the infirmities of the fundament. But for this purpose there must be a decoction or fomentation made, with three sextars of vinegre, whereunto there should be put of Sulphur

* Contrarie to Diastordides, who giue it to Celliac & dysenterich.

* Troubled with the and paymas, a corrupt and deprauate appetite, longing after this and that, and not alwaies the best things.

* Post ordinem, Some read hispidius, after the sucking of Horse leeches.

* Multipeda, called otherwile Sept.

or Brimstone two ounces, or a bunch of Hyssop, and then set ouer the fire for to boile together. In case of much effusion and losse of blood, which ensueth and followeth those who are cut for the stone, or any thing els taken out of the body; ther is nothing better than to foment the place without forth, with the strongest vinegre that may be had, in a sponge, and then to take inwardly in drinke 2 cyaths of the same: for surely it cutteth and dissolueth the cluttered blood lying within forth. Vinegre taken inwardly & applied outwardly, cureth the filthy tetter called Lichen. Being ministered by way of clyster, it knitteth the belly, and staith al rheumatick fluxes that haue taken a course by the guts and entrails. And the same helpeth as well the fall and slipping downe of the Longeon or fundamente, as the laxitie and hanging forth of the Matrice. An * old cough it restraineth: the rheumes also and catarrhes it represseth, which light on the throat and windpipe: it openeth the passages in them who labor for breath, & canot take their wind but sitting vpright: it confirmeth also the teeth loose in the head: many it hurteth the bladder, and doth harme in all infirmities of the sinewes. The Physicians were ignorant heretofore of the soueraign vertue that vinegre had against the sting of the serpent called Asp, until by a meere chaunce they came to the knowledge hercof. And thus stood the case: It fortuned that a certaine fellow carying about him a bottle of vinegre, trode vpon the said adder or serpent, that turned vpon him againe and stung him: howbeit he felt no harme at all so long as he carried the vinegre: but so often as he set the bottle downe out of his hands, the sting put him to sensible paine. By which experiment it was found and knowne, that vinegre was the only remedy, and so with a draught therof he had help out of hand, and was cured. But behold another prooffe and triall thereof. They that vse to suck out the poyson of venomd wounds giuen by serpents and such like, vse no other collution to wash their mouths withal, but only vinegre: certes, the force of vinegre is such, that it conquereth not only the strength of our viands & meats, but also many other things: for the very hard rocks, which otherwise it was vnpossible to cleaue before with the violence of fire, soone breake and giue way, when vinegre is poured aloft. This singular gift moreouer it hath, that no liquor in the world giueth a better tast to our meats and fauces, or quickneth them more than vinegre doth: for which purpose, if it be ouerharpe and strong, there is a means to mitigat and dull the force thereof, either with a toft of bread, or some wine: againe, if it be too weake and apalled, the way to reuiue it againe, is with Pepper or the spice Laser: but nothing moderateth it better than salt. And to knit vp and close this discourse of vinegre, I cannot forget nor ouerpasse one rare and singular accident that befell of late: *M. Agrippa* in his later days was much troubled and afflicted with a grievous gout of his feet, and being notable to endure the intollerable paines therof, took counsell of a certaine leech, some bold and venterous Emperick, who made great boast of his deep skill and admirable knowledge (for the Emperour *Augustus Caesar*, whose daughter he had espoused, he made not acquainted with the matter,) who gaue him counsell to bath his legs with hot vinegre, and to sit therein about his knees, at what time as his disease tormented him most: true it is indeed, that he was eased of his paine by this means, for he lost the very feeling of his feet. Howbeit, *Agrippa* chose rather to be paralyticke in some sort, and to want both vse and fence of his legges, than to abide the extremities of his gout.

CHAP. II.

¶ Of vinegre Scyllitike. Of Oxymel. Of the double cuit wine Sapa. The lees of wine: dregs of vinegre: and of the foresaid cuit.

THE vinegre of Squilla or sea-Onions, called Scellinum, the elder it is and longer kept, the more is it esteemed. This vinegre, ouer and aboue the other vertues of common vinegre before rehearsed, hath this property, To helpe the stomacke, in case the meats lie souring and corrupting therein: for no sooner doth a man tast thereof, but it dispatcheth and riddeth away the foresaid inconuenience: moreover, it is good for them that are giuen to vomit, fasting, in a morning: for it hardeneth the throat & the mouth of the stomacke which is ouersensible, & knitteth the same. It causeth a sweet breath, confirmeth the flesh about the gums, fasteneth the teeth which are loose, and maketh a bodie look with a fresh and liuely color. Being gargarized, it draweth away and doth euacuat those grosse humors which caused hardnesse of hearing, and

openeth

A openeth the auditory passages of the ears; and so by consequence clarifies the sight of the eyes. Soueraigne it is besides for those who haue the falling sicknesse, and who are troubled in mind by occasion of melancholy. It cureth the turning and dizziness of the braine, the suffocation or rising of the mother. It helpeth such as be sore and bruised with dry blowes, such as are false headlong from high places, and thereby haue cluttered blood gathered within their bodies: as many also as haue the infirmity or weaknesse of sinews, or otherwise be diseased in the kidnies: howbeit offendue it is to those that haue any vlcere either within or without.

Touching the syrrup Oxymel, *Diouches* saith, That the ancients in old time prepared and tempered it in this manner. They tooke of honey ten pounds, of old vinegre five hemines, of bay salt one pound, of Saucerie three ounces, of sea water five sextars: These together in a kettle they did set to boile, and let them haue tennewalms ouer the fire: then they lifted the pan from the fire, poured this liquor out of one vessell into another, & so kept it for their vse: but *Asclepiades* comes after, disproueth all the maner of this composition, and withall condemneth the vse thereof for the physicians before histime, feared not to prescribe it to be drunk euen in feuers; and yet both he and all, do confesse and agree, that this was a good drink against the venomous serpent called Seps: also for them who were poysoned with Opium, [i. the juice of Poppey] or with the gum Isia, which commeth from the hearb Chamæleon. Moreouer, they all commend it to be gargled hot for the squinancy, for the paine and deafnesse of ears, for the accidents and infirmities of the mouth and throat: like as at this day we vse in all these cases, the sharpe brine or pickle called Oxalme; which if it be made of salt and new vinegre that is fresh and quick, it is better in operation.

C As for the cuit named in Latine Sapa, it commeth neere to the nature of wine, and in truth nothing els it is, but Must or new wine boiled til one third part and no more do remain: & this cuit, if it be made of white Must is counted the better. Vse there is of it against the flies Cantharides and Buprestes: against the worms breeding in Pine trees, named thereupon Pityocampæ, against Salamanders, and generally all those beasts whose sting or tooth is venomous. If a woman drink thereof, together with scallions or such bulbs, it sendeth downe the after-burden, and expelleth the dead infant out of the womb. And yet *Fabianus* mine author saith, That it is no better than a very poison, if a man drink it fasting presently after he is come out of the bain.

D A consequent and appendant to these foresaid things, is the lees of wine; that is to be considered according to the wine from whence it commeth: and verily the lees of wine are so strong, that oftentimes it ouercommeth and killeth those, who go downe into the vats & vessels wherein the wine is made. But to know and prevent the danger thereof, this experiment is found; namely, to let down a candle into the said vat: for so long as it will not abide light, but goe out still, dangerous it is for a man to enter into those vessels. And yet wine lees without any washing at all, goe into the composition of many medicines. Take wine lees a certaine quantity, and of the floure de-lis or Ireos root a like weight, conorporat them together into a liniment: singular it is to annoynt the small pocks and such like cutaneous eruptions. The same either drie or wet, may be applied with very good successe to the places stinged with the venomous spiders called Phalangia; to the inflammations also of the genitoirs or priuy members; to the paps, or any other part of the body whatsoeuer. Now for the better preparing therof, it ought to be sodden in wine, together with barley meale and the powder of frankincense; which done, to be burned and so dried. And to know whether it be sufficiently sodden or no, make this triall: If you touch it neuer so little at your tongues end and so tast thereof, when it is thoroughly cold, it will seeme to bite and burne it, if it haue had sufficient boiling as it ought: but it soone loseth the heat and force, if it be not kept in a place well enclosed: by the said burning, it commeth to be much more stronger in operation. Sodden with figgs, it yeeldeth an excellent decoction to repress tetter, shingles, and such like wild fires; to scoure away also scurfe and dandruffe: & in that sort either applied as a cataplasme or fomentation, it cureth the leproie and running skals of the head. Being taken in drinke, especially raw, it is a soueraign countrepoyson for such as haue eaten venomous mushrunes. Boiled and washed, it is mingled with collyries which serue for the eyes. A liniment thereof cureth the accidents that befall to the cods and genitoirs. Taken in wine, it helpeth the strangury, and giueth them ease who otherwise could not pisse but by drop-meale. Lees of wine, after it hath lost the caustick operation and life that it had, will serue very wel for a good lie or water to cleanse the skin of our bodies, and to wash or scoure clothes: and

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then

*For it stirreth
the cough at
the beginning.
Discoeridet.

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M

then verily, it hath the astringent power of Acacia, and serueth for the same vse.

The dregs of vinegre, must of necessity be much more sharpe, biting, and vlcerauue, than wine lees, in regard of the matter whercof it commeth: it driueth backe impostumes or biles, and keepeth them from suppuration. A liniment of it, helpeth the stomack, belly, and entrails: it staieth the flux of those parts, and the ouerflow of womens months: it dissolseth pusshes and small biles, and squinances, if they be taken betimes before they fester and impostumat: and a cerot made with it and wax together, is good against *S. Anthonies* fire. The same drieth vp the milke in womens breast, who would not be nourses, or bee troubled with ouermuch milke. It taketh away with ease the illfaoured rugged nails, and giueth room for new to come vp in their place. Applied with grosse barley meale or groats, it is singular and most effectually against the venome of the horned serpents, called in Greeke *Cerastra*: and with Gith or *Nigella Romana*, it is vsed for the biting both of crocodile and mad dog. The burning also of these dregs, quickeneth & fortifieth the strength thereof, & being thus burnt and incorporat with the oile of *Lentiske*, * it coloureth the haire of the head in one night red, if they bee annointed withall: The same lapped in a fine linnen cloth, and put vp in forme of a pessarie, cleanseth and mundifieth the secret parts of women.

To conclude with the grounds or lees of the cuit Sapa; vinegre dregs are knowne to be very good for to heale burnes; and the cure proceedeth better, in case they be mixed with the furry cotton or downe of reeds: the same being sodden, and the decoction thereof taken as drinke, cureth inueterat coughs. Salt of all, they vse to seeth or stew it betwene two platters with salt and grease, wherewith they make a liniment or ointment to take down the swelling of the chaws and the nape of the necke.

CHAP. III.

¶ *Of Oliu trees: of the leaues of Oliues: their floures and their ashes. Of the white and blacke Oliue berries: and of the mother or lees of Oile-oliue.*

NExt after the Vine, there is not a tree bearing fruit, of so great authority and account as the Oliue. The oliue leaues, are exceeding restringent, good to cleanse, good also to restraine or stop any flux: being chewed and applied to vlcers, they heale them: and reduced with oile into a liniment, they assuage the pain of the head. A decoction of their leaues, together with honey, is singular to bath and foment the parts cauterized by the Chirurgian, according to the direction of the learned Physician: the same vsed by way of a collution, cureth the inflammation of the gumbs, whitflaws, and excrescences of ranke flesh in filthy vlcers: with honey also it stauncheth the flux of bloud, proceeding from any neruous parts. The juice of oliue leaues is singular for the little vlcers in manner of carbuncles, with a crust or rouse vpon them, rising about the eies; and all other small wheals or blisters: as also in case the bal or apple of the eye be readie to start forth, and therefore it is vsed in collyries or eye-salues: for it healeth weeping eies that haue run with water a long time, and the exoriation or frettings of the eie-lids. Now this juice is drawn out of the leaues, first stamped, and then well sprinckled and wet with wine & rain water, & so pressed forth; which being afterwards dried, is reduced into trochiskes, The same rolled in wooll or bombast to the forme of a pessarie, and so put vp into the naturall parts of women, staies the immoderat flux of their flours. Good it is also for those, who rid corrupt bloud by the inferiour parts. Moreover, it easeth the swelling piles or bigs sticking out in the fundament; killeth the cholerique exulcerations called *S. Anthonies* fire; healeth corrosiue and eating sores, and allaieth the paine of night-foes or child-blaines, called by the Greeks *Epinyctides*. The same effects haue their floures. The tendrons or young twigs of Oliues being in floure, if they be burnt, yeeld a kind of ashes that may serue as a succedan in stead of Spodium: but the same must be burnt a second time, after they haue bene well drenched and foked with wine. These ashes applied as a liniment, or the very leaues only stamped and tempered with honey, are good for impostumes growne to suppuration, and for the pusshes or biles named *Pani*: but if they be mixed with grosse barley meal or groats, they are in a liniment comfortable to the eyes. Take the green branches of an Oliue and burne them, there will distill and drop from the wood a certaine juice or liquor, which healeth ringwormes, tetter, and shingles, scoureth away the scales of the skin and dandruffe, and cureth the running skalls of the head.

Touching

A Touching the gum that issueth from the oliue tree it self, and namely that wild oliue which is called *Æthiopica*; I cannot wonder enough at some, who giue counsell therewith to annoint the teeth which ake, considering that they themselves giue out, That it is a poison, and to be found as well in wild oliues as others. The rind or bark pared from the root of a most tender and yong oliue, reduced into an electuary, and often licked and let downe by leasure into the throat after the manner of a lohoch, cureth those who reach vp bloud, and cough out filthy and rotten matter. The ashes of the very oliue it self, mixed with swines greafe, cure all tumors; draw forth corruption of fistulous vlcers; and when they are thus mundified, heale them vp cleane. White oliues agree very well with the stomack, but they are not so good for the belly. A singular commodity they yeeld before they be put vp in their compost or pickle, for to be eaten greene by themselves as meat: for they scoure away grauel with vrine; & good they are for the teeth, whether they be worne, rotten, worne eaten, or loose in the head. Contrariwise, the blacke oliue is not so friendly to the stomack, better for the belly, but offensive both to the head and the eies. Both the one and the other, as well the white as the black, being punned and applied to burned or skalded places, do cure them: but the black haue this propertie, That if they be chewed, and presently as they be taken out of the mouth, laid to the burne or scald, they will keep the place from blistering. Oliues in pickle are good to cleanse foule and filthy vlcers, but hurtful to those, who pisse with difficultie.

As touching the mother or lees of oile oliue, I might be thought to haue written sufficiently, following the steps of *Cato*, who deliuered no more in writing: but I must set down also the medicinable vertues obserued therein: First and foremost therefore, it helpeth the soreness of the gumbs, cureth the cankers & vlcers of the mouth; and of all other medicins it is most effectually to fasten the teeth in the head. If it be dropped or poured vpon *S. Anthonies* fire, and such other corrosiue and fretting vlcers, it is of singular operation to heale them: but for kided heeles, the grounds or dregs of the black oile-oliue is the better, as also therewith to foment smal children. As for that of the white oliues, women vse to apply it with wooll to their secret parts, for some accidents thereto belonging. Be it the one or the other, generally it is more effectually sodden than otherwise. Boiling it ought to be in a copper or brasie vessell, vntill it come to the consistence of honey. Vsed it is with vinegar, old wine, or with must according as the cause requireth, in curing the infirmities of the mouth, teeth, and eares; in healing running skalls; and finally, in the cure of the genitoirs or priuie members, & of the fissures or chaps in any part of the body. In wounds it is vsed with linnen cloth or lint; but in dislocations, it is applied with wooll. And verily in these cases and in this practise, it is much employed, especially if the medicine be old and long kept: for being such, it healeth fistulous sores. And being injected by a syring into the vlcers of the fundament & genitoirs, or otherwise by a metrenchyte into the secret sores within the naturall parts of women, it cureth them all. Also a liniment thereof is singular for to be applied to the gout of the feet: also in the rest, whether they be in the hands, knees, hucklebone, or any other joint, so they be not ferled or inueterat, but taken at the first. But in case it be sodden againe in the oile of green oliues, vntill it come to the consistence of honey, and so applied, it causeth those teeth to fall out of the head without paine, which a man would willingly be rid of. It is wonderfull to see how it healeth the farcines and manges of horses, being vsed with the decoction of Lupines and the herbe *Chamaeleon*. To conclude, there is no better thing than to foment the gout with the ashes of oile, raw.

CHAP. IIII.

¶ *Of the wild Oliue leaues. The oile of the floures of the wild wine Ocmanthe. Of the oile Cinnamon. Of the oile of Palma Christi. The oile of Almonds: of Bayes, of Myrtles, of * Kusso or Chamaemyrsine, of Cypresse, of Citrons, and of Nuts.*

F The leaues of the wild oliue haue the same nature that the leaues of the tame. As for Antipodium, or the ashes made of the tender branches of the wild oliue, it is of greater force and operation in staying and repressing of rheume, catarrhes, and fluxes, than that abouenamed in the former chapter.ouer and besides, it assuageth the inflammations of the eies, it mundifieth vlcers, it doth incarnat and fill vp the void places where the flesh is gone, it gently

P 2

cateth.

* *Severus Samonitus* calleth this ointment *Unguentum Cineris*, alledging *Lentis* for his author.

* *Butcher's Broom*.

cateth away, and without mordication, the excrecence of ranke and proud flesh, drieth the fores, healeth and skinneth them vp. In other cases this oliue is vfed as the other oliues: & yet one peculiar propertie hath the wild oliue, That a spoonefull of the decoction of their leaues with hony, is giuen with good successe to them that spit and reach vp bloud. Howbeit, the oile made hereof is more ægre and sharpe, yea and mightier in operation than that of the other Oliues; and a collution thereof to wash the mouth withall fetheth the teeth that be loose. The leaues of the wild oliue reduced into a cataplasme with wine, and so applied, do cure whitflawes about the root of the nails, carbuncles, and generally al such apostemations: with hony the said cataplasme serueth well to clenfe and mundifie where need is. The decoction of the leaues, yea and the juice of the wild oliue is put into many compositions and medicines appropriat to the eies. To good purpose also the same is dropped into the ears with hony, yea although they ran filthy utter. A liniment made with the floures of the wilde Oliue, is singular for the swelling piles and the chilblanes that be angry in the night: and the same applied with barley meale to the belly, or with oile to the head for the ache thereof, occasioned by some rheume, is known to do very much good. The young tendrils or springs of the wild oliue, being boiled and laid to with hony, do re-ioyn and re-vnite the skin of the head which was departed from the bones of the skull. The same tendrils pulled ripe from the wild oliue, and eaten with meat, do knit the belly, and stay laskes: but torrifed, and so beaten to powder and incorporat with honey, they do mundifie the corrosiue and eating vlcers: they breake also carbuncles.

As touching oile of oliues, the nature and manner of making it I haue already treated of at large. But forasmuch as there are many kindes thereof, I purpose to set down in this place such as serue for physick only. And first to begin with the oile made of vnripe oliues, called in Latin Omphacinum, and which commeth neere to a green colour, it is thought of all others most medicinable: moreover, the same is best when it is fresh and new (vnlesse it be in some case when it were requisite to haue the oldest that may be found) thin and subtil, odoriferous, and nothing at all biting, which be qualities al of them contrarie to that oile which we vse with our meats. This Greene or vnripe oile (I say) is good for the fores of the gumbes: and if it be held in the mouth, there is no one thing preferueth the whitenesse of the teeth better: it represseth also immoderat and diaphoretical sweats.

The oile Oenanthemum, made of the floures of the wild vine Oenanthe, hath the same operations that oile rosat hath. (But note by the way, that any oile, howsoeuer it doth mollifie the body, yet it bringeth vigor and addeth strength thereto.) Contrary it is to the stomacke, it encreaseth filthinesse in vlcers, doth exasperat the throat, and dul the strength of all poisons, especially of ceruse or white lead, and plastre, namely if it be drunk with honied water or the broth of dried figs: but it is taken against Meconium or Opium, with water: against the Cantharides, Buprestis, Salamanders, & the worms Pityocampæ, if it be drunk alone without any thing els: but if it be vomited and cast vp againe out of the gorge, it hath no fellow in all those cases aboue named. Moreover, in lassitudes and extreme colds, oile is a present refreshing & remedy. Taken hot to the quantity of six cyaths, it mitigateth all wrings and torments of the belly, the rather if rue be sodden with it, and in that maner it expelleth wormes out of the guts. Drink it to the measure of one hemina with wine and hot water, or els with the juice of husked barley, it looseth the belly. It serueth in good stead for vulnerarie salues and plastes: it scoureth & clenfeth the skin of the face. Conueyed vp into the head of kine and oxen, vntill they belch & deliuer it againe, it doth allay & resolue all their ventosities: but old oile doth heat more, and is of greater force to resolue a body into sweats than the new, as also to dissipat all hard tumors and swellings. More healthfull also it is to those who lie of the lethargie, and especially when the disease is in declining and wearing away. Somewhat it is thought to clarifie the eies, namely if it be applied with an equal quantitie of hony that neuer came neere smoke. A proper remedie it is for the head-ache: likewise in ardent feuers it is very good with water, to allay their heat; and if there cannot any old be gotten, it ought to be well sodden, that thereby it may seeme to haue age sufficient.

The oile of Ricinus or Tickseed, called Cicinum, taken as a drink with the like quantitie of M hot water, is singular to purge & euacuat the belly: & it is said to haue a special vertue to clenfe the midriffe and those precordial parts neere the heart. Soueraigne it is for all gouts, hard tumors, the infirmities of the matrice, of the ears, and for all burns or scaldings. And if it be med-

A led with the ashes of shell-fishes called Burrets, it cureth the inflammation of the fundament, and any scab or mange whatsoeuer. It giueth a fresh color to the skin of the visage, and causes the haire to grow plentifully where it is applied. The seed wherof it is made, there is no liuing creature will touch. Of the grapes which this Palma Christi or Ricinus carieth, there be made excellent weiks or matches for lamps and candles, which will cast a most cleer light, & yet the oile that is drawne out of the seed, giueth but a dim blaze or obscure flame, by reason of the exceeding grossnesse & fatnes thereof. Of the leaues tempered with vinegre, there is a liniment made, which is good for S. Anthons fire: and of themselves alone being fresh and Greene, they be applied with good successe to the paps, and any violent fluxion whatsoeuer: the same, boiled in wine, and laid too, with grosse barley meale or groats and saffron, are singular for all inflammations: and if they be applied by themselves without any other thing, to the visage, they do embelish and polish the skin passing wel within 3 daies. Oile of Almonds is laxatiue: it serueth to soften the body and make it tender, the skin which was riuelled, it causeth to look neat, smooth, and cleare: and being applied with hony, it taketh away freckles and spots out of the face. Boiled with oile rosat, hony, the * rind of pomegranats, it is comfortable to the eares, it killeth the worms therein, resolueth those grosse humors that were the cause of hard hearing, of the thumping, ringing, and other inordinat sounds within the eares; and withall, easeeth the head-ache and cureth the dimnes of the eies. Reduced into a cerot with wax, it healeth felons, and cleareth the skin of those who be tanned and sun-burnt: wash the head with it and wine together, it kills the running skull, and riddeth away the dandruffe: applied with Melilot, it discusseth the swelling piles and bigges in the fundament: if the head be annointed with it alone, it procureth sleepe. Oile de baies, the newer that it is and greener of colour, the better it is thought to be: hot it is of nature, and therefore good in a pallsie, crampe, sciatica, and for bruised places looking blacke and blew vpon stripes: and being heat in the rind or coat of a pomegranat, and so applied as a cataplasme, it helpeth the head-ache, old rheumes, and infirmities of the eares. Oile of Myrtles is made after the same manner: astringent it is, and serueth to harden any part of the body: it knitteth the flaggie gumbes, helpeth the tooth ach and bloody flux; it cures the exulceration of the matrice and bladder; healeth all old vlcers which run and yeeld filthy matter, if it be brought into a cerot with the scales of brasse, and wax. Also it cureth the meazles, and angry wheales: & so it doth all burns and skalds. It healeth and skinneth any gall and raw place, it skoureth dandruffe, and represseth the breeding thereof: it cureth clifts and chaps: piles and swelling bigs in the fundament, it bringeth down and resolue, it knitteth dislocations of joints, and taketh away the strong and rank fauor of the bodie. A countrepoyson it is against the Cantharides and the Buprestis: as also against all other venome which is corrosiue and hurteth by exulceration. Touching the ground-Myrtle Chamaemyrsine, or Oxymyrsine, it hath the same nature that the other Myrtle hath; and the oiles be of semblable vertues. The oile of Cypress also & likewise of Citrons, be not vnlike to the oile of Myrtles in operation, but the oile drawne from the walnut kernels (which we called Caryinum) is singular to bring haire againe, where it is fallen away by some infirmity: and instilled into the eares, it helpeth the hardnesse of hearing: if the forehead be annointed therewith, it cureth the head-ache. Otherwise, it is but dull in operation, and yet a stinking smel it hath with it. If but one nut kernel be corrupt and rotten, it marreth all the oile that is made of the rest, were there a pecke of them. The oile which is made of the graine or seed of the plant Thymelæa, is of the same vertue that the oile of Palma Christi, or Tickseed aboue-named. The oile of the Lentiske is passing good to make an ointment of, against lassitude and wearinesse: and verily it were a quinalent euery way to oile-rosat, but that it is found to be more astringent: it is vfed much in repressing of immoderat sweats, and those angry pimples which rise after much sweat. Nothing is there so effectuall to heale the farcines or skab in horses, and such like beasts. The oile of Ben, mundifieth freckles, cureth felons and biles, take away spots and moles, and healeth the apostemations in the gumbes.

As for Cypiros, what a plant it is, and how there is an oile made thereof, I haue shewed already. By nature it is hot, and softneth sinews which be stiffe and stark. The leaues serue to make a good liniment for to annoint the pitch of the stomacke: and their iuice applied in manner of a pessarie, fetheth the mother when it roseth euery way and is out of other place. The Greene leaues chewed and applied, cure the running skalls in the head, the cankers and sores in the mouth, all risings and apostemations, and likewise the piles. A decoction of the said leaues, is singular for

burns and skals, likewise for lims out of joynt, if they be bathed therin. The very leaues in substance stamped and incorporat with the juice of a peare-quince into an ointment, set a reddish yellow colour vpon the haire of the head. The floures brought into a liniment with vinegre assuage the paine of the head: the same calcined and burnt into ashes within a pot of vnbacked or raw earth, either alone or with hony, healeth corrosiue sores and putrified vlcers. These floures haue a certaine savor with them, which procureth sleep. The oile called * Gleucinum is astringent; and yet it cooleth after the same sort that the oile Oenanthium. The Balsame oile, called Balm, is of all others most pretious (as hertofore I haue said in my treatise of odoriferous ointments) and of great efficacie against the venome of al serpents. It clarifieth the eie-sight mightily, and dispatcheth mists and clouds which dimmed the same: it easeth all those who draw their breath with difficultie: it assuageth impostumations and hard swellings: it keepeth blood from cluttering, and is excellent to mundifie foule vlcers: singular comfortable to the eares in case of paine, hardnesse of hearing, & ringing within: to the head also for to assuage the ach: for the nerves, against shaking, trembling, and convulsions; & withal, a proper remedy for ruptures. It danteth and mortifieth the poison of Aconitum, if it be taken with milk. If the patient lying sicke of an ague, be annointed all ouer therewith, it mitigateth the fits comming with shaking and shuering. Howbeit, folke must be warie and vse it with moderation, for being hot in the highest degree, it is caustick, and so doth enflame and burne: and therefore if a mean be not kept it bringeth a mischiefe for a remedie, and doth more harme than good.

Concerning Malobathrum, the nature and sundrie kinds thereof, I haue discoursed heretofore. Now for the vertues which it hath in Physicke, first, it prouoketh vrine: being stamped, the juice drawne out of it with wine by way of expression, is excellent to be applied vnto the eyes, for to stay their continuall watering: the same laid to the forehead as a frontall, procureth sleep to them that would gladly take their repose. And more effectually it worketh, in case the nose-thrills also be annointed therewith, or if it be drunke with water. The leafe of * Malabathrum, if it be but held vnder the tongue, causeth the mouth and the breath to smell sweet: like as, if it lie among apparell, it giueth them a pleasant fauour. The oile of Henbane is emollitiue, howbeit an enemy to the sinewes: certes, if it be taken in drinke, it troubleth the braine. The oile of Lupines, called Therminum, is likewise an emollitiue, and commeth nearest of any to the operation and effects of oile-rosat.

Touching the oile of Daffodills, I haue spoken of it in the treatise of the floures thereof. Raddish oile cureth the Low sicke disease; and namely, when lice are engendred vpon some long and chronick disease: it clenseth the skin of the face from all roughnesse, and maketh it sicke and smooth. The oile of Sefama, cureth the paine of the eares, and healeth vlcers which eat as they spread, even such as be morimals and check the Chirurgians hand. Oile of Lillies, which wee haue named Lirinon, Phaselinum, and Sirium, is most agreeable and wholsom for the kidnies: also to procure and maintaine sweate, to mollifie the matrice and naturall parts in women, & to promote digestion inwardly. The oil or ointment Selgiticum (as we haue already said) is comfortable to the sinues: like as the * grasse-green oile, which the Inguinians (dwelling vpon the caufy or street-way Flamminia) vse to sel. * Elæomeli, an oil which (as I haue declared before) issueth from oliue trees in Syria, carrieth a certaine tast of hony: howbeit their stomachs it maketh to rise at it, who licke thereof; and it is of power to soften the belly. It purgeth choler *Ele-
stinè*, if two cyaths thereof be giuen to drinke in one hemine of water: howbeit these symptomes or accidents do follow them who drinke thereof: They lie as it were in a dead sleepe, and must eftssoons be awakened. Our lustie drunkards who make profession of carousing, vse to take one cyath thereof before they sit down to drinke one another vnder board. The oile of Pitch is vsed euery where, for to heale the skurfe, mange, and farcins in beasts.

Next to vines and oliues, Date trees are to be raunged in the highest place, and doe cary the greatest name. Dates, if they be fresh and new, doe inebriat and ouerturn the braine: and if they be not very well dried, they do cause head-ach: neither are they (so far as I can see) any way good for the stomacke: againe, they do exasperat the cough and make it worse, yet they be great nourishers, and cause them to feed who eat of them. Our ancients in old time drew a certaine juice or liquor out of them when they were boiled, which they gaue vnto sicke persons in stead of an hydromell or honyed water to drinke; and that for to refresh them, to restore their strength, and to quench thirst: and for this purpose, they preferred the Dates of Thebais in high Egypt before

* Some read
delcinum.

* Potium Indi-
cnum.

* Eleobatum.
* Called like
wife Otrum Sy-
riacum.

A before all others. Being eaten as meat especially at meals, they are good for them who reach vp blond. The dates Caryote serue to make a liniment for the stomack, the bladder, belly & guts, with an addition of Quince among. Being incorporat with wax & saffron, they reduce the black and blew marks remaining after stripes in the skin, to their naturall colour. Date stones with their kernels are burnt in a new earthen vessel which was neuer occupied before, and being thus calcined, and their ashes washed, they serue in stead of Spodium, and doe enter with other ingredients into collyries or eie-salues: and with some Nard among, they make fukes to paint and imbelish the eye-browes.

CHAP. V.

¶ of the Myrabolan Date, and the Date Elate.

T He best Palm or Date tree which beareth a fruit like to Myrabolanes, is that which groweth in Egypt. These Dates haue no stones, like to others. Being taken in vuripe and hard wine, they stop the flux of the belly, and stay the extraordinary course of womens fleures, and do consolidat wounds.

As touching the Date-tree, called Elate or Spathe, it affordeth for vse in Physick, the yong buds, the leaues, and the barke. The leaues serue to be applied vnto the midriffe and precordial parts, the stomacke, liuer, and such corrosiue vlcers, as hardly will be brought to heale and skinned vp. The tender rind thereof incorporat with wax and rosin, healeth all manner of scales, within 10 daies. The same boiled and applied accordingly, cureth the accidents befalling to the cods and genitoirs. The very perfume thereof colereth the haire of the head black: and the suffumigation fetcheth downe the dead infant out of the mothers belly. It is giuen inwardly in drinke for the infirmities of the kidnies, bladder, & precordial parts: howbeit, an enemy it is vnto the head and sinews. A decoction or bath thereof, if a woman sit in it, staeth the immoderat fluxe both of Matrice and belly. Likewise, the ashes taken in white wine, are singular for the pains and torments of the collick: as also a collution therewith, is as effectual to cure the fall of the * Vvula and other defects incident to that part.

* Vvulari vi-
tyr. Some read
vulvarum, i. of
the matrice &
naturall parts
of women.

CHAP. VI.

D ¶ The medicinable vertues considered in the floures, leaues, fruit, boughes, branches, bark, wood, iuice, root, and ashes of many trees of fine rall kinds.

I T remaineth now to decipher the manifold medicines which apples & such like fruits tender skinned, do afford, according to the variety of trees which bring them forth. Of which, thus much in generall is to be noted, That all fruits which ripen in the Spring, while they be soure and harsh, be enemies to the stomack; they trouble the belly, disquiet the guts and bladder, and withall, be offensive to the sinewes: but if they be full ripe or foddren, they are the better. But to grow vnto particulars. Quinces if they be boiled, baked, or roasted, are sweeter and more pleasant to the tast, than raw. Yet being thoroughly ripe vpon the tree, although they be eaten raw, they are good for those that spit and reach blood, and are diseased with the bloody flux: such also as vpon the violent motion of vnbridled cholerick humors void vpward and downward: as also for them who be subiect to continuall loosenesse of the belly, occasioned by the feeblenes of the stomack. Being once boiled or baked, they are not of the same operation: for they lose thereby that astringent vertue which their iuice had. In hot and sharp feuers they serue for to be applied to the breast. And yet if they be foddren in rain water, they will do well in those cases aboue recited: but for the paine of the stomack, it matters not whether they be raw, foddren, or baked, so they be reduced into the form of a cerot, & laid too. Their down or mossinesse which they beare, if it be boiled in wine, and reduced into a liniment with wax, healeth carbuncles. And the same maketh the haire to grow again in bald places occasioned by some disease. Raw Quinces, condired and preserved in hony, do stir the belly, & moue to siege. They impart vnto the hony a pleasant tast, whereby it is more familiar and agreeable to the stomack. But such as being parboiled before, are then kept and conserued in honey, be thought good for the stomacke, in the opinion of some, who ordaine and prescribe to steep them first, and then to take them in manner of a meat or conserue. Being incorporat with Rose leaues boyled, for the infirmities of the Stomacke.

The

The juice of raw Quinces is a souveraine remedy for the swoln spleen, the dropse, and difficulty of taking breath, when the patient cannot draw his wind but vpright. The same is good for the accidents of the breasts or paps, for the piles, and swelling veines. The floure or blossom of the Quince, as well green and fresh gathered, as drie, is held to be good for the inflammation of the eies, the reaching and spitting of blood, and the immoderat flux of womens monthly terms. There is a mild juice drawn also from these floures, stamped with sweet wine, which is singular for the flux proceeding from the stomack, and for the infirmities of the liuer. Moreover, the decoction of them is excellent to foment either the matrice when it beareth down out of the body, or the gut Longaon, in case it hang forth. Of Quinces also there is made a souveraine oile, which is commonly called Melinum: but such Quinces must not grow in any moist tract, but come from a found and dry ground: which is the reason, that the best Quinces for this purpose be those that are brought out of Sicily. The smaller Pear Quinces called Struthia, are not so good, although they be of the race of Pome. Quinces. The root of the Quince tree tied fast vnto the Scrophules or Kings-cuill, cureth the said disease: but this ceremony must be first obserued, That in the taking vp of the said root, there be a circle made round about it vpon the earth with the left hand, and the party who gathereth it is to say, What root he is about to gather, and to name the Patient for whom he gathereth it: and then, as I said, it doth the deed surely.

The Pome-Paradise, or hony Apples called Melimela, and other fruits of like sweetnesse, do open the stomacke, and loosen the belly, they set the body in a heat, and cause thirstinesse, but offensive they be not to the sinews.

* Orbiculata.

The * round Apples bind the belly, stay vomits, and prouoke vrine. Wildings or Crabs are like in operation to the fruits that be eaten soure in the Spring, and they procure costiuenesse. And verily for this purpose serue all fruits that be vnripe.

As touching Citrons, either their substance, or their graines and seed within, taken in wine, are a counterpoison. A collution made either with the water of their decoction, or their juice pressed from them, is singular to wash the mouth for a sweet breath. Physicians giue counsell to women with child for to eat the seed of Citrons, namely, when their stomackes stand to coles, chalk, and such like stuffe: but for the infirmity of the stomack, they prescribe to take Citrons in substance: howbeit, hardly are they to be chewed but with vinegar.

* *Nonem*, and
y^e heretofore
has named but
few.
* *Disforides* af-
flicteth the
conary.

As for Pomgranats, needlesse altogether it were now to iterate and rehearse the * nine kinds thereof. Sweet Pomgranats, all the sort of them, which by another name we called Apyrena, are counted * hurtfull to the stomack: they ingender ventosities, and be offensive to the teeth and gums. But such as in pleasant tast are next vnto them, which we called Vinosa, hauing smal kernels within, are taken and found by experience to be somewhat more wholesom: they do stay the belly, comfort and fortifie the stomack, so they be eaten moderately, and neuer to satisfie the appetite to the full: & yet some there be who forbid sick persons once to tast of these last named: yea, and in no hand wil allow any Pomgranats at all to be eaten in a feuer; forasmuch as neither their juice and liquor, nor the carnos pulp of their grains is good for the patient. In like maner they giue a charge and caueat not to vse them in vomits, nor in the rising of choler. Certes, Nature hath shewed her admirable worke in this fruit: for at the very first opening of the rind, she presently maketh shew of a perfect wine, without appearance of any grape at all, nor so much as of Must, which ordinarily is the rudiment of wine. All Pomgranats, as well sweet as tart, are clad with a very hard coat & rough rind. And verily the coat which the four kind hath, is much vsed and in great request: and namely the Curriers know full well how to dresse their skins therewith: and this is the cause, that the Physicians name it in Latine * Malicorium. And they would bear vs in hand, That the same doth prouoke vrine: as also, that the decoction thereof in vinegar, with gal-nuts among, doth confirm and keep the teeth fast, which do shake and are loose in the head. Women with child, and giuen to longing after a strange and vnreasonable manner, finde much good and contentment hereby: for no sooner tast they of it, but the child doth stir and sprunt in their wombe. The Pomgranat diuided into quarters or parcels, and laid to steepe and infused in raine water, for three daies or thereabout, yeeldeth a good and wholesome drinke for them to take actually cold, who are troubled with loosenesse of the body, occasioned by a flux from the stomacke; and with casting and reaching vpon blood. Of the tart and soure Pomgranat, there is a singular composition, which the Greeks call Stomatice: for that it is a most souveraine medicine for the infirmities incident to the mouth: and yet it is as wholesome for the accidents of the

* For *Corium*
signifies a skin
or leather.

nostrils

A nostrils and ears, as also for the dimnesse of the eies, for the troublesome ouergrowing & turning vp of the skin and flesh about the roots of the nailes, for the genitoirs or priuie members, for corrosiue vlcers which they call Nomax, and for the proud flesh and all excrescences in fores. Against the poison or venom of the sea-hare, there is an excellent composition made with Pomgranats in this manner: take the grains or kernels of Pomgranats, being despoiled and turned out of their outward rind or skin, stampe them well, and presse out their iuice and liquor from them: seeth the same vntill a third part be consumed, together with Safron, Roch-allon, Myrrh, and the best Attick hony, of each halfe a pound. Others do compound and prepare a medicine after another sort in this wise: they take and pun many soure Pomgranats, and draw out of them a iuice, which they seeth in a new cauldron or pot of brasse, neuer vied before, to the thicknesse

B of honey: this they vse in all infirmities of the fundament and priuy parts; for all griefs and maladies which be cured with the medicinable iuice Lycium: with this they cleanse ears that run with filthy matter; restraîne all violent fluxes of humors newly begun, and especially taking a course to the eies; and rid away the red pimples and spots that arise in any part of the body. Whosoever carieth in his hand a branch of the Pomgranat tree, shall soone chase away any serpents. The pill or rind of a soure Pomgranate boiled in wine, and so applied, cureth kibes. A Pomgranat stamped and then sodden in three Hemines of wine vntill one remain, is a singular remedy for the torments of the Collick, and driueth wormes out of the belly. A Pomgranate torrifed in an oven within a new earthen vessell neuer occupied before, well stopped and couered with a lid, and so being calcined and drunk in wine, staeth the flux of the belly, and assuageth the wrings in the guts. The first knitting of this fruit, when the tree * begins to floure, is

C called by the Greeks Cytinus. Of which there be obserued strange properties, approued by the experience of many men: for if any person, man or woman, vnbraced, vnclaced, vnpointed and vnbuttoned, with girdle loose, hose vnartered, & shooes vnbuttoned, and hauing not so much as a ring about any finger, come and gather one of these tender buds or knots, with a fingers only, to wit, the thumb and the fourth ring-finger of the left hand; and after this ceremony performed proceed forward to another, namely, to touch lightly with the same bud the compas of the eies round about, as if the priest should sacre or hallow them; and withal, when this is done, coueigh the same into the mouth, and swallow it down whole, so as a tooth touch it not: there goeth an opinion, That he or she for certain shall feele no impediment or infirmity of the eyes that year throughout. The same knots or yong Pomgranats, if they be dried and beaten to powder, are very good to keepe downe all excrescences of ranke flesh, and be wholesome for the gummies and teeth: moreover, the very iuice drawn out of them after they be sodden, do fasten the teeth in the head, although they were loose and ready to fall out before. The very * yong Pomgranats themselves alone newly knit, and making shew vpon the tree, if they be stamped to the form of a liniment, are singular for any corrosiue vlcers, & such as tend to putrification. Likewise, they be excellent good in that sort prepared and applied, for the inflammation of the eies, & of the entrailes, and in manner for all those occasions wherein the outward rinds and pills do serue. And here before that I proceed any farther, I cannot sufficiently admire and wonder at the careful industry and diligence of our antients before time, which they imploied in the consideration of

D Natures workes, searching as they did into euery secret, and left nothing behind them vnassayed and vntried: in so much, as they took regard of those little pretty floures appearing vpon these knots or buds before said, such I meane as break forth and spring, before the Pomgranat it selfe is formed, and maketh any appearance, which smal blossoms, as I said before, * are called Balau-

E fia. For euen these, as little as they be, our ancestors haue found by their experiments to be aduerse vnto scorpions. And true it is, that being taken in drinke, they do restraîne the extraordinary flux of womens fleurs: they heale the cankers and sores in the mouth, the diseases of the Tonfils or Amygdales, and of the Vvula: they do helpe the spitting and reaching vp of blood: they cure the feeblenesse both of belly and stomack, with the fluxes thereupon insuing: they are singular besides for the grieuances of the priuy members, and for all running vlcers spreading in any part of the body whatsoever. Moreover, they made prooue of the said floures dried, and this high magistery they found, That being beaten to powder, they cured those of the bloudie flux, who lay at the very point of death on that disease: as also that there was not a better thing in the world to stay any lask or flux of the belly. Nay, they staid not here (so inuentiue were our forefathers) nor thought much to make trial of the very kernels or stones, within their grains, to see

* *Floures incipientis*, rather
deficientis, ac-
cording to *Galen*: for then the
fruit is said to
knit, when a
tree sheddeth
the blossom.

* *Ip/a corporis*.
la. Some reade
Uisula, mea-
ning the ves-
sels containing
the gaires.

* Here is *Pliny*
out of the way

see if they could meet with any goodnesse therein, for to deliuer vnto posterity and the age following. And in good faith, they found, That euen those as contemptible as they seem, being torried and so pulverized, doe help and comfort the stomacke, if either the meat be strewed or sprinkled, or the cup spiced with the said powder. And in truth, if they be drunk with rain water, they bind the body: the root of the Pomgranat tree, if it be boiled, yeldeth a liquor or iuice which being taken in drinke to the weight of a Roman victoriat [i. halfe a denier, or half a dram] killeth the worms in the belly. The same thoroughly foddren in water, is of the same operation that Lyeium is for any purpose that it shall be put vnto.

that Lycium is for any purpose that it shall be put vnto.
Finally, there is a wild Pomgranat, so called for the resemblance that it hath to the planted Pomgranat: the roots are red without forth, * which being taken to the poise of one denier or dram in wine, do procure sleepe. The graines or seeds in drink, drie vp the watery humours that be gotten between the skin and the flesh, in that dropie which is called Intercus. To conclude, a perfume made with the rind or pill of a Pomgranat, chafeth Gnats out of the place, where it burneth.

CHAP. VII.

¶ Of Peares, and the properties of served in them. Of tame Fig-trees, and their Figs. Of the wild Fig tree. Of Evinius, and other plants, with the medicines which they afford.

ALL Peares whatfoeuer, are but a heauie meat, euen to them that are in good health. And sick folke are debarred for eating them, as well as for drinking wine. And yet if the same be well boiled or baked, they are maruellous wholesome and pleasant to the tast, especially those of Crustuminum. There is no kind of Peare at all, but if it be foddren or baked with hony, agreeth with the stomack. Of Peares there be vually made certaine cataplasmes, which are singular good to discusse all pusses, risings, and pimples vpon the body: and their decoction serueth wel to resolu all hard tumors. Peares insubstance be a good counterpoison against venomous Tadstools and Mushrooms; for either they drie them down by their very weight and ponderosity, or els chase them out of the stomacke, through a certain secret antipathy in Nature, that their iuice hath. The wild choke Peares be very late ere they ripen. The manner is to cut them into certaine slices or roundles, and so to hang them vp a drying, for to stay the laske and knit the belly, which their decoction also will do sufficiently, if the patient doe drinke it. The leaues likewise, together with the Peare, are vsed to be foddren for the same purposes. The ashes also of the Peare tree * wood, in case of pestilent Mushrooms is of more efficacie than the Peare it selfe. Poor iades that carry Apples and Pears vpon their backs in paniers, are shrewdly loden: and wonderfull it is to see, how heauy they do weigh, and how a few of them will make the poore beasts to shrink vnder their burden: but what is the remedy? Let them eat some of those Peares before, or do but shew them vnto them, they will vndergoe (as folke say) their load more willingly, and go away with it more roundly.

The milke or white juice that the Fig-tree yeeldeth, is of the same nature that vineger: and therefore it will cruddle milk as well as rennet or rindles. The right season of gathering this milky substance, is before that the figs be ripe vpon the tree, and then it must be dried in the shadow: thus prepared, it is good to breake impostumes, and keepe vlcers open: also to bring down the monthly termes of women, either applied with the yolk of an egge, or taken in drinke with * Amyl or * Starch powder. If the same be tempered with the flour of Pœnigreek seed and vineger, and so applied in manner of a liniment, it helpeth the gout. Also it is depilatory, and fetcheth off haire: it taketh away the skurfe of the eie-lids. In like maner it killeth tettars, ring-worms, & any wild scabs. It openeth the body, and makes it soluble. This fig-tree milke is naturally aduersē vnto the venomous stings of Hornets, wasps, and such like. But particularly to the prick of Scorpions. The same if it be incorporat with hoggs greafe, taketh away warts. Fig tree leaues & green figs vnripe, reduced into a liniment, do discusse and resoluē the Scrophules, called commonly the kings euil, yea, and all such nodosities as are to be mollified. The leaues also alone will do as much. There is another vse of them besides, namely, to rub therewith tettars and bald places, which through some infirmity haue lost haire: & generally all those parts that had need to be blistered: the tender tops & twigs of fig-tree branches are singular to cure the biting

A of mad dogs, if they be applied to the skin where it is broken. The same brought to a liniment with honey, healeth the wens or impostumations which be called Ceria, yeelding forth an humor like to hony out of the comb. And if they be tempered with the leaues of the wild Poppy, they draw forth broken spils or shiured bones. Fig-tree leaues stamped with vineger, do restrain the venom, occasioned by the biting of mad dogs: the white tendrils or sprigs of the blacke fig-tree made into a cerot with wax, and so applied, do cure felons and the biting of hard thriues. The athes made of black fig-tree leaues, heale gangrenes, and consume all excrescence of dead or proud flesh. Ripe figs prouoke vrine, make the belly soluble, moue sweat, and bring forth small pocks and meafels: in regard of which operation thus to open the pores, they be vnwholome to be eaten in Autumne or at the fall of the leafe: for when by their means our bodies be set into a sweat, they are more subiect to take a through cold. Neither be they wholsome for the stomack: but the best is, their offence continueth but a while. Mary, they are well knowne to be enemies to the voice. The figs which be of a later breed (as it were) and come last, are wholesome than those which ripen betimes: (whereas verily, if they be brought to their maturity by medicining, i. by caprification, then they are neuer good:) and these figs increase the strength of young folk: preferue elder persons in better health, and make them looke more yong and with fewer wrinkles. They do quench and allay thirst, and coole vnkinde heat. And therefore such must not be denied vnto the patient, in feuers proceeding from the constriction of the pores, which agues the Greeks call Stegnas. Dry figs offend the stomack: but for the throat and wheezant they are exceeding good. These dried figs are by nature hot in operation, and therefore ingender thirst. They set the belly into a loosenesse: in which regard they are not good to be eaten in any flux or Catarrhs, taking a course either to it or the stomack: wholsome they be at all times for the bladder, such also as be short winded and purtie. Semblably, they open the obstructions of liuer, kidneys, and spleen, and cure their infirmities. Nutritiue they be, and therefore much eating of them causeth a man to grow corpulent, and nathelesse to be strong and lusty withall: which is the cause, that professed wrestlers and champions were in times past fed with figs. For *Pythagoras*, a great master and warden of these exercises, was the first man who brought them to eat flesh meat. Moreouer, figs be restorative, and the best thing that they can eat who are brought low by some long and languishing sickness, and now vpon the mending hand and in recouerie. In like manner they are singular for the falling euil and the dropsie. Figs

D applied as a cataplasme, are excellent either to disperse or els bring to maturity any impostumes or swellings: but they doe the feat more effectually, if either quicke-lime or sal-nitre be mixt therewith. Boiled with Hyssop they cleanse the brest, break and dissolve the flegmatick humors either fallen to the lungs, or there ingendred; & so by consequence rid away an old cough. Soden in wine, & so applied as a liniment, they cure the infirmities incident to the feat or fundament, they mollifie and resolve the swelling tumors of the paps, they disperse and heale felons, pushes, biles, & risings behind the ears. A fomentation made with their decoction, is good for women. And the same being sodden with Feni-greek, are excellent for the pleurisie & Peripneumony, i. the inflammation of the lungs. Boiled with Rue, they assuage the ventosities or collicke in the guts. The same being incorporat with verdi-grease or the rust of brasse, cureth the morimals of the legs: and with Pomegranats they heale the rising & exulceration of the flesh and skin about the naile roots. But made into a cerot with wax, they heale burnes, scaldings, & kided heels. Seeth Figs in wine with wormwood and barley meal, and put nitre to them, they are passing wholesome for those who are in a dropsie. Chew them, they *binde the belly. Make a cataplasme of Figs and fait together: the same is singular for the sting of scorpions. Boyle them in wine, and so apply them, you haue an excellent remedy to draw forth carbuncles to the outward parts, and bring them to an head. Take the fattest & fullest Figs you can get, lay them vpon the vgly and ill fauored tumor called Carcinomay, the Canker, so it be not yet exulcerat. I assure you it is a fouraine remedy, and hardly can be matched againe: and so it is also for the festering and eating vicer Phagedæna. There is not another tree againe growing vpon the face of the earth that yeeldeth better or sharper asses than the wood of the Figge-tree doth: either to cleanse *vicers, or to incarnate, consolidate, and restrain flux of humors. It is taken in drink for to resolve clutered blood within the body. Semblably, if it be giuen to drink with water & oile, of each one eayth, it serues wel for those who are dry beaten & bruised, who are fallen from some high place: such also as haue spasms & inward ruptures. And thus they vse to giue it in a

cramps.

* I doubt that
Plinie mis-
taketh here: and
is caried away
with the simi-
litude of two
Greece names
to wit, *joaze*, i.
the red wan-
dering Poppy;
and *joas* the
Pomgranat.
Forturely the
properties by
him assigned
to his wild
Pomgranat, in
some sort ac-
coid with
those of *Papa-
uer erraticum*,
or Corn-Rose.

* *Pyrorii ligni.*
Quere, if he
 meane not the
 stonie kernels
 of some Pears,
 which he vses
 otherwhiles to
 call *Lignum.*

* *Amylo. Diosc.*
hath *Amygda-*
la. i. Almonds.

2 *· iſſet, ſacher
 2 cient, or vi-
 2 leſſunt. ὁ κείναι
 2 εἶναι. Ex Dioſc.

cramps, and namely, in that vniuersall convulsion, which holdeth the body so stiffe, that it can stir no way nor other, as if it were made of one intire piece without any ioint. Likewise, both taken in drink, and also infused or iniected by clystere, it helpeth the fluxe, occasioned either by a feeble and rheumatick stomacke, or els by the vicer of the guts. If a man rub the body all over with it and oile together, it setteth it into an heat, were it before benumbed. A liniment made of it, and wrought with wax and oile Rosat together, skinneth a burnt or scalded place, most finely, leauing no skar at al to be seene. Temper it with oile, and therewith annoint their eies who are pore-blind, sand blind, or otherwise short-sighted, it amends their eie-sight: & to conclude, rub the teeth often therewith, it preferueth them white, neat, and from rotting. Thus much of Fig-tree ashes.

Moreover, it is commonly said, That if one come to a Fig-tree, bend a bough or branch thereof downward to the ground, and bearing vp his head without stooping, reach and catch hold of a knot or ioint with his teeth, and so bite it off, that no man see him when he is doing of it, and then lap the same within a piece of fine leather, tied fast by a thred, and hang it about his necke, it will dispatch the kings euill and swelling kernels or inflammations behind the eares.

The bark of the Fig-tree reduced into powder, mixed with oile, and so applied, healeth the vicers of the belly. Green Figs taken raw, stamped and incorporat with niter and meale, take away all warts, whether they be smooth or rough. The ashes made of those shoots that spring from the root, is a kind of Antispodium, and may go for Spodium indeed. If the same be twice calcined and burnt, and then mixed with cerusse or white lead, and so reduced into trochiskes, they make a good collyrie or eie-salue, to cure the roughnesse and exulceration of the eies.

As many vertues as the mild fig-tree hath, yet the wild is much more effectuell in operation: how soeuer she yeeldeth lesse milke or white juice than the other doth. For a branch onely of it, is as good as rennet or rindles to make milke turn and run to a cheefe curd. Howbeit, that milky liquor which it hath, if it be gathered and kept vntill it be dry and wax hard, serueth to season our flesh meats, and giue them a good tast. For which purpose it is wont to be mixed and dissolued in vinegar, & then the flesh must be well rubbed and poudered therewith. The same is vsually mingled with caustick and corrosiue medicines, when there is an intention to raise blisters, and make an issue. It caufeth the belly to be laxatiue, and openeth the matrice, if it be vsed with Amyl powder. Being taken in drink with the yolk of an egg, it prouoketh womens fleurs. Applied in a liniment with the floure of Feni-greece, it easeth the pains of the gout: it clenseth the leprosie, and foul wild scab: it killeth ring-worms and fell tectars: it scoureth away freckles and such flecks as disfaue the face: likewise it cureth the parts stung with venomous serpents, or bitten with mad dogs. Moreover, this juice of the wild Fig-tree, applied vnto the teeth with a lock of wooll, allaieth their ach: so it doth also if it be put into them that be worne-eaten and hollow. The tender yong branches, together with the leaues, if they be mingled with Eruille, are good against the poison of venomous sea-fishes. But then, according to some Physitians, there must be wine added to this receipt. The said tender branches being put into the pot with Boeuf, and so boiled together, saue much fewell, for lesse fire by far will serue to seeth the meat. The green figs of this wild fig-tree brought into a liniment, do mollifie and discusse the kings euill, and all other tumors and apotemes. And in some measure the leaues also haue the same operation: Chuse the softest and tenderest of them, let them be stamped and mixed with vinegar, they will cure running scalls and sores, ease bloody fals and chilblanes, yea, and scoure away filthy scurf or dandruffe. The said green figs, together with the leaues, incorporat with honey, doe cure the wens or exulcerat bunches, which yeeld matter out of them resembling hony: likewise they heale the biting of mad dogs. The greene and fresh figs newly gathered, if they be laied roo with wine, doe heale filthy eating vicers: and mixed with Poppie leaues, they draw and fetch away broken bones out of the body. The greene Figs of the wild Fig-tree, doe scatter and discusse inflammations, onely by their perfume, if they be burnt. They are a counterpoison, in case one haue drunk Bils blood, or cerusse: the same also put away the danger of milke crudded within the stomacke, if they be taken in drinke. Likewise, soddren in water, and reduced into a liniment, they cure the risings & tumors behind the eares. The tender branches & the least green Figs of this wild Fig-tree, being taken in wine, are very good for the sting of Scorpions: with this change, that the milky juice thereof be instilled into the wound, and the leaues laied aloft. The same also serueth for the hardi shew. The ashes of the small tendrons being burnt, duely applied,

A applied, bring the Vvula againe into the right place, and assuage the paine therof. The ashes of the very tree it selfe, being incorporat with honey, do cure the rhagadies, fistules, and chaps in the feet, or elswhere. The root boiled in wine, easeth the tooth-ache. The winter wild fig-tree, (which beareth fruit late in the yere) if it be soddren in vinegar, and so stamped and brought into a liniment, is singular to kill tectars and wild scals. But to prepare this medicine, the wood & boughs of the tree must be depouled of the barke, and then shauen or scraped so fine as any powder or saw dust, that they may be reduced into an ointment. Yet there is one medicine more belonging to the wild fig-tree, which is admirable, and may make a man to wonder at it: if a yong boy not yet vndergrowne nor 14. yeares of age, break a branch or bough of the wild fig-tree, and with his teeth do pill the said branch, and fetch off the rind before it haue gathered any downe

B or mosse about it; then the marrow or pith within the said branch, if it be taken forth and tied fast about one that hath the kings euill (so that all this be done in a morning before the Sun-rising) doth repercusse and smite back the said disease, so that it shall not arise and grow. Moreover, this wild fig-tree hath one singular property besides, That if a collar made of the branches thereof be but about a bulls neck, it will make him perforce to stand still and not to stir, how fell and fierce soeuer he be otherwise; such a wonderful vertue it hath to bridle and keep vnder his courage.

Moreover, since that the Greeks do terme this wild fig-tree in their language Erineos, which putteth me in mind of a certain herb called Erinos also in their tongue, I cannot wil nor chuse but for affinity and neighbor-hood sake, describe the same in this place, and set downe the properties and vertues thereof. An herb it is, one good handful high, rising vp commonly with five or six little stalks or branches, much like vnto Basil; bearing a white floure, a black seed, and the same small which seed beaten to powder and medled with the best Atticke honey, cureth the rheume which falleth into the eies and caufeth them to weep and water continually: as touching the herb it selfe, if it be applied or vsed accordingly, with a little sal-nitre put thereto, it is a passing good remedy for the paine of the eares. The leaues are a counterpoison.

To come now to the Plum tree: the leaues thereof boiled in wine, are good for the infirmities incident to the amigdales, the gums, and the Vvula, in case the mouth be oftentimes washed with a collution made of their decoction. Plums themselves make the body soluble, & very commodious they are to the stomack; but this benefit continueth but a small while.

D Peaches are much better than Plums; and so is their iuce, principally if it be drawn in wine or vinegar: and verily for a fruit, there is not in the world any more harmlesse than it. You shall not see a fruit againe, to haue lesse sinell, & more iuce within than the Peach; and yet as liquid as it is, it caufeth them to be dry and thirsty who eat thereof. The leaues of the Peach-tree, punned and applied, do stanch bleeding. The kernels of Peaches, incorporat in vinegar and oile to a liniment, and laied too as a frontal, allay the head-ache.

Bulleis, Skegs, and Slone (which are the berries, as it were, or fruit of the wild Plum tree) or the very barke and rind growing to the root, boied in one hemine or smal pint of some hard and crabbed wine, vntill a third part only remaine, do yeeld a decoction effectuell to allay the pains of the cholick, and to stop the flux of the belly: of this liquor, a cyath is a sufficient draught to be taken at a time. As well in this wild kind as in planted Plum trees of the hortyard, there is to be found a certain skinny gum, in Greek called Lichen, which hath a wonderfull operation to cure the rhagadies or chaps, yea, and the swelling piles or knobs that appeare in the fundament. In Egypt and Cypres both, there groweth the Sycomore, which is a kind by it selfe between a fig tree and a mulberry tree, as I haue before said; the fruit or berries whereof be full of liquor, which so soon as the vppermost rind or pill only is pared away, appeareth in great abundance: cut and gash them deeper in, they seeme drie, after a wonderfull and incredible manner. This iuce issuing out of them, is a singular defenfatue against the poison of Serpents: a wholesome medicine for the bloody flux; and * a notable carminatiue to discusse and resolu pusshes, biles, and al impostumations. It foudereeth and healeth ywounds, it allaieth head-ach, and assuageth the wens or pains of the eares. Such also as be spleeniticke or diseased in the spleene, finde much ease and comfort by drinking thereof. Moreover, a liniment made therewith, is good to chaufe and heat those, who chill and quake for extremity of cold: howbeit, last it will not, but breed worms very quickly. Certes, the iuce of our mulberries which we haue, is of no lesse operation and effect; for if it be taken in wine, it is a singular counterpoison for them who haue drunke ei-

The like is
Fenneltrum
discussed by
Galen, and
described by
Aegineta.

ther the iuice of Aconit, [i. Libard-bane] or swallowed a venomous spider. The same doth loo-
 sen the belly, euacuat slimy and roping fleame, and expelleth the broad wormes and other such
 vermin ingendred in the belly. Of the like efficacy is the bark, if it be puluerized and so taken
 in drink. The leaues boiled in rain water, together with the bark of the blacke fig-tree and the
 vine, do make a lauature or water to * colour the haire [blacke.] The iuice of mulberries doth
 work speedily, and prouoke to the siege: and the very fruit or mulberry it selfe, for the present is
 comfortable to the stomacke; it cooleth for the time, but bringeth thirst with it. If a man eat
 them alone, or last, and lay no other meat vpon them, they swell in the stomack and be very fla-
 tuous. The iuice drawn out of vnripe mulberries, are of vertue to bind the belly. In sum, there be
 strange and wonderfull properties worthy to be obserued in this tree, which seemeth to haue
 some sence and vnderstanding, as if it were a liuing and sensible creature, whereof I haue already
 * written more at large in the description of it, and the nature thereof. There is a notable * com-
 position made of mulberries, respectiue to the mouth and throat, called thereupon Panchrestos
 Stomatice, and by another name, Arteriace: the receit and making whereof, is in this manner;
 Recipe, of the iuice drawne out of Mulberries, three sextars, seeth it ouer a gentle and soft fire [or
 rather let it stew in balneo Maria] vntill it be reduced to the consistence of hony: afterwards put
 thereto of veruice made of dried grapes, the weight of two * deniers or drams; of myrrhe, the
 poise of one denier; of saffron likewise, one dram or denier. Let these ingredients (I say) be first
 beaten to powder (such I mean as need puluerising) and so mingle them together with the fore-
 said decoction, and put it vp for your vse. A better and more pleasant medicine there is not, for
 the mouth, the windpipe, the vula and the stomack. There is another way of making it in this
 sort, Take of the iuice aforesaid, the quantity of * two measures called sextars, of Atticke hony
 one sextar, seeth them together as before. Many maruels besides are reported of this tree, of
 which I will giue you a little tast: Spie where the little mulberries that shall be are newly knit,
 to wit, when the tree first buddeth and before the leaues be fully out; gather their yong knots of
 the fruit toward, which the Grecks call Ricinos, but in any case with the left hand; take heed al-
 so that they touch not the ground, how soeuer you do: and if when you haue obserued these cir-
 cumstances, you wear them about your wrefts, hang them about your necke, or otherwise tie
 them about you, be sure they will stanch bloud, whether it gush downe from your nostrils, flow
 out of a wound, run out of the mouth, or issue by the hemorrhoid veins. And in truth, folke vse
 to keepe these little buds or knots very carefully for this purpose. The same vertue and operati-
 on the branches haue (as they say) but then they must be broken from the tree at the full of the
 moon, when they begin to knit & giue some hope of fruit: & if the same touch not the ground,
 then they haue a speciall property respectiue vnto women, for to restrain the immoderat flux of
 their monthly terms, being tied or fastened to their arms. And it is thought, that they work this
 effect, if the woman her selfe do gather them at any time when soeuer: provided alwaies, that the
 branch in any wise touch not the ground, and that she weare it fast about her in manner afore-
 said. The leaues of the mulberry tree stamped greene, or beeing dry and boiled, serue in a cata-
 plasme to be applied vnto those places which are stung by serpents: the same good they do al-
 so, if they be taken in drink. The iuice of the bark which grew to the root, if it be drunk either in
 wine or oxycrat [i. vinegar and water together] is singular against the pricke of scorpions. But
 here I must set downe the compositions that our antients deuised and made of mulberries: first
 and formost, they tooke a quantity of the iuice pressed out of mulberries, as well ripe as vnripe,
 which they sod in a brasse pan, vnto the consistence or thicknesse of honey. Some vsed to put
 thereto, myrrh and Cyresse, setting all to frie and take their fermentation in the sun, vntill it
 grew to hardnesse in the foresaid vessell, stirring it thrice a day with a sparule: This was the sto-
 maticall medicine of the antients, which they vsed also in healing & skinning vp wounds. And
 yet there was another kind made after this sort: they pressed forth the iuice of the vnripe mul-
 berries, but first they let the said fruit to be very wel dried, & this serued them in lieu of sauce,
 which gaue an excellent tast to their other meats. In physick also, they imploied it much, name-
 ly, about corrosiue and eating vlcers, and for to euacuat tough fleame out of the brest: they vsed
 it also as need required, as an astrictiue, to corroborat the noble and principall parts within the
 body. It stood them also in good stead for collutions, to wash the teeth withall. Moreover, a
 third kind of iuice they had, which they drew from the leaues and roots after they were wel boi-
 led: and with this iuice & oile together, they were wont to annoint any burnt or scalded place

* *Tingunt capi-
lum*: for the
black colour
was in most
request in
those daies.

* *Lib. a. 6. ca. 25.*
* *Diamorum*, of
the compound
syrup of mul-
berries.

* *Pondus X. dr.*
* *drum*.

* Somewhat
vnder two
wine quarts
with vs.

G

H

I

K

L

M

of

A of the body: for which purpose, the leaues also they applied alone without more ado. As touch-
 ing the root of the Mulberry tree, it yeeldeth in haruest time (by way of incision) an excellent
 iuice for the tooth-ach, for biles, and impostumes, especially such as are growne to suppuration
 and be at hand to break: the same purgeth the belly. The leaues of the Mulberry tree infused &
 soked in vrine, fetch off the haire from those skins which are to be courried and dressed.

Cherries loosen the belly, and be hurtfull to the stomack; yet, if they be hanged vp and dried,
 they do bind the belly, and prouoke vrine. I find a notable experiment in some authors, That if
 a man eat Chery-stones and all in a morning, new gathered from the tree with the dew vpon
 them, they will purge so effectually, that he shall find himselfe cleane rid from the gout of the
 feet, if he were diseased that way.

B Medlars, all of them, except those great ones called Setania (which indeed are more like to
 Apples) do close vp the stomack, and bind the belly. In like manner Sorueises, if they be dried;
 for being fresh and new gathered, they be good to scoure and send excrements speedily out of
 the stomacke and belly both.

CHAP. XVIII.

¶ Of Pine-nut s, or Pine-apples: of Almonds, Filberds, and Hazell-nuts: of Wal-nuts, Fi-
 sticks, Chestnuts, Carobs, and Corniols. Of the fruit of the Arbut or Straw-
 berry tree, and the Bay.

C T He Pine apples or nuts, which haue rosin in them, if they be lightly bruised, and then sod-
 den to the half in water, with this proportion, to wit, one sextar of water to euery such ap-
 ple, do yeeld a decoction singular good for such as reach and spit vp bloud; so that the pa-
 tient drink two cyaths thereof at one time. The decoction likewise of the Pine-tree bark boi-
 led in wine, is giuen to drink for the pains and torments in the belly. The kernels of the Pine-
 nuts quench thirst; they pacifie and stil the frettings and gnawings of the stomack: they rectifie
 the corrupt and putrified humors there settled and bedded: they strengthen weak bodies in man-
 ner of a restorative, and are right good & agreeable to the reins and bladder: howbeit they seem
 to exasperat the throat, & to encrease a cough. Being taken inwardly, either in water, wine, sweet
 cuit, or the decoction of * dates or tamarinds, they purge cholerick humors: when the gnawing
 D gripes within the stomack be exceeding violent and painfull, it is good to mix therewith Cu-
 mber seed and the iuice of Pourcellane: likewise in case either bladder or kidnies be exulce-
 rat: for diureticall they be also, and prouoke vrine.

*Balanum de-
casto.*

Touching the bitter Almond tree, the decoction of the roots thereof, doth supple the skin
 and lay it even and smooth without wrinkles; it imbeliseth the visage with a fresh, luely, and
 cheerfull colour. The bitter Almonds themselves bring folk to sleep, and get them appetite to
 their meat: they moue vrine, and stir the ordinary course of womens monethly fleurs: they serue
 in a liniment for the head-ach, especially in feuers, but if the said head-ach come by occasion of
 drunkennesse or a surfet of wine, they would be applied with vineger, oile rosat; and a sextar of
 water. They haue a property to stanch bleeding, mixed with Amylfloure and mints. They are
 E good in a lethargy, and the falling sicknesse, if the head be therewith annointed all ouer. They
 cure the angry night-foes, called chilblanes and bloody-falls: applied with cold wine, they cure
 vlcers which grow to putrifaction; and with hony, the bitings of mad dogs: they take away the
 scales and dandruffe about the face, if so be there haue bin vsed before, some conuenient fomen-
 tation to prepare the skin for this medicine. An Almond milk drawn with water, and taken as a
 drinke, easeeth the pains of the liuer and kidnies. Bitter Almonds reduced into a loch with Ter-
 pentine, worke the same effect, so that the Patient be often licking thereof. For those who be
 troubled with the stone and grauell, with difficultie also of pissing, they be very effectuell if
 they be taken with sweet wine cuit: also beaten with honied water, they be singular to cleanse the
 skin, and make it look neat and faire. Reduced into the form of a loch with hony, they be whol-
 F some for the liuer, good to ripen and dispatch a cough, & excellent for to mitigate the paines of
 the cholique: and this electuarie must bee taken, to the quantity of one hazell nut at a time,
 with a little sauge put thereto. It is said, that our lusty tosse-pots and swil-bols, if they eat foure
 or five bitter almonds before they sit them down to drink, shall beare their liquor well, and ne-
 uer be drunke, quaffe they and poure they downe as much as they wil: also, that if foxes chance

to eat of them, and cannot come by water neere at hand to lap, they wil die thereof. Sweet almonds are not so medicinable as the bitter, and yet they be purgative, abstersive, and diureticall. If they be new and fresh, they charge and stuffe the stomacke.

Hazel-nuts and Filbirds, otherwise called the Greekish nuts, beeing taken in vineger with wormwood feed, cure the yellow jaunise, as it is commonly said: & a liniment made with them doth help the diseases incident to the feet, and particularly the piles and swelling bigs there appearing. The same medicine is good for the cough, and such as spit and cast vp blood.

ῥαυον, of ῥαυον, the head: like as in Latin, *Nux, a noxa, vel nocendo*

As for Walnuts, the Greeks haue giuen them a * name importing as much as the heaviness of head, and not without good cause, for the very shade of the tree and the sent of the leaues, do pierce and enter into the head: so do the kernels also in lesse while, if they be eaten: now the newer they be, the more pleasant tast they haue: the drie are more oily and vnctuous, hurtfull to the stomack, hard of digestion, causing head-ach, naught for them who haue a cough, and for such as would vomit in a morning fasting: good only in that troublesome running to the stoole and straining for nought, by reason of their property to euacuat fleam. The same being eaten before meat, do dull the force of any poisons: they help the squinancy also, applied with Rue and oil. Aduerse & contrary they are to the nature of onions, & do keep down & repress their strong smell which riseth from them, after a man hath eaten them. Applied with a little hony, they are thought to be very good for the inflammation of the ears, & with Rue, for the breasts and paps; as also for dislocations and parts out of ioint. But if they be vsed with onions, salt, and hony, they are singular for the biting both of dog & man. The shel of a wal-nut, is thought to be of a caustick quality, and good to burn or seare an hollow tooth: the same being burnt, pulverized, and incorporat with oile or wine, serueth to annoint the heads of yong babes for to make the hair grow thick: & in that maner it is vsed to bring the haire again of elder folk, when through some infirmity it is shed. The more Walnuts that one eateth, with more ease shal he driue worms out of the belly. VWal-nuts that haue bin very long kept, do cure carbuncles, gangrenes tending to mortification, and reduce the black and blew spots (remaining after stripes) to their own color. The bark of the wal-nut tree, is a soueraign remedy for the bloody flux, and the foule tectars or ringworms. The leaues bruised & stamped with vineger, & so applied, put away the pain of the ears. After that *Mithridates* (that most mighty and puissant king) was vanquished, *Cneus Pompeius* found in his secret closet or cabinet, among other precious jewels, the receipt of a certain antidote or preservative against poison, set down vnder the hand of the sayd prince, in a priuat note-book of remembrances, in this maner following: Take a dry walnut kernel, as many figs, of rue, 20 leaues: stamp al these together into one masse, with a graine or corn of salt among. Vnder which receipt, was thus much subscribed, VWhofoeuer vse to eat of this confection in a morning next his heart, there shall no poison hurt him that day. It is said moreover, that the kernels of walnuts chewed by a man or woman fasting, doe cure the biting of a mad dog, so that the place be annointed and dressed therewith.

But to return again to Hazle-nuts and filberds, they do cause head-ach, they breed winde in the stomack: and a man would not think nor beleue, how soon they wil make one fat, but that experience approueth it. If they be roasted or torried, they cure a rheume: and if they be beaten to poudre, and giuen to drink in honied water, they rid away an old cough that hath stucke to one a long time: some put thereto certain pepper cornes, and others drinke them in wine cuit that is sweet. Fifticks are vsed in the same sort, and haue the same operation and effects as the Pine-nut kernels haue: ouer and aboue, they are soueraigne for the sting of serpents, whether they be eaten or taken in drinke.

* *Alvo cile, & molliu ciente.*

Chestnuts be exceeding astringent, and mightily stay all fluxes both of the stomack and the belly: for such as scoure ouermuch and haue * a great lask vpon them: also for them who reach vp blood, they be passing wholesome, and withall, nutritiue and breeding good flesh.

Carobs, which be fresh and Greene, are hurtfull to the stomacke, and doe loose the belly; yet the same, if they be dried, do bind, and are more wholesome for the stomacke: diureticall they be also, and prouoke vrine. As for those Carobs or Cods of Syria, some vse to leech three of them in a sextar of water vntill halfe be consumed, and drink that iuice or liquor thereof for the paine of the stomack. If a man take the green twigs of a Corneil tree, there will (by the meanes of a red hot plate or slice of yron set vnto them) sweat or fry out a certain liquid humor, which must be receiued so, as nowood touch it: the rust of yron befieared with this liquor, cureth foul tectars

A tars and ringwormes called Lichnes, if they be taken at the first before they haue run far. The Arbut or Strawberry tree, otherwise named Vnedo, beareth a fruit hard of digestion, and offensive to the stomack. The Lawrell, both leafe, bark, and berry, is by nature hot, and therefore it is agreed among all writers, That their decoction, especially of the leaues, is comfortable to the bladder and natural parts of women: the same being applied as a liniment, be singular good for the prick or sting of wasps, hornets, and bees; and likewise against the poisons of serpents, especially of the viper, and Seps otherwise called Dipas. Boiled with oile, they are good to bring down womens fleurs. The tender leaues of the Bay stamped, and mixed with grosse barley meale or groats, cure the inflammations of the eies: with Rue, they help the hot tumors and swellings of the cods: but incorporat with oile Rosat, or with oile of Ireos or floure-de-lys, they assuage the head-ach. Whofoeuer doth chew and swallow downe three bay leaues, for three daies together, shall be deliuered by that means from the cough. The same, if they beaten to poudre & reduced into an electuary or loch with hony, are good for such as be purrile and labor for wind. The bark or rind growing to the root, is dangerous for women great with child, and such must take heed how they meddle with it. The very root it selfe, breaketh or dissolueth the stone, and is wholsome for the liuer, if it be taken to the weight of three oboli in odoriferous wine. Bay leaues giuen to drink, do prouoke vomit. Bay berries bruised and so applied, or otherwise pulverized and taken in drink, draw down the issue of womens terms. Take two Bay Berries, rid or cleanse them from their huske and drinke them in wine, it is a singular medicine for inueterate coughs, & the difficulty or straitnesse of breath, when a man is forced to sit vpright for to fetch C and deliuer his wind: howbeit, if the Patient be in a feuer, it is better to take these berries in water, or els by way of a loch or electuary, after they haue bin sodden in honied water or sweet cut. And in this manner they be good in a phthisick or consumption of the lungs, & all catarrhs which fall to the pectorall parts; for they ripen fleam, and send it out of the chest. Four Bay berries drunk with wine, are a good remedy for the sting of scorpions. The same being brought to poudre and reduced into a liniment with oile, & so applied, do heale the bloody-falls called Epinyctides; rid away freckles and pimples, cure running scalls and vlcers, cankers and sores in the mouth; and cleanse the body of scurfe, scals, and dandruffe. The iuice drawn out of Bay berries, killeth an itch that fretteth the skin, & besides, the lice that cawle and swarm all ouer the body. The same, mingled with old wine and oile rosat, and so dropped into the ears, cureth their D pain and deafnesse: and whofoeuer be annointed all ouer therewith, need feare no venomous things, for they will flie from them. The same iuice, especially if it be drawn from the berries of that Lawrell which hath the smaller and thinner leaues, may be taken in drink, and so it is effectually against all stings. The berries drunk in wine, withstand the venom of serpents, scorpions, and spiders. Brought into a liniment with oile and vineger, and so applied, they help the spleen and liuer; but with hony, they heale gangrenes. Such as be wearied with trauel, or otherwise stiffe and benumbed with cold, find much good by being annointed with the said liniment or iuice, if some sal-nitre be put thereto. Some are of opinion, That if a woman in labor drinke the quantity of one acetable of the Lawrell root in water, shee shall haue the more speedy deliuerance: and for this purpose (they say) that a fresh and green root is better than a dry. Others prescribe, E to giue in drink ten bay berries against the prick of scorpions. Also when the Vvula is false, some giue counsell to take three ounces of the leaues and berries, and seeth them in three sextars of water to the thirds, & to gargarize with this decoction hot: also for the head-ach, to take some odde number of bay berries, and stamp them with oile into a liniment, & therewith to annoint the fore-head & temples, as hot as the patient can well abide it. The leaues of the Delphick Lawrell beaten to poudre, and held to the nose and smelled vnto euer and anon, serue for a good preservative in time of the contagious pestilence; and the rather, if they be burnt, their perfume doth rectifie the infection of the aire. The oile of the said baies of the Isle Delphos, is good for to make those cerots which put away lassitude & wearinesse, to discusse & resolute the cold humors which cause quivering and quaking, to mollifie and stretch the sinews, to allay the F pain of the sides in a pleurisie, and last of all, to driue away the cold fits of agues. Semblably, if the same be warmed in the rind of a Pomgranat, & instilled into the ears, it easeth their pain: the leaues boiled in water to the consumption of a third part, keepe vp the Vvula, vsed by way of a gargarisme: but the said decoction taken inwardly, allaieth the pains of belly and guts: the tenderest leaues that may be had, stampt with wine into a liniment, do repress & keep down wheals

and itching, if the body be annointed therewith euery night. Next vnto this, the other kinds are to be ranged according to the validitie of their operation. As for the Lawrell Alexandrica or Idæa, if a woman in trauell of child-birth take three deniers weight of the root, and drinke the same in three cyaths of sweet wine, she shall be quickly deliuered and brought to bed: the same drink sendeth forth the after-birth, and prouoketh womens monthly terms.

Daphnoides, or the wild Lawrell (or call it by any other of those names before rehearsed) hath many good vertues: it purgeth the belly, if you take the leafe either green or drie, to the weight of three drams with salt, in hydromel or honied water: being chewed, it draweth downe flegmatick and watery humors. The leafe also moueth to vomit, and is officious to the stomack. The berries likewise be purgatiue, if a man take five or ten of them at once.

CHAP. IX.

¶ Of the tame or gentle Myrtle tree planted. Of Myrtidannum, and the wilde Myrtle.

OF garden Myrtles, the white is not so medicinable as the black: the fruit or berries of the Myrtle, help those that reach vp blood: taken with wine, they put by the danger of venomous murtherers: chew them in your mouth, your breath will be the sweeter for it two daies after. It appeareth by the Poet Menander, that the good-fellows Synaristense were wont to eat Myrtle berries: the weight of one denier in wine, is good for the bloody flux. If they haue a little sueting or waulm ouer the fire in wine, they make a good water or liquor to cure vntoward vlcers to heale, especially such as be in the extreame parts of the body. Of them and barley groats, there is made a cataplasme for bleered eies: for the fainting also and trembling of the heart, being applied to the left pap or brea st. In like manner, the same being vsed with pure vndelaied wine, is singular for the prick of scorpions: for the infirmities of the bladder the head-ach, and the apostemations betwene the angle of the eies and the nose, if they be taken before they yeeld filthy matter: and so they cure other tumors or swellings: and if their pepins or kernels be taken forth, and then incorporat with old wine, they be singular for the small pocks and meazles. The juice of Myrtle berries bindeth the belly, but prouoketh vrine. A liniment also is made thereof with wax, for the said pox and meazles: also against the sting of the venomous spiders Phalangia. The said juice doth colour the haire blacke. Of the same Myrtle there is an oile made, more lenitiue and mild than the iuice or liquor aboue-named: & yet there is a wine of Myrtles more kind & gentle than it, which wil neuer ouerturn the brain or make one drunk. The same, if it haue lien and be stale, bindeth the belly and staieth a laske: it strengtheneth the stomack also, and represseth vomits: it assuageth the griping pains in the guts, and restoreth appetite to meat: the powder of drie Myrtle leaues, restraineth sweats, if the body be strewed therewith, though it were in a feuer. The same powder is good for the feebleness of the stomack, and the flux from thence proceeding: it reduceth the matrice into the right place, when it beareth down out of the body: it cureth the infirmities of the seat; healeth running scalls and vlcers; warissheth S. Anthonies fire, and the shingles, being vsed thereto in some fomentation; retaineth and staieth the haire ready to shed; scoureth away dandruffe; drieth vp wheals, pocks, and meazles; and last of all skinneth burnes and scaldings. The powder entrencheth into those vnguinous or oleous plasters which the Greeks call Liparas. And such a kind of plaster in like manner as the oyle of these Myrtle berries, is most effectually in those sores which light vpon moist parts, as for example the mouth and the matrice. The leaues in substance, beaten to powder and tempered with wine, are a counterpoison against venomous murtherers; but incorporat with wax into a liniment, they do ease the gout of any joints, and driue back rifings and impostumations. The same leaues boiled in wine, are given to drink for the bloody flux, and the drop sic. VVhen they be dried and brought into powder, they serue to cast and strew vpon vlcers; also to restraine any bleeding. They scour away freckles, and such like spots of the skin: they heale the rising, ouer-growing, and parting of the skin about the naile roots; also whit flauis, chilblanes, piles, & swelling bigs in the fundament; the accidents befalling to the cods; filthy maligne and morimall vlcers; and last of all, burnes (applied in manner of a cerot.) For the ears running with filthy matter, there is good vse of the leaues burnt; also of their iuice and decoction. The same are likewise burned, to serue for certain antidots or counterpoisons. In like manner, to the said purpose the tender sprigs of the Myrtle with the floure vpon them, are gathered and calcined within an ouen,

A ouen, in a new earthen pot, well couered and close luted: after which they be reduced into powder, and mixed with wine. The ashes of the leaues burnt, healeth burnes. To keepe the share or groin from swelling, although there be an vlcer there, it is sufficient, if the party haue about him a shoot or branch only of the Myrtle, prouided alwaies, that it touched neither yron nor the earth.

As touching Myrtidarum, how it is made I haue shewed already. Applied vnto the matrice or natural parts of a woman either by way of fomentation or liniment, it doth much good. And much better, if it be made with the bark, leafe, and berry of the Myrtle. Moreover, of the softest leaues braied and stamped in a mortar, there is a iuice pressed forth, by pouring green wine by little and little among, and otherwhiles raine water: which is vsed much for the vlcers and sores of mouth, seat, matrice, and belly: to dye the haire black: to wash and *bath the arm-holes with: to scour away spots and freckles: and in one word, when and wherefoeuer there is need of a striction.

The wilde Myrtle or Oxymyr sine, called also Chamæmyrsine, differeth from the ciuill and gentle Myrtle, in the redness of the berries, and the smal growth. The root is highly esteemed: for boiled in wine, and so taken in drink, it cureth the paine in the raines, the difficulty of vrine, especially when it is thick, and of a strong sauer. The jaundise also it helpeth, and cleanseth the matrice, if it be brought into powder, and mixed with wine. The yong and tender buds eaten after the manner of Sperage crops with meat, first roasted in the embers, the seed likewise taken in wine, oile, or vinegar, break the stone. The same seed stamped and drawne with vineger and oyle rosat, allaieth the head-ach; but in drink it cureth the jaundise. Castor called Oxymyr sine (with the sharp prickie leaues like the Myrtle, and wherewith beefomes be made) by the name of Ruscus, and saith it hath the same properties. Thus much for planted trees, and their medicinal vertues: proceed we now forward to the wild.



THE TWENTY FOVRTH BOOK OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIVS

SECVNDVS.

The Proeme.

CHAP. I.

¶ Medicinable vertues obserued in wild trees.

NATURE, that sacred and blessed mother of all things, willing and desirous that man, whom she loueth so well, should find euery place stored with proper and conuenient remedies for all maladies incident vnto him; hath disposed of her workes, and taken that order, that the rough woods and forests, even the most hideous parts of the earth, and fearfull to see vnto, bee not without their plants medicinable. Nay, the very wilds and desarts are enriched and furnished therewith: insomuch, as in euery coast and corner of the world there may be obserued both sympathies and antipathies (I meane those naturall combinations and contrarieties in those her creatures.) From whence proceed the greatest miracles which are to bee seene in this round Fabricke and admirable frame.

frame. For first and formost, the Oke and the oliue tree beare such mutual rancor and malice (as it were) and are so stiffly bent to war one with another, that if a man replant one of these trees in the trench or hole from whence the other was taken vp, it wil surely die. Also, if an Oke be set neare vnto a walnut-tree, it wil not liue. The Colewort and the Vine hate one another to the very death; in such sort, that if a Vine stand neare vnto it, a man shall sensibly perceiue the same to shrink away and recule backward from it: and yet this wort, which maketh the Vine thus to retire and flie, if it chance to grow ouer-against Origan or Cyclamine, will soone wither and die. Moreouer, it is commonly said, That trees in the Forrest fully grown, which haue stood many a yeare, and namely such as are ready to be fallen and laid along for timber, proue harder to be hewed, and sooner wax dry, if a man touch them with his hand before hee set the edge of the axe to their butt. And some say, that pack-horses, asses, and other labouring beasts which haue Apples and such like fruit aloof, wil quickly shrinke and complaine vnder their burden, yea, & presently run all to sweat (carry they but a very few to speak of) vnlesse the said fruit, wherewith they are to be charged, be first shewed vnto them. Asses finde great contentment and good by feeding vpon Fenel-geant or Ferula plants: and yet to horses, garrons, & other beasts of cariage and draught, they are present poison, if they eat them: which is the cause that the Ass is a beast consecrated vnto the god *Bacchus*, as well as the foresaid plant Ferula. Ouer and besides (see the admirable operation in Nature) the very insensible and liuelesse creatures, yea, the least that be, meet euery one of them with some contrary thing or other, which is their bane and poison: for as our cooks know well enough, the inner bark of the Linden tree sluied thin into broad flakes and fine boulded floure together, doe drink and suck vp the salt of viands, ouermuch powdered, and make it fresh again. Likewise, salt giueth a good relish to any meat that is ouer sweet, and tempereth those that haue a luscious and wallowish tast. If water be nitrous, brackish, & bitter, put some fried barley meale into it, within two houres and lesse it will be so well amended and sweet, that a man may drink thereof: and this is the reason that the said Barley meale is put ordinarily in those strainers and bags through which wines do passe, that thereby they may be refined and drawn the sooner. Of the same operation also and effect there is a kind of chalker in the Island of Rhodes: and our clay here in Italy will do as much. Thus you see what enmity & discord there is in some things. Contrariwise, we may obserue in others, how wonderfully they accord and agree together: for pitch will dissolue, spread, and be drawne out with oile, being both as they are of a fatty nature; oile alone will incorporat and mingle well with lime; & they hate water, the one as well as the other. Gums are sooner dissolued and more easily tempered with vineger than with any thing els; & ink with water: besides an infinit number of other such, that I shall haue occasion to write of continually in their due places. And indeed, this is the very ground and foundation of all our Physick. For (to say a truth) Nature ordained at the first such things and none but such, for to be the remedies of our diseases, which we feed & liue daily vpon; euen those which are soon found and as soon prepared, which be ready at hand, common euery where, and cost vs little or nothing at all. But afterwards the world grew to be so full of deceit and couenage, that some fine wits and nimble heads deuised to set vp Apothecary shops, promising and bearing vs in hand, that euery man might buy his life and health there for mony. Then anon a sort of compositions, mixtures, and confections were set on foot; then there was no talk but of strange and intricate receipts, and these were bruited abroad for the only medicines, of wonderfull and vnpeakable operations. So that now adaiies wee vse no other drugs but those that come from Arabia and India. And if a man aile neuer so little, or haue the least pufh or wheale about him, he must haue some costly Physick forsooth for it: & a plaster that came from as far as the red sea: whereas in truth, the right remedies appropriat for euery maladie, be no other than such as the poorest man that is feedeth vpon euerie night ordinarily at his supper. But if we went no farther than to the garden for medicines, and sought after herbs, shrubs, and plants only, for to cure our sicknesse, or maintain our health, certes there were not a baser occupation in the world than the profession of Physick, and Physicians would be nought for by: but will you haue the truth? To this passe are we come, the old world we haue bidden farewell vnto: the ancient manners and rites of Rome citie are dead and gone: our state is growne so much in greatness, as there is no goodnesse left. Our victories and conquests be these, and nothing else, which haue vanquished & subdued vs: for subiect we must acknowledge our selues to strangers and forraigne Nations, so long as Physicke (one of their Arts) is able to command our commanders,

A ders, and ouerrule our Emperors. But the discourse of this matter in more ample manner, I will referue to some other time and place.

CHAP. II.

¶ Of *Lotos*.

As touching the herbe * *Lotos*, the Egyptian plant likewise of that name: as also, of another tree about the Syrtis so called, I haue written sufficiently in their due places: as for this *Lotos*, which our countrymen call in Latine the Greekish Bean, hath a property for to bind and knit the flux of the belly, with the fruit or berries which it beareth. The shauings or scrapings of the wood thereof, boiled in wine, and so taken inwardly, cure the bloody flux and exulceration of the guts; represseth the immoderat flowing of womens moneths; help the dizziness and swimming of the braine; and those who be subiect to the falling sicknes: the same decoction also * keepeth the haire from shedding, if the place be bathed therewith. But wonderfull it is, that these small shauings should be so bitter, as nothing more, when the fruit it self is as sweet as any other. Moreouer, of the fine dust sawed or filed from this wood, sodden in Myrtle water, then kneaded or wrought into past, & so reduced into seuerall trochisks, there is a soueraigne medicine made for the bloody flux: if the patient drinke the weight of one Victoriat or halfe dram of these troches in three cyaths of water.

* Called otherwife *Colocasia*, and the Egyptian Beans.

* *Cobibene* called *pillam*, *Dioscor.* hath *Exodisc.* *i. Rafant.* *i. com.* loureth. *chem.* yellow.

CHAP. III.

¶ Of *Mast*.

As Cornes or Mast of the Oke, beaten to powder, & incorporat with Hogs lard salted, heale all those hard and swelling cankerous vlcers, which they call in Greeke *Cacoethe*. In all these trees bearing Mast, the very substance of the wood is more forcible than the fruit; the outward bark more than the wood; and the inner rind or tunicle vnder it, more than the bark or all the rest. This membrane or pellicle if it be boiled, is singular for the flux of the stomach, proceeding of weaknesse. The very Mast or Acome it self reduced into a liniment and applied, staith the bloody flux: and the same resisteth the venom of serpents stings, restraineth rheums, and catarrhs, and namely, that flux of humors which causeth apostemations. As well the leaues, the mast or berries of this tree, as the bark or juice drawn from it, after boiling, are excellent against the poisons called in Greeke *Toxica*. The bark sodden and brought into a liniment with Cow-milk, is very good to be applied vnto the place where serpents haue bitten or stung; it is giuen also in wine for the bloody flux: of the same vertue & efficacy is the holm-oke

CHAP. IIII.

¶ Of the [Scarlet] graine of *Holme-oke*: of *Galls* and *Mistle*: of certaine little balls growing vpon the Oke: of *Mast*: of the root of * *Cerrus*: and of *Corke*.

The * Scarlet graine growing vpon the Oke-helm, is very good to be laid to fresh wounds with vineger. It is applied with water for the flux of watery humors vnto the eies: & dropped likewise into them when they be bloud-shotten. Now there is a kind of it growing commonly in the region of Attica and throughout Natolia, which very quickly turneth to be a grub or Magot (wherupon it is called *Scolecion*) and is rejected, as being of no worth. Many more sorts there be of it, whereof the chiefe and principall I haue shewed already.

As touching the Gal-nuts, I haue likewise made of it as many kinds: for some be solid and masse, others full of holes, as if they were bored through. You shall haue of them white, and black: some great, & others small: but how different soeuer they be in substance, colour, or quantity, they be all of like nature. The best are those of *Comagene*. Galls are good to eat away the superfluous excrescences in the body. They serue very wel for the infirmities of the gums and vula; for the cankers & exulcerations breeding in the mouth. Being first burnt, & then quenched in wine, they are singular for the fluxes occasioned by a feeble stomach. Applied in manner of a liniment, they help the bloody flux. Incorporat in hony, they cure whitflaws, risings, & partings of the flesh and skin about the naile roots; the roughnesse of the nailes, the running scals

* The great *Holm-Oke*.
* *Coccum* *Illis* our *Kermes* or *Kutchenel*, as some thinke.

and vlcers in the head: the knobs or swelling piles in the fundament, and in one word, all those corrosiue and eating vlcers, which consume the flesh to the very bone. Boiled in wine, and so instilled into the eares, they cure the infirmities of that part. So do they likewise help the eies, if they be annointed therewith. Applied with vineger, they discusse flegmatick wheales and such like breakings out, as also the flat biles and impostumes called Pani: the round kernell within them if it be chewed, allaith the tooth-ach. The same is good to skin raw and galled places, & any burn or scalded place. Take vnripe Gal-nuts, & drink them with vineger, they wil consume and weare away the swelled spleen. Burn the same, and quench them with salted vineger; a fomentation thereof, staith the immoderat flux of womens fleurs, & reduceth the matrice (fallen downe) into the right place. All the sort of these Gals do colour the haire of the head blacke.

Concerning Misseito: That the principall and best is found vpon the Oke, how it is cut and in what maner birdlime is made therof, I haue already shewed. Some for to make the said glew or birdlime, stamp Misseito first, and then seeth it in water, vntill it swim aloft. Others vse to chew the grains or kernels onely which they beare, and spit out their outward pills or skins. But the very best is that, which hath no husk or skin at all: which also is the * smoothest: without-forth of a light tawny or yellowish red: within, as Greene as a lecke: for indeed, there is not a thing more glutinous or glewy than it. This Misseito is a great emollient, for it softneth, dissoluth and resoluth also hard tumors: it is excitatiue besides, and drieth vp the Scrophules or swelling kernels, knowne by the name of the kings euill. If it be incorporat with rosin & wax, it mitigateth all sorts of impostumes or flat biles whatsoeuer. Some put thereto Galbanum also, in equall quantity or weight: and so vse it in the same manner for to heale wounds. It pollieth and maketh smooth the rough & vneuen nails, if it be laid too for seuen daies, and the medicine not removed before: but the nails ought to be wel washed with salnitre. Some obserue certain superstitious ceremonies herein, and are of opinion, That it will worke the better & with more efficacy, in case it be gathered from the Oke, the first day of the new Moon: also if it be not cut downe with any bill, hook, knife, or edged yron toole. Moreover, they do hold, That if it touch not the ground, it cureth those who are troubled with the falling sicknes. Semblably, if women do but carry it about them, it helpeth them to conceiue. Finally, if it be chewed and so applied vnto vlcers, it is most effectuall to heale them perfectly.

As for the little round bals or apples found vpon the Oke Robur, if they be incorporat with Bears greafe, they cause the haire to come thick again, where it is shed, in case the bare or bald place be annointed therewith.

Of the great Oke Holm Cerrus, thus much I haue to say, That the leaues, the bark, and mast thereof do discusse and drie vp all gathering of impostumations, enen such as grow to suppuration or mattering, and stay the flux of humors which feed them. A decoction thereof doth corroborat any member or part of the body which groweth to be sencelesse or benumbed, if the same be fomented therewith. Also for to dry, bind, & confirm any part which is feeble & weak, it is singular good to sit in a bath of this decoction. The root of this Cerrus is powerful against the prick of scorpions.

The bark of the Corke tree beaten into poulder and taken in hot water, is excellent for to repress any flux of bloud, whether it be vpward or downward. The ashes of the said bark giuen in wine hot, is greatly commended for the reaching and spitting of bloud.

CHAP. V.

¶ Of the Beech and Cypress trees, Of the great Cedars and their fruit called Cedrides: of Galbanum.

The leaues of the Beech tree being chewed, do much good to the gums and lips, in any accidents that befall vnto them. The ashes of Beech mast is singular for the * stone, if it be applied as a liniment. The same also bringeth haire againe, when by occasion of sicknesse it is shed and fallen away, if the place be annointed with it and hony together.

Cypresse tree leaues stamped and so applied, are a conuenient remedie for the sting of Serpents. Also laid vnto the head with dried groats of Barley, they ease the pain therof, occasioned by the heat of the Sunne. In like sort, the same cataplasme cureth ruptures. For which cause a drinke made of them is very good. A liniment also of Cypresse leaues and waxe mingled together.

* Dente innare
Some read Dente
nihil innare
that is, so
long vntill it
settles all to the
bottom, which
may stand wel
with the first
reading in this
sense, so long
as it swimmes
aloft.

* Sevilsum.

* Calculi. Some
reade, occurs, i.
eyes: others,
calis, i. hard
knots or callosities: & both
to better sence
in mine opi-
nion.

of Plinies Naturall History.

Ather, assuageth the swelling of the cods. Tempered with vineger, they will make the haire cole black. Moreover, if they be stamped with two parts of soft dough or the tender crums of bread, & so incorporat together with Ammnean wine, they allay the paine of the feet or the sinews. The little bals or Apples hanging vpon Cypresse trees, are soueraigne for to be taken in drinke against the sting of serpents, and for the casting vp of bloud out of the body. Brought into an ointment, they serue for the swellings or impostumes gathered to a place. Take them whiles they be yong and tender, stamp them with swines greafe and Bean flour, they do much good to those that are bursten: and for that purpose a drinke made of them, is passing effectuall. With ordinary meale they serue in a cataplasme to be applied vpon the swelling kernels behinde the eares, as also the kings euill. There is a iuice drawn out of these apples after they haue bin stamped together with their grains or seed within: which if it be mingled with oile, helpeth them to their cleare sight again, whose eies are ouercast with a web & dimmed. The same effect it hath if it be taken in wine to the weight of one Victoriat or halfe dram. But Cypresse apples rid and cleansed from their grains within, and reduced into a liniment with fat dried figs, and so applied vnto the cods, cure their infirmities, and namely, resolueth the tumors incident to those parts: but incorporat with leuaine, they dispatch the Scrophules or kings euill. The root and leaues punned together, and then taken in drinke, do comfort the bladder, and help such as are diseased with the strangury: they serue also against the prick of the venomous spiders Phalangia. Their small shauings or scrapings if a woman take in her drinke, procure her monthly terms, and are singular for the sting of scorpions.

The great Cedar, called by the Greeks Cedrelate, as one would say, the Fir-Cedre, yeeldeth a certain pitch or parrosin named Cedria, a singular medicine for the tooth-ach, for it breaketh them, fetcheth them out of the head and easeth all their pain. As touching the liquor that runneth from the Cedar, and the manner how it is made, I haue written already: this kind of pitch were excellent for the eies but for one discommodity, in that it causeth head-ach. It preferueth dead bodies from corruption, a world of yeares: contrariwise, liuing bodies it doth putrifie and corrupt. A strange and wonderfull property, thus to mortifie the quick, and quicken (as it were) the dead. It marreth and rotteth apparell, as wel linnen as woollen: and it killeth all liuing creatures. And therefore I would not aduise as some haue done, to tast this medicine and take it inwardly for the squinancie or crudities of the stomack: neither would I be bold, but fear rather, to prescribe it in a collution with vineger to wash the mouth withall for the toothach, or to drop it into their eares who be hard of hearing or otherwise haue vermine within them. But a monstrous and beastly thing it is which some report of it, That if a man do annoint therewith the instrument or part seruing for generation, at what time as he is minded to know a woman carnally, it will bring her to an abortiue slip, if she were conceiued before, or hinder conception, if she were cleare. Howbeit, I would not make doubt to annoint therewith the head & other parts, for to kill lice, or to rid away the scurffe or scally dandruffe among the haire, either in head or face. Some giue counsell for to drinke it in sweet wine cuit, vnto them who are poisoned with the sea Hare. For mine own part, I hold it a safer way and an easier to annoint therewith the leprosie. But some of the foresaid authours haue applied it to filthy, putrified, and stinking vlcers, & the excrescences therein: as also to rub or annoint therewith the eies against the pin and web, & such accidents as dim and darken the sight. Moreover, they haue prescribed to drinke a cyath of it for to cure the vlcere of the lungs, and to expell wormes and vermin out of the belly. Of this pitch or rosin there is an oile made, which they call Pisselæon, and the same is far more strong in operation for all the infirmities aboue named, than the simple rosin it selfe. Certaine it is, that the fine dust scraped or filed from the Cedar wood, chaseth away serpents: so do the berries also of the Cedar beaten to poulder and reduced with oile into a liniment, in case a man annoint his body all ouer with the same.

As touching Cedrides (i.) the fruit of the Cedar, it is soueraigne for the cough, and prouokes vrine, bindeth the belly, & healeth ruptures. It cureth spafmes, convulsions or cramps: yea, and helpeth the infirmities of the matrice, if it be applied accordingly. Also it is a counterpoison against the venomous sea Hare: and a medicine for other maladies aboue named, and namely for apostemes and inflammations.

Of Galbanum I haue written heretofore. Good Galbanum should be neither moist nor dry: but such in all respects as I haue described already. Being taken of it selfe alone in drinke, it cureth

* Cedrium

* Arborum
suri Glycerum
quod est adu-
m.

* Admodum
read pot, i. a-
ken in drinke.

reth an inueterat cough shortnesse, and difficultie of winde, ruptures, crampes, and convulsions. Outwardly applied, it is singular for the Sciatica, pleurisie, or pains of the side, angry biles, and fellons. It is good also to be vsed, in case the flesh (corrupted by meanes of corrosiue vlcers, as woules and such other) is departed and eaten from the bone: moreover, for the wens called Scrophules or the kings euill: the knots and nodosities growing vpon the ioints: and the tooth-ach: it serueth also in a liniment with hony for to annoint scald heads. With oile of Roses or with Nard, it is good to be infused or dropped into ears that run with matter: the very perfume alone or smell thereof is good to raise them who are taken with the epilepsie or falling sicknesse: also to recouer women, lying as it were in a trance or dead, vpon a fit of the mother: & to bring them again who are gon in a swoone. If a woman fall to trauell before her time, it is good to fetch out that vntimely fruit of hers (if it be loth to come away) either by way of cataplasme or suffumigation. The same effect it hath, if the branches or small roots of Ellet ore be well annointed therewith, and so put vp as a pessary. The smoke of it frying in the fire (as I said before) driueth serpents away: and more than so, serpents will not come neere to them that are besmeared with Galbanum. And say that one be stricken with a scorpion, a plaster of Galbanum will heale the wound. If a woman haue bin long in labor of childbirth, and cannot be deliuered, let her drinke in one cyath of wine, as much Galbanum as the quantity of a Bean, she shal fall to her busines and be deliuered anon. The same is a good medicine to reduce the mother into the right place, if it be vnsettled or turned. If Galbanum be taken in wine with Myrrhe, it fendeth out the dead infant in the mothers womb. Also with Myrrh and * wine, it is good against all poisons, and especially those which be called Toxicia. Incorporat Galbanum with oile and * Spondylium together, it will kill any serpents, if they be but touched therewith. Howbeit, there is an opinion of Galbanum, that * in difficulty of vrine it is not good to be vsed.

CHAP. VI.

¶ Of Gum Ammoniack: of Storax: Spondylium: Spagnos: Terebinth: Chamæpitys: of Pituy: of Rosinus: of the Pitch tree: and the Lentiske.

Since we are fallen into the mention of Gums, it will not be amisse to treat of Ammoniack, being as it is so like in nature (as I haue said) to Galbanum: for it hath vertue to mollifie, to heat, discusse, and dissolue. Vsed in collyries, it is a proper medicine to clarify the sight: and serueth wel to take away the itch, the spots or cicatrices, the pin and web also of the eyes. It allaieth the tooth-ach, but more effectually, if it be set a burning, & the fume receiued into the mouth. Taken in drinke, it helpeth those who hardly fetch and deliuer their winde. It cureth the pleurisie, Peripneumony or inflammation of the lungs, the infirmities of the bladder, pissing of bloud, the swelled spleen, and the Sciatica. And in that manner it easeth the belly, and maketh it soluble. Boiled with the like weight of pitch or wax and oile rosat together, and so reduced into an ointment, it is good for all gouts, and especially that which lieth in the feet. It ripeneth the biles called Pani, if it be applied to them with honey: and fetcheth away any corns by the roots. In which sort it doth soften any hardnesse. Incorporat with vineger and Cyprian wax, or els with oile: of it, it maketh an excellent plaster for to mollifie the hard spleen. Moreover, if it be reduced into an ointment with vineger, oile, & a little sal-nitre, it is singular to annoint those that haue a lassitude or wearinesse vpon them.

Touching Storax and the nature thereof, I haue said enough in my Treatise of strange and forraigne trees. But ouer and aboue the qualities or properties before required, I take that for the best Storax, which is fairest, pure, and cleane, and whereof the pieces or fragments do break white. This drug cureth the cough, the sorenesse of the throat, and the accidents of the breast: it openeth the obstructions of the matrice, & mollifieth the hardnes thereof. Whether it be taken inwardly in drinke, or outwardly applied, it prouoketh womens flours, & moueth to the seege. I reade in some authors, that if one drinke Storax Calamita, in small quantity, it will procure gladnesse and mirth of heart: but if it be taken in greater quantity, it breedeth heavinesse of the mind. Indilled or poured into the ears, it riddeth away all the singing therein: and in a liniment it resolueh the wens called the Kings euill, and the nodosities of the sinews. Soueraigne it is against those poisons which burne by meanes of their coldnesse, and therefore it is good for them that haue drunk the iuice of Hemlock.

Likewise

A Likewise of Spondylium, a kind of wild Parsnep or Madnep, I haue spoken thereof heretofore, together with Storax. An embrochation made of it, to be infused vpon the head, is excellent for such as be in a frensie or lethargy: also to cure the inueterat pains of the head. Taken in drinke with old oile, it helpeth the infirmities of the liuer, the jaundise, the falling sicknesse, the straitnesse of breath (whereby one cannot take his winde but sitting vpright) and the rising or suffocation of the mother, in which cases, a suffumigation thereof is good. This Spondylium is effectual to mollifie the belly, and make the body soluble. Reduced into a liniment with rue, it serueth fitly to be applied vnto vlcers that spread and eat as they go. The iuice of the floures is of great effect, if it be poured into the ears that run with filthy matter: but when this iuice is a pressing or drawing forth, it had need to be kept well couered, for feare of flies and such like, which are very greedy thereof, and loue a life to settle vpon it. The root of Spondylium, or a piece thereof scraped, if it be put in maner of a tent into a fistula, cateth away all the hardnes and callosities thereof. Being dropped into the ears, together with the iuice, it is exceeding good for them. The root giuen alone in substance, cureth the jaundise, the infirmities of the liuer & matrice. If the head be all ouer annointed therewith, the haire will curl and frizzle.

Concerning the sweet Mosse, called of the Greeks * Sphagnos, Sphacos, or Bryon, growing (as I haue shewed before) in France, it is good for the naturall parts of women to sit ouer the decoction of it, in manner of a bath: likewise if it be mingled with cresses, and so stamped together in salt water, it serueth well to be applied as a cataplasme to the knees and thighs, for any tumors or swellings in those parts. Taken in wine with dry per-rosin, it causeth one most speedily to make water. Stamped with Iuniper, and drunk with wine, it doth euacuat the aquosities in the dropsie.

The leaues and the root of the Terebinth tree, applied in form of a cataplasme, are good for the collection of humors to an impostumation. A decoction made with them, doth comfort and fortifie the stomack. In case of head-ache, of stopping and difficultie of vrine, it is passing good to drinke the seed or grains of the Terebinth tree in wine. The same gently easeth and looseth the belly: it prouoketh also carnal lust. The leaues of the * Pitch tree & * Larch tree bruised and sodden in vineger, do ease the tooth-ache, if the mouth be washed with the decoction. The ashes made of their barks, skin the places that be chafed, fretted, and galled betweene the thighs, and heale any burn or scald. Taken in drinke, they bind the belly, but open the passages of the vrin. A perfume or suffumigation thereof, doth settle the matrice, when it is loose and out of the right place. But to write more distinctly of these two trees, the leaues of the Pitch tree haue a particular property respectiue to the liuer, and the infirmities thereof, if one take a dram weight of them and drinke it in mead and honied water. It is well known and resolued vpon, that to take the aire of those woods and forests only where these trees be cut, lanced, and scraped, for to draw pitch and rosin out of them, is without all comparison the best course which they can take who either be in a consumption of the lungs, or after some long and languishing sickness, haue much ado to recouer their strength. Certes, such an aire is far better, than either to make a long voiage by sea into * Egypt, or to goe among the cottages in summer time for to drinke new milk comming of the fresh and green gras of the mountains.

D As for Chamæpitys, it is named in Latine by some Abiga, for that it causeth women to slip their conception beforetime: of others, *Tibis terra* [i. ground Frankincense:] this herb putteth forth branches a cubit long, and both in floure and fauor resembleth the * Pine tree. A second kind there is of Chamæpitys, lower than the other, seeming as though it bended and stooped downward to the ground. There is also a third sort, of the same odor that the rest, and therefore so named. This last Chamæpitys, riseth vp with a little stalke or stem of a finger thickenesse: it beareth rough, small slender, and white leaues, and it groweth commonly amongst rocks. All these three be herbs indeed, and no other, and should not be ranged among trees: yet for names sake, because they carry the denomination of Pitys [i. the Pitch-tree] I was induced the rather to treat of them in this present place, & to stay no longer. Soueraigne they bee all against the pricks or stings of Scorpions: applied in manner of a liniment with dates and quinces, they be wholsome for the liuer: their decoction together with barley meale, is good for the infirmities of reins and bladder. Also the decoction of these hearbes boiled in water, helpeth the jaundise and the difficulty of vrine, if the Patient drinke thereof. The third kind last named, taken with hony, is singular against the poison of serpents: and in that maner only applied as a cataplasme,

R

it

* Wine. Rather
aceto, vineger
after. D. ser.
* Cow pissen
or. No. in spe.
* D. u. r. d. r.
reporteth the
contrary.

* Picee.
* Larix.
I. seems that
Pity took
name, which is
the Pine, for
Picee, and
Pity, which is
the Pitch tree,
for Larix.

* i. Into a
more grosse
aire.

* or rather, the
Pitch tree.

it clenseth the matrice & natural parts of women. If one drink the same herbe, it will dissolve and remoue the cluttered thick bloud within the body: it prouoketh sweat, if the body be therewith annointed; and it is especially good for the reins. Being reduced into pills, together with figs, it is passing wholesome for those that be in a dropsie; for it purgeth the belly of waterish humors. If this herb be taken in wine to the weight of a victoriat piece of siluer; i. halfe a Roman denier, it wariseth for euer the paine of the loins, and stoppeth the course of a new cough. Finally, if it be boiled in vineger, and so taken in drink, it is said that it will presently expel the dead infant out of the mothers wombe.

For the like cause and reason, I will do the herb Pityusa this honor as to write of it among trees, since that it seemeth by the name to come from the Pitch tree: this plant some do reckon among the * Tithymals: a kind of shrub it is, like vnto the Pitch tree, with a small floure, and the same of purple color. If one drink the decoction of the roote, to the quantity of one hemina, it purgeth downward both fleame and choler: so doth a spoonfull of the seed thereof, put vp into the body * by suppositories. The decoction of the leaues in vineger, doth cleanse the skin of dandruffe and scales: & if the decoction of rue be mingled therewith, it is singular for sore breasts, to appease the wrings and torments of the cholicke, against the sting of serpents, and generally for to discusse and resolu all apostemations and botches a breeding.

But to returne againe to our former trees, how Rosine is ingendred in them, of their severall kinds, and the countries where they grow, I haue shewed before, first in the treatise of wines, and afterwards in the discourse and histories of Trees. And to speak summarily of rosins, they may be diuided into two principall kinds; to wit, the dry and the liquid rosin. The dry is made of the Pine and the Pitch trees; the liquid commeth from the Terebinth, Larch, Lentisk, & Cypresse trees; for these beare rosin in Asia and Syria: & whereas some there be of opinion, That the rosins of the Pitch and Larch trees be all one, they be much deceived; for the Pitch tree yeeldeth a fatty rosin, and in manner of frankincense, vnctuous: but from the Larch tree there issueth * a subtill and thin liquor, running like to life hony, of a strong and rank vnpleasant smell. Physitians seldome vse any of these liquid Rosins, and neuer prescribe them but to be taken or sucked off with an egge. As for that of the Larch tree, they giue it for the cough and exulceration of some noble parts within: neither is that per-rosin of the Pine tree much vsed: as for the rest they be not of any vse vnlesse they be boiled. Touching the diuers manners of boiling them, I haue shewed them sufficiently.

* In balenizv-
lesse we reade,
Cum Phenice-
balenizv, a
kind of Date,
as some thinke,
Tamarinds.

But if I should put a difference between these rosins according to the trees from whence they come, the right Terpentine indeed which the Terebinth yeeldeth, liketh and pleaseth me best, being of all others lightest and most odoriferous. If I should make choice of them in regard of the countries where they are found, certes they of Cypresse and Syria be best, and namely those that in colour resemble Attick hony: and for the Cyprian rosin, that which is of a more fleshie substance and drier consistence. Of the dry per-rosins, those are in most request, which be white, pure, transparent or cleare, quite through. In generall, those that come from trees growing vpon mountains, be preferred before them of the plains: also regarding the Northeast, rather than any other wind. For salues to heale wounds, as also for emolliuie plasters, rosins ought to be dissolved in oile: for drinks or potions, with bitter almonds. As touching their medicinable vertues, they be good to cleanse and close vp wounds: to discusse and resolu any apostemes which bee in gathering. Moreover, they be vsed in the diseases of the breast (and namely true Terpentine) by way of liniment; for then it is singular good, especially if it be applied hot: also for the pains of the lims, and for those that be plucked with the cramp, in case the grieved parts bewell rubbed therewith in the sun, which they know well enough who buy slaues and sell them for gain, after they haue trimmed and set them out for sale: for they especially are very curious to annoint their bodies alouer with this Terpentine, for to loosen the skin when they be hide-bound, lank, and carrion lean, to giue more liberty and space for euery part to receiue nutriment, and so to make their bodies seeme fat and faire liking. Next vnto the right Terpentine, is the rosin of the Lentiske Tree: this hath an astrigent or binding qualitie; but of all others it prouoketh vrine most: all the rest doe mollifie the belly and make it soluble, concoct and digest all crudities, stent the inueterate cough, and draw downe all the superfluous burdens of the matrice: for which purpose last named, their fume receiued by a suffumigation, is very effectuell. They are more particularly as good as a counterpoison against the venomous gum Ixia, growing vpon the

* i. Spurges.

* In balenizv-
lesse we reade,
Cum Phenice-
balenizv, a
kind of Date,
as some thinke,
Tamarinds.

* Which is
thought to be
our Terpen-
tine.

CHAP. VII.

¶ Of Stone-pitch: of Tarre: of Pitch twice boiled: of Pissaspfalt or Mummie: of Zopis-
sa: of Torch-wood, and the Lentiske.

From what tree Pitch commeth, and the sundry waies of making it, I haue declared heretofore: also that there be two principall kinds thereof; to wit, the thick or fast Pitch, and the thin or liquid: of the former sort, the best for vse in Physick is the Brutian Pitch, for that (being of all others fattiest & fullest of gum) it yeeldeth a twofold commodity both for medicines, and also to trim and rosin wine-vessels; for which purposes, that which inclineth to a reddish yellow is counted the chiefe. But whereas some do say moreover, that the better Pitch commeth from the male tree, I cannot conceiue what they should mean thereby, neither doe I think it possible to discerne any such difference. True it is, that Pitch by nature is hot, & a good incarnatiue: a speciall and particular property it hath against the venom inflicted by the sting or tooth of the horned serpent Ceraustes, if it be made into a cataplasme with tried barley groats: and being applied with hony, it healeth the squinancy, cureth catarrhs, and restraineth sneezing: with oile of roses, it serueth well to be poured into running ears, out of which there doth ooze filthy matter: or being applied in manner of a liniment with wax, it is passing good: it healeth the ill-fauored tetter called Lichenes, and it looseneth the belly: licked or let downe leisurely in manner of a loch, it is a good means to void and reach vp from the breast, tough fleame: and to annoint the tonsils or almonds in the mouth with it and hony together, is a proper medicine: being in that manner prepared and vsed, it clenseth vicers: and if it be incorporat with raisins and swines greafe, it doth incarnat and fill them vp again with new flesh: carbuncles also it doth mundifie, so doth it sores that begin to putrifie & gather corruption: but if they be such as spread & be corrosiue withal, then there would be an addition of the Pine tree bark, or brimstone. Some haue prescribed, for the consumption of the lungs, and a cough of long continuance, to drinke the quantity of one cyath in Pitch. The fissures and chaps as well about the feet as in the feet, it cureth: for the flat biles named Pani, it is very good: as also to take away the rough nails that be so troublesome. The very odor or perfume thereof, helpeth the hardnesse of the matrice, and setleth it again, being either fald down, or turned out of the due place: likewise it helpeth such as be surprised with the lethargy. Moreover, if it be boiled in the vrine of a yong boy vnder 14 yeares of age with barley meale, it is a good maturatiue, and bringeth the wennes called the Kings euill to suppuration. As for dry pitch or stone pitch, it helpeth much to make the haire grow again, where it is shed by some disease. The Pitch called Brutia, or of Calabria, boiled in wine to a waulm or two, with the fine floure of the bearded wheat Far, and so applied in a cataplasme as hot as may be suffered, is singular good for womens paps. Concerning liquid Pitch or Tar, as also the oile which they call Pisselxon, and how it is made, I haue already written at large. Some boile it a second time, and then they name it Palimpissa. With this liquid Pitch it is good to annoint the squinzy that groweth inwardly; as also the vula within the mouth: the same is singular for the pain in the ears, to clarifie the sight, to cleanse the mouth furred as it were, so as it hath no tast of meat: likewise for those who are short winded: for women who are diseased in their matrice: to ripen & rid away old coughs; and to ease them that can doe nothing but spit & reach out of the chest: for spasmes, cramps, shaking, and trembling: moreover, it helpeth them whose heads or bodies are drawn backward: it cureth palsies, and any pains or griefs of the sinews. There is not a better thing to kill either the mange in dogs, or the scab and farcines in horses, asses, and such like traouelling beasts.

Moreover, as touching Pissaspfalt, which is of a mixt nature, as if pitch and Bitumen were mingled together, it groweth naturally so, in the territory of the Apolloniars, yet some there be who make an artificial pissaspfalt, and meddle the one with the other, and hold it for a remedy

to cure the farcins and scabs of cattell; as also when the young sucklings doe hurt the teats of their dams. Of this kind, that is best which is of it selfe, and come to maturity and perfection: the same in boiling swimmeth aloft. * Zopiffa, is that Pitch, which (as I said heretofore) is scraped from ships, and is confectioned of wax well foked in the salt water of the sea: the best is that which commeth from ships that haue bin at sea and made some voiares: it goeth into emollientie plasters, for to resolute the gathering of impostumes. As for Tarda or Torch-wood, if it bee sodden in vineger, it maketh a singular collution for to wash the teeth withall when they ake.

Let vs come now to the Lentisk tree: the wood, the seed or fruit, the bark and gum thereof, do prouoke vrine, and bind the belly: a fomentation made with their decoction, is excellent good for eating and corrosiue vlcers: it serueth in a liniment for all sores in moist & flegmatick parts: likewise to cure S. *Antonies* fire, and to wash the gums withall: chew the leaues thereof and crush them well between the teeth, the same will ease their ach: wash them with their decoction, and they wil set them fast in the head. The same are good to colour the haire black: the gum which this tree doth yeeld, is soueraign for the infirmities of the feet, especially such as require either drying or heating. The very decoction of Mastick is comfortable to the stomach, it causeth it to rift, & is besides diuretical. Applied vnto the head as a liniment, incorporat with the fried groats of barley, it cureth the ach or pain thereof: the tender leaues be applied to right good purpose, for the inflammation of the eyes. Moreover, this Mastick, which is the gum of the Lentisk tree, is vsed ordinarily to lay the hairs of the eyelids euen, & to extend or make plaine and smooth the riuclid skin of the face: therefore it is vsed in sope, and wash-bals. Moreover, there is a good vse thereof, for spitting and reaching vp of blood, & for an old cough. In one word, it serueth all those turns whereto the gum Ammoniacke is vsed. It healeth all places galled and chaufed, where the skin is rubbed or fretted off: and if the cods and members of generation be fomented either with the oile made of the seed of the mastick tree mixed with waxe, or with a decoction of the leaues boiled in oile or els in water, it will skin any raw part thereof. To knit vp this discourse, I am not ignorant that *Democritus* the Physitian, who had in cure *Confidia*, the daughter of *M. Serullius* late Consull of Rome, for an * infirmity or malady of hers (for that this damosell could not abide to heare of any vnpleasant Physick) caused her to be fed a long time with the milk of goats which were kept with the Lentisk tree leaues, and did eat nothing els, and so he cured her of her malady.

C H A P. VIII.

Of the Plane tree, the Ash, and Maple: of the white Poplar and Elme, the Tillet or Linden tree, the Elder, and the Juniper.

The Plane tree is an enemy to Bats or Reremice: their little bals which they beare, if they be taken to the weight of foure Roman deniers in wine, do cure all poisons of serpents and scorpions: likewise they heale any burn. Being braied or stamped with strong & sharp vineger (which if it be Squilliticum is the better) they stanch any bleeding whatsoeuer. Incorporat in hoisy, they mundifie and cleanse all cancerous vlcers, the red pimples and specks, with all black spots and marks in the skin which haue remained a long time. The leaues and bark reduced into a liniment, their decoction also, help to rid away any gathering of humors to an head, and namely if they matter and run. The decoction of the barke sodden in vineger, is a singular remedy for the tooth-ach; like as the tendrest leaues boiled in white wine, for the infirmities of the eyen. The ashes which come of the foresaid little bals, do heale vp any burn, occasioned either by fire or extreame cold. The barke taken in wine, represseth the venome of the scorpions sting, so that it shall go no farther.

As touching the Ash tree, of what effectuall operation it is against serpents, I haue declared heretofore: it beareth a * seed inclosed within certain * cods, which being taken in wine, is an ordinary remedy for the obstructions & infirmities of the liuer, as also for the pain in the sides. The same also doe euacuate the aquosities or waterish humors spread between the skinne and the flesh in the dropsie Leucophlegmatia: the leaues do take down by little & little and make lean a body ouer-grosse, and do ease it of the troublesome cariage that it hath of so much fat, if the same be stamped and giuen in wine: but herein good regard ought to be had of the strength of the party, after this proportion: If it be a child, fiue leaues of the ash are sufficient to be infused in

* Called *Lingna*.
* Which are named *Keyes*.

* It should sceme the vicer of the lungs or kidneys, or els some outrageous flux of blood.

A in three cyaths of wine; but elder folk and of a stronger complexion, may abide seuen well enough in fiue cyaths, and drink the infusion. But before I do leaue this tree, it would not be forgotten that the small chips and shauings, yea, and the saw dust or filed powder of this wood, are thought to be hurtfull vnto some, and they are forbidden to meddle withall. The root of the Maple tree, stamped into a cataplasme, is singular to be applied for the griefs of the liuer, and worketh mightily.

As touching the white Poplar or the trembling Asp, I haue shewed heretofore how the perfumers vse the berries or * grapes thereof in their sweet ointments. The barke infused and taken in drink, is good for the sciatica and the strangury. The iuice drawn out of the leaues, dropped hot into the ears, easeth their pain. Whosoever carieth a twig of Poplar in their hands, shall not need to feare any surbating of the feet, or galling between the legs. The best blacke Poplar and of greatest operation in Physick, is that reputed which groweth in the Island Creta; the fruit or grain thereof if it be drunk in wine, is singular for those who be taken with the falling sicknesse. This Poplar yeeldeth a certain small gum or rosin, which is much vsed by Physitians in emollientie plasters: the leaues sodden in vineger, make a proper cataplasme to be applied vnto the gout: the liquor or humor that issueth out of the pores or concauities of the blacke Poplar, taketh away warts and wheals, it skiunneth also galled & raw places in any part of the body: these Poplars as wel white as black, beare vpon their leaues certain warts like to drops of water standing vpon them, out of which the Bees do gather that cereous substance named Propolis. The drops also of water, which the said Propolis doth yeeld, if they be mingled with water, is a very effectuall remedy for many things.

Now for the Elme: the leaues, the bark, and the wooddy substance of the branches, haue a glutinous nature to consolida, vnite, and heale wounds: the thinner rind or tunicle verily lieth between the outward bark and the tree, doth assuage the leprosie, called of some S. *Magnus* euill: so do the leaues also, applied with vineger. The barke of the Elm puluerized and taken to the weight of a Roman denier in one hemine of cold water, is a very purgatiue, and doth euacuate flegmatick and waterish humors particularly. The liquor that issueth from the tree as a jelly, is singular good for apothemations, wounds, and burnes; but if the places were fomented before with the decoction, it would be the better. The Elm beareth certaine small bladders or huskes, wherein there is ingendred and contained a waterish humour, which is very proper to imbelish the skin, & beautifie the face. The first tender sprouts of the leaues boiled in wine, do assuage all tumors, & * draw filthy matter and corruption forth of fistulous sores: the same do the inward thin rinds within the bark. Many are of opinion, that the very bark chewed only, and applied to green wounds, is singular good to heale them. They affirme moreover, that the leaues bruised and applied to the feet, allay their swelling, so there be water sprinkled among. Furthermore, the water or liquor which runneth from the heart or pith of the wood when the tree is lopped or disbranched (as I haue said before) if the head be annointed or bathed withall, causeth the haire to grow again if it be lost, and keepeth it on if it be ready to shed and fall.

As touching the Tillet or Linden tree, the very wood thereof is vsed for all things in a manner that the wild oliue is imployed vnto, if the same be lightly bruised or stamped: howbeit, the leaues only are occupied; which, if they be chewed and so applied, do cure the cankers breeding in the mouth of small infants. Being boiled and their decoction inwardly taken, they prouoke vrine: outwardly applied, they do stay the inordinat and excessiue flux of womens fleurs; but giuen in drink, they euacuate the same superfluous blood.

There is a second kind of Elder more wild of nature, which some of the Greeke writers call * *Chamae*, others *Helion*, and it groweth much lower than the other. The decoction of the leaues as well of VVallwoort as Elder, boiled in old wine, is contrarie and nowsome to the stomach, and purgeth downward waterie humors: euen so doth the decoction either of the seed or the root, if it be taken inwardly to the quantity of two cyaths: the same is excellent to coole any inflammation; and namely, to take out the fire of any new burn or scald. The yong and tender leaues, as well of Elder as VVallwoort, reduced into a cataplasme and laied too with barley groats, doe cure the biting of a dogge. The iuice both of the one and the other, infused and conueighed accordingly into the head, is a soueraigne lenitiue for all impostumes of the braine, and especially those which are growing in the fine membrane or pellicle called *Pia Mater*, which immediately lappeth and enfoldeth the braine. The fruit or berries of the Elder or

* And verily heretofore he saith that it hath neither the one nor the other.

* Extravagant pus fistulis.

* I. Ground. Elder, Wallwoort, or Dane-wort.

of Walwort, are weaker in operation than the other parts of the tree or plant: howbeit, they serue wel to colour the haire of the head black. The same also taken in drinke, to the measure of one acetable, be diureticall and prouoke vrin. The softest and tenderest leaues are eaten ordinarily in a salad with oile and salt, for to purge fleame and choler. In summe, the lesser plant, which is the V Valwort, is in all things more effectuall than the elder it selfe; for if the root thereof be sodden, and a draught of two cyaths be giuen to them who are in a drop sicke, it will purge mightily and euacuat watery humors. A decoction of the roots and leaues of Danewort, is singular to mollifie the matrice and naturall parts of a woman, if she sit ouer the same and take the vapour thereof into her body. The tender sprigs of the milder Elder, boiled between two platters, do make the body soluble, and moue to the seege. The leaues drunke in wine, resist and kil the poisoned sting of serpents. The tendrons of the elder, incorporate with goats tallow, and reduced into a liniment, are singular good for the gout, if they be applied to the grieved place: the water of their infusion, if it be cast or sprinkled in any room of the house killeth fleas: and if the place be likewise sprinkled with the decoction of the leaues, it will not leaue a flie aliue. There is a kind of disease [much like to purples or neazles] when the body is bepainted all ouer with red blisters: a branch of the Elder tree is excellent good to lase the said wheales or risings, for to make them fall again and go down. Take the inner bark or rind of the Elder, beat it into powder, and so drink it in white wine, it is a sufficient purgation.

The Iuniper of all other trees, passeth either for to heat any part, or to extenuate & make subtil any humors: in operation much like to the Cedar. Of it there be two kinds; the greater, and the lesse: a perfume made with the one as well as the other, driueth away serpents: the seeds or berries of Iuniper, assuage the pains of stomach, brest, & sides: the same serue wel to break wind and resole all ventosities, yea and to euaporat all cold and chilnesse: they ripen any cough, and mollifie all hardnesse: a liniment made thereof applied outwardly, causeth any tumor to go down and represseth the rising thereof: likewise if the berries be drunk in some grosse or thick red wine, it will stay a lask: like as they will abate the swelling of the belly, if they be laid too by way of a cataplasme or liniment. The Iuniper berry is reckoned among the ingredients which go into antidors, or preseruatiues against poison, such I mean, as be penetratiue and of quick operation. It is diureticall and moueth vrin. In case the eies do water much by reason of a continuall rheum taking to them, it is good to apply a liniment vnto them made therewith. Foure Iuniper berries are giuen in white wine, or 20 of them boiled in wine, for convulsions, crampes, ruptures, wrings, and torments in the belly, for the griefes of the matrice and the Sciatica. To conclude, some there be, who fearing to be stung with serpents, vse ordinarily to rub or annoint their bodies with a liniment made of Iuniper seed or berries.

CHAP. IX.

¶ Of the Sallow, Willow, or Withy: of the twig Withy or Oisier Amerina. Of twigs or binding rods. Of Heath or Lings.

The fruit which the willow or Sallow yeeldeth, if it be suffered to hang, before it doth ripen is conuerted into a certaine substance resembling a cobweb; but being gathered ere it be thus transformed, it is singular good for such as reach or cast vp blood. The ashes of the rind pilld from the first branches that the willow putteth forth, and tempered with water, taketh away corns and callosities of the feet: they serue also to rid the spots and specks which disfigure the visage, the rather if they be incorporat with the juice of the willow. Now there be found in the said willow, 3 sorts of juice: the first sweateth out of the tree it self in manner of a gum: the second issues forth by way of incision, when the tree is in the bloom; prouided alwaies that the cut or gash in the bark, be made three fingers broad: this liquor is singular good to cleanse the eies, and to rid away such impediments as hinder the sight; likewise to increasate or thicken where need requireth, to prouoke vrin, and draw forth all inward impostumes outwardly: the third juice is that which distilleth from the branches presently after the bill or cutting-hook, when the tree is lopped, or the boughs cut from the body. Take any one of these juices, and heat the same well with oile of Roses in the rind of a Pomegranat, excellent it is for to be dropped into the ears: likewise the decoction of Sallows, or the leaues stamped and incorporat with wax, and so applied, do the like: as also laid too in maner of a cataplasme, they ease the pain of

A of the gout. The decoction of the leaues and bark boiled in wine, is passing wholsom to foment the nerues withall. The blooms or chattons of the willow, stamped together with the leaues, cleanse the branny scales that appeare in the face. The leaues of the willow punned and taken in drinke, do coole them that are giuen too much vnto lasciuious lust, and ouer hot in the action of Venus: and if they vse to take the same often, they will disable them altogether for the act of generation. The seed of the black Oisier or willow called Amerina, mixed in like weight with white litharge of siluer, and brought into a liniment, is a depilatory, and fetcheth off the haire if the place be annointed therewith presently after the baine.

There is a kind of tree named Vitex, not much different from the willow, in regard of the vse that the twigs be put vnto, and also of the leaues which resemble those of the willow in outward shew, but that their smell is more pleasant and odoriferous: the Greeks, some call it Lygos others Agnos, i. chaff, for that the dames of Athens, during the feast of the goddesse Ceres, that were named Thesmophoria, made their pallets and beds with the leaues thereof, to coole the heat of lust, and to keep themselves chaste for the time. And two sorts there be of it. The greater riseth vp to a tree in maner of a willow: the other, which is lesse & lower, brancheth thick, bearing white leaues, and those full of down and cotton. The former of these two, which is called the white Agnus Castus, putteth forth white floures & purple one with another: whereas contrariwise, all the floures of the lesse, which is called the black, be purple only. Both the one and the other loue to grow in plains and moors. The seed of Agnus Castus, if it be taken in drinke, hath a certain rellish or salt of wine, and it is commonly thought that it cureth feuers: & whoseuer is annointed therewith, being incorporat into a liniment with oile, shall soon sweat: and by that means it is good to rid away wearinesse. Agnus Castus, as well the one as the other, prouoketh vrin, and the monthly terms of women. Both of them fume vp into the head as wine doth: and no maruell, for they haue the very smell of wine. They be singular to send all ventosities downward. They stop the flux of the belly, and be excellent good for those who are in a drop sicke, or troubled with the spleen. They haue this speciall property besides, to breed good store of milk in milch nurces. Aduersely they be to all poisons of serpents, such especially as doe mischief by their cold quality. The lesse is more effectuall against serpents. And for this purpose they vse to giue either one dram of the seed to drinke in wine or Oxycrat, which is vineger and water, or els two drams of the most tender leaues. There is neither of them both, but as well the seed as the leaues, reduced into a liniment, be singular good for the pricke of spiders. And there is not any venomous creature that wil come neere those who are but annointed therewith: nay they wil flie from the very perfume thereof, or the couch which is made of the leaues: they abate the heat of wanton lust: and in that regard especially they be contrary to the venomous spiders Phalangia, which by their sting do prick a man forward that way, and cause his flesh to rise. The floures and yong tendrils of Agnus Castus incorporat in oile rosat, do allay the head-ach, occasioned by drinking ouerliberally: but if the said headach be exceeding great, it is good to foment the head in a decoction of the seed of the said Agnus: for it will resole & dispatch the extremity thereof. The same likewise by way either of suffumigation or cataplasme, munieth and clenseth the matrice. And being taken as a drink with pennyroial and hony, it is a purgatiue, and scoureth the belly. Mixed with Barly meale, and applied pulteffewise, it mollifieth those bitches & byles which hardly grow to ripenesse. The seed tempered with salt petre and vineger, healeth tetters, ringwormes, and red pimples: and with hony cureth the cankers or sores of the mouth; yea, and any wheals and breaking forth whatsoeuer. The same reduced into a liniment with butter and vine leaues, warieth the infirmities incident to the cods: and if the seat be annointed with it & water medled together, it taketh away the chaps & fissures in that part. Brought into a cerot with salt, nitre, & wax, it is singular good for all dislocations: both the seed and leaues of Agnus, enter into many cataplasmes or mollitiue plasters, deuised for the sinewes and the guts: the seed boiled in wine, maketh a good decoction, which if it be dropped vpon the head by way of embracation, is right soeraign for lethargy and frensie both. It is said, that whoseuer beareth in his hand a twig of Agnus, or gird himselfe about the middle therewith, shall not be galled or fretted between the legs.

As touching Heath or Lings, which the Greeks call Erice, it is a shrub not much different from Tamariske, in colour and forme of leafe, such as it is, resembling Rosemary. The leafe of this plant (they say) is an enemy to serpents.

As

As for Broom, it serueth also very well to make halters and cords of. The floures please bees passing well. I am in doubt and not able to say, whether this Genista or Broome, be that which the ancient Greek writers called Sparton; for I haue shewed, that they vsed therof to make their fishing nets; and I wot not well whether *Homer* meant it, when he said, that the ship-spars were vntwisted and loose. For this is certain, that neither the spart of Africk, ne yet the Spanish spart was as yet in any vse; and at what time as barges and vessels were sowed together with seams, it is wel known, that the stiches were made with linnen thred, & not with spart. The seed that it beareth, which the * Greeks giue one and the same name to, growing within smal cods in maner of Phascols, is as strong a purgatiue [of Melancholy] as Ellebore; if it be taken when one is fasting, to the weight of a dram and halfe, in four cyaths of honied water: the branches & leaues (such as they be) of Genista or Broome, being stamped after they haue lien infused in vineger, yeeld a certain iuice singular good for the Sciatica, if it be drunk to the quantity of one cyath. Some chuse rather to steep it in sea-water, and to draw forth the iuice, and so minister it with a clyster for the said purpose. The said iuice incorporat with oile, serueth for an ointment also to be applied outwardly for the Sciatica. Some vse the seed for the strangury. The substance of Broome stamped with swines greafe, helpeth the ach or pain in the knees.

To come now to Tamarisk, which the Greeks call Myrice, *Lenax* affirmeth, That it is vsed in maner of the Amerian willow for beefomes; and more than so, that if it bee sodden in wine, stamped and reduced into a liniment with hony, it healeth cankerous vlcers: and in very truth, some hold, That the Myrice and Tamariske be both one. But doubtlesse, singular it is for the spleen, in case the patient drink the iuice pressed out of it in wine. And by report, there is that wonderfull antipathy and contrariety in Nature betweene Tamariske and this one part alone of all the other bowels, that if the troughs out of which swine drinke their swill, be made of this wood, they will be found when they are opened, altogether without a spleen. And therefore some Physitians do prescribe vnto a man or woman also diseased in the spleen, and subject to the opilations therof, both to drinke out of cups or cans of Tamarisk, and also to eat their meat out of such treen dishes as be made of that wood. One renowned writer about the rest, and for knowledge in great credit and authorit among Physitians, hath affirmed and auouched constantly, That a twig of Tamarisk slipped or broken from the plant, so as it touched neither the ground, nor any yron tooke, assuageth all belly ache, in case the patient weare it about him so, as that his girdle and coat hold it fast and close to the body. The common people call it The vnlucky tree, as I haue heretofore said, because it beares no fruit, & is neuer with vs set or planted. In Corinth and all the territory or region round about, they name it Brya, and make two kinds thereof; to wit, the wilde, which is altogether barren, and that which is of a more tame and gentle nature. This Tamarisk in Egypt and Syria beareth in great plenty a certain fruit, in substance hard and woody, in quantity bigger than the gal-nut, of an vnpleasant and harsh tast; which the Physitians do vse in stead of the Gal-nut, and put into those compositions which they name Antheras. Howbeit, the very wood of this plant, the floure, leaues, and barke also, be vsed to the same purpose, although they be not so strong in operation as the said fruit. The rind or barke beaten to powder, is giuen with good successe to them that cast vp bloud: also to women who haue a great shift of their flours: likewise to such as be troubled with a continual flux, occasioned by the imbecility of the stomach. The same bruised and applied as a cataplasme, refresheth and smiteth backe all impostumations breeding. The iuice pressed out of the leaues, is good for the same infirmities: moreover, they vse to boil the leaues in wine, for the same intent. But of themselves alone being brought into a liniment with some hony among, they are good to be applied vnto gangrenes. The foresaid decoction of the leaues beeing drunke in wine, or the leaues applied with oyle of Roses and wax, mitigat the said gangrenes; namely, when the flesh tendeth to mortification. And in this manner they cure the night-foes or chilblanes. Their decoction is wholesome for the paine of teeth or eares: for which purpose serueth the root likewise and the leaues.ouer and besides, the leaues haue this property, That if they be brought into the form of a cataplasme with barley groats and so applied, they keep down and restrain corrosiue vlcers. The seed if it be taken to the weight of a dram in drinke, is a preseruatiue and counterpoison against spiders, and namely those called Phalangia. And if the same be incorporat with the tallow or greafe of any fatlings or beasts, kept vp in stall, stie, or mow, into a liniment, it is singular good for any vncom or fellow. Of great efficacy it is also against the sting of all serpents, except the

*For they call it Sparton, as well as the plant.

A the Aspis. The decoction likewise of the seed clysterized, is singular for the jaundise, it kills lice and nits, and staieth the immoderat flux of womens months. The ashes of the very wood of the tree, is good in all those cases before said: which if they be mingled in the stale of an oxe, and so taken of man or woman, either in meat or drink, it will disable them for hauing any mind to the sports of *Venus* euer after. And a burning cole of this wood, when it is quenched in the stale or beasts piss, they vse to saue & lay vp in the shade for that purpose: but if one list to kindle lust, * then they set it on fire againe. To conclude, the Magitians say, That it would do as much if the vrine only of a gelded man were taken for the said purpose.

*Rufus scribit.

CHAP. X.

B ¶ Of the Bloud-rod, Of Siler, Of Priuet, The Alder tree, and Ivy. Of Cisthus and Cissos, Of Erithranos, Of Chamacissos or Ground- Iviue, Of Smilax or Bindweed, Of Clematis.

THE Plant called the Sanguin-rod, is as vnhappy as the foresaid Tamariske. The inner bark thereof is singular good to open again those vlcers, which are healed aloft only and skinned before their time.

The leaues of * Siler, brought into a liniment and applied as a frontall to the forehead, allay the paine of the head. The seed thereof driuen into powder and incorporat with oile, is good for the lousie disease, and keepeth the body from lice. The very serpents cannot abide this plant or shrub, but flie from it: which is the caule, that the peasants of the country make their walking stauers thereof.

C Our Ligustrum or Priuet, is the very same tree that Cypros is in the East parts. To good vse it serueth among it vs here in Europ: for the iuice of it is wholesome for the sinews, the ioynts, and any extreme cold. The leaues applied with some corns of salt, heale all inueterat vlcers in any part whatsoeuer, and particularly the Cankers in the mouth. The graines or berries that it beareth, are good to kill lice: also for any gal, where the skin is fretted off between the legs: and so be the leaues likewise. The foresaid berries do cure the pip in Hens and Pullen.

As for the Alder tree: the leaues if they be applied hot as they be taken out of scalding water, do cure without faile any tumor or swelling.

D As touching the Ivy tree, 20 kinds thereof and no fewer I haue already shewed; and of all these there is not one, but the vse of it in Physick is doubtfull and dangerous. For first and formost, Ivy, if it bee drunke in any quantity, howsoeuer it may purge the head, surely it troubleth the brain. Taken inwardly, it hurteth the sinews: applied outwardly, it doth them much good. Of the very same nature it is, that vineger. All the sorts of Iviue be refrigeratiue. In drinke they prouoke vrin. But the soft and tender leaues, sodden in vineger and oile of rofat, and then stamped, and so tempered with more oile of roset put too afterwards, vntil they be reduced into an ointment, are a singular remedy for the pains of the head; and especially for the braine and the thin pelli-cle Pia mater, which inwrappeth the brains: to which effect the forehead ought to be annointed with the foresaid liniment, the mouth to be fomented and washed with the decoction, and the whole head afterwards well rubbed also with the abovesaid vnguent. They are good for the spleene, both taken inwardly in drinke, and outwardly applied as a liniment. The decoction of the same leaues may be drunke very well against the fit of an ague, to driue away the shaking cold: also for the smal pocks and meazles: for which turn likewise they serue, if they be puluerized and taken in wine. The berries of the Iviue cure the opilation and hardnesse of the liuer, either giuen in drinke, or applied outwardly. So do they open also the obstructions of the liuer, if a liniment be vsed only. Applied accordingly to the naturall parts of women, draw down their monthly sicknesse. The iuice of yvie (and specially of the white, which is planted in gardens) clenseth the nostrils of the foule vlcers and vermine therein breeding, it rectifieth also the filthy smell proceeding from thence. If the same be conueighed vp into the nose, it purgeth the head: but more effectually, if sal-nitre be put thereto. Moreover, it is to right great purpose dropped into the eares with oile, in case they either run matter, or be pained. It reduceth cicatrices or wounds and vlcers newly skinned, to the naturall colour of the other skin: the iuice of the white Ivy is of more force and better operation for the opilations of the spleen, & the swelling hardnesse thereof, if it be made hot with a red hot yron, than otherwise: whereof fixe berries in two cyaths

*Some think it is the broad-leaved Olier.

* Golden berry Ivy.

cyaths of wine, is a sufficient dose. Moreouer, three berries of the same white Ivi drunke at a time in Oxymell, do expell the worms in the belly: during which cure, it were not amisse to apply them outwardly also. As for the Ivi, which I called * Chrylocarpus, if one take twelue of the golden yellow berries thereof beaten to powder, and put them to a sextar of wine, three cyaths thereof giuen to drink, according to *Erasistratus*, purge by vrine the watery humors between the skin and the flesh, which ingender the dropie. The same *Erasistratus* was wont to take five such berries stamped into powder and mixed with oile of rose, which after they were made hot in the rind of a Pomgranat, he vsed to drop into the eare of the contrary side, for the tooth-ache: the berries of Ivy which yeeld a iuice as yellow as Saffron, if a man take before he sit down to drink, may be assured, that he shal not be drunk at that sitting. Likewise, they ease them much who are giuen to cast and reach vp bloud, or be subiect to the collicke and wrings of the belly. The white berries of the black Ivi if a man take in drinke, dull the vigor of his generall feed, and disable him for getting children: any Ivy whatsoever, being boiled in wine, & so brought to a liniment and applied, doth cure all vlcers, euen morimalls, and such as be vntoward for to be healed. The liquor issuing out of Ivy, is depilatory; but as it taketh away haire, so it riddeth lice and vermin. The floures of any kind of Ivy, taken (as much as a man may comprehend with 3 fingers) twice a day in some green and hard wine, help the dysentery or bloody flux, yea, and any other laske. The same reduced into a liniment with wax, are very good to skin and heal burns or scaldings. The berries of Ivy, colour the haire of the head black. The iuice of the Ivi root drawn with vinegar and taken in drinke, is singular against the poison of the venomous spiders Phalangia. Moreouer, I find in some writers, That the drinking out of a cup or dish of Ivy wood also, as well as of Tamarisk, cureth those who haue hard Splens. The same authors prescribe to bruise the berries, afterwards to burn them, and with the ashes to dresse and bestrew the place that is burnt or scalded, so that it be first washed & bathed in hot water. There are Physitians who giue order to cut and lance the Ivy tree, for to draw a iuice or liquor from the place of the incision, which is to be vsed for rotten and worm-eaten teeth: and by their saying, the faulty teeth will breake and crumble into pieces if they be annointed therewith: provided alwaies, that the found and good teeth standing next, be well defended with wax for catching harm by this medicine: moreouer, they seek and lay for the gum of Ivy, which they would perswade vs assuredly vpon their word to be singular for the teeth, being applied thereto with vinegar.

For the vicinity and likenesse of the name of Ivy in Greek, which is Cissos, I may take occasion to speak in this place of another shrub or plant called Cisthos, bigger than Thyme, & leaved like Basil. Of it be two kinds; namely, the male, with a red Rose colored floure; the female with a white: both sorts are good for dysenteries or bloody fluxes, and all loosenesse of the belly, if there be drunk twice a day in some green & hard wine, as much of their floures as may be held at three fingers ends: which if they be made into a cerot with wax, heale old vlcers, burnes, and scaldings: and alone of themselves cure the cankers or sores in the mouth.

Vnder this plant specially grows Hypocisthis, wherof I haue written in my treatise of Ivi. Likewise, there is another plant like vnto the Ivy, and the Greeks call it Cissos Erythranos: which being taken in drink, helpeth the Sciatica, and is good for the loins: but they say it is so vehement and forcible in operation, that together with vrine it will euacuat bloud.

Moreouer, there is an Ivy which creepeth and traileth alwaies close by the ground, and the same the Greeks call Chamæcissos. This herb being stamped and taken in wine to the quantity of one Acetabell, cureth the infirmity of the spleen. The leaues incorporat with swines greafe serue to cure burnes.

Furthermore, the Bindweed Smilax, known also by the name of Nicephoros, resembleth Ivy, but that it hath smaller leaues. They say, that a chaplet or guirland made of this Smilax, is singular for the headach; provided alwaies, That the leaues which goe to the making of it, bee in number odde. Some haue said that Smilax is of 2 sorts: the one, which continueth a world of yeres, grows in shadowie vallies, climbing trees, & tufted in the head with clusters (as it were) of berries in manner of grapes; a foueraigne plant against all poisons, in so much, as if the iuice or liquor of the berries be oftentimes dropped into the ears of young babes or little infants, no poisons (by report) will euer hurt them afterwards. As for the other Smilax or Bindweed, it loqueth places well toiled and husbanded, wherein it vsually groweth: but of no vertue it is & operation: the former Bindweed is that, the wood wherof we said would giue a sound, if it were held close

A close to the eare. Another herb there is like to this, which some haue called Clematis. This plant creepeth & climbeth vpon trees, hauing many ioints also or knots. The leaues are good to mundifie the foule leprosie. The seed drunk to the measure of one acetabell, in a hemin of water or mead, maketh the belly loose. The decoction thereof is giuen likewise to the same effect.

CHAP. XI.

The vertues and properties of Canes or Reeds, of the Papyr reed, of Ebene, Oleander, Smack, otherwise called Rhus Erythros, Madder, Alysson, Sopewort or Fullers-weed, Apocynon, Rosemary, Cachrys, Saurine, Selago, and Samulus. Also of Gummies.

B Heretofore haue wee shewed 29 fundry kinds of Reeds, all indued with their medicinable vertues: and in no plants more appeareth the admirable power of dame Nature, the only subject matter handled in all these books of ours. For in the first place, there presenteth it selfe vnto vs the root of Reeds or Canes, which being bruised and applied accordingly, draweth forth of the body any spils of Fearnie sticking within the flesh: to doth the Fearnie root by the Reed. And forasmuch as we haue set downe many sorts of Canes, that amongst the rest, which cometh out of India and Syria, and whereof perfumers haue so great vse in their sweet ointments and odoriferous compositions, hath this property besides, That if it be boiled with the grasse called Dent de Chien, Quioich grasse, or Parsley seed, it is diureticall and prouoketh vrine. Applied outwardly, it draweth down the desired sicknesse of women. Taken in drinke to the weight of two oboli, it cureth those who are subiect to conuulsions or cramps: it helpeth the liuer and the reines: it is a remedy also for the dropie. As for the cough, a very perfume thereof will stay it, and the rather, if it be mixed with Rosin. The root sodden in wine with Myrrh, cleneth scurfe and dandruffe, it healeth also the spreading vlcers & running scals of the head: there is a iuice besides drawn from it, which becometh like to Elaterium, or the iuice of the wilde Cucumber. Moreouer, in any Reed, the best and most effectual part thereof is that holden to be, which is next to the root. The ioints also and knots be of great efficacy. The Cyprian Cane is named Donax, the rind wherof, if it be burnt and brought into ashes, is singular for to bring haire againe in places where it is shed: it healeth likewise vlcers growing to putrifaction. The leaues thereof are vsed, to draw forth any pricks or thorns. The same be of great vertue against S. Antonies fire, the shingles, and such like, yea & against all impostumations: the common and ordinary Reeds haue an extractiue or drawing faculty, if they be stamped greene: which is not meant of the root only, but also the very substance of the reed it self, which they say is of great operation. The root being reduced into a liniment, and applied with vinegar, cureth all dislocations, and easeth the pains of the chine bone. The same punned green and new, stirreth to lust, if it be drunk in wine. The down or cotton growing vpon the cane, if it be put into the ears, causeth hardnesse of hearing.

E There groweth in Egypt a certain plant named Papyrus, which resembleth much the Cane or Reed: a thing of great vse and commodity, especially when it is dry; for it serueth as a sponge both to suck vp the moisture in Fistulaes, and also to enlarge them. For swelling as it doth, it keepeth the vlcer open, and maketh way for the medicines to enter accordingly by that means. The paper made thereof when it is burnt, is counted to be caustick. The ashes of it being drunk in wine, cause sleep: and applied outwardly, taketh away hard callosities.

F Touching Ebene, it groweth not (as I haue already said) so neare vnto vs, as in Egypt. And albeit my meaning and purpose is not to deale with any medicinable plants growing in the strange & vknown countries of another world: yet in regard of the wonderfull properties that Ebene hath, I will not passe by it in silence. For first and foremost, the fine dust or powder filed from it, hath the name to be a singular medicine for the eyes: as also, that the wood thereof being ground vpon an hard stone, together with wine cuit, dispatcheth away the cloudy mist which ouercasteth the eyes. As for the root, if it be vsed likewise and applied with water, it consumeth the pin and web, and other spots in the eyes. The same being taken with equall quantity of the herb Dragon in hony, cureth the cough. In sum, Physitians repute and range Ebene among the medicines which be corrosiue.

Oleander, called in Greek Rhododendros, which some name Rhododaphne, and others Nerion,

The foure and twentieth Booke

As concerning gums, I haue heretofore declared how many kinds thereof are to be found. **G** To speake of them in generall, The better that any gum is, the more effectually be the operations thereof hurtfull they are to the teeth: they haue a property to thicken or coagular blood, and therefore be good for those who cast and reach vp blood: likewise they be singular for burns, as also for the windpipe and instruments of respiration. The superfluous and corrupt urine within the body, they prouoke and giue passage vnto. They dul & diminish the bitteresse of other medicines wherein they be mingled, how soeuer otherwise they be astringent & do fortifie other qualities. That which commeth from the bitter almonds, and is of a stronger operation to thicken and incrassat, hath vertue also to heat the body. The best gums be those of Plum-trees, cherry trees, and vines: they haue all of them a drying and astringent quality, if any part be annointed with them: and dissolved in vineger, they kill the tetter and ringwormes in children, & heale them vp. Being drunk to the weight of foure oboli, in * new wine, they be good for any inueterat cough. Moreover, they be thought to make the colour more fresh, lively, & pleasant, to procure and stir vp the appetite to meat; also to help those who be pained with the stone, in case they be drunk in sweet wine cuit. And to conclude with some particularity, The * gum of the Egyptian thorne is soueraigne for wounds, and all accidents of the eies.

* Musto, et
Mistura, in
some made or
compound
wine.
* Thought to
be Acacia.

CHAP. XII.

¶ Of the Arabian Thorne: of * the white Thistle Bedeguar: of Acanthion and Acacia.

* Our Ladies
thistle,

Touching the Arabian Thorne or Bush, and the commendable qualities thereof, I haue sufficiently spoken in the treatise of perfumes and odoriferous consecrations: yet thus much moreouer I haue to say of the medicinable vertues, that it doth thicken and incrassat thin and rheumatick humors, it restraineth all catarrhes and distillations, it represseth the reaching vp blood, & staierth the immoderat flux of womens monthly terms: for which purposes the root is more effectual than any other part of the plant.

The seed of the white Thistle is singular for the sting of scorpions: a garland made of it and set vpon the head, assuageth the paine thereof. Much like vnto this, is that Thistle which the Greeks call Acanthion, but that the leaues be much smaller, and those are sharpe pointed and prickly all about the edges, and couered with a downe resembling a cobweb; which the people of the East countries do gather, and thereof make certain cloth for garments, resembling silke. **K** The leaues or roots drunk in substance, are supposed to be a singular remedy for the crampe or convulsion which draweth the neck and body backward.

Moreover, there is a kind of Thorne, whereof commeth Acacia, and it is the juice thereof. It is found in Egypt to issue from certain trees, which be white, black, and green: howbeit, the best Acacia by far, is that which the former (that is to say, the white and the black) do yeeld. There is made likewise a kinde of Acacia in Galatia, which is most soft and tender; and the tree that affordeth it, is more prickly and thorny than the rest. The seed or fruit of all these trees, is like vnto Lentils, but only that the grain is lesse, and the cod or huske wherein it lieth, smaller. **L** The right season to gather this fruit is in Autumn; for if it be taken before, it is too too strong. For to draw this juice which we call Acacia, the cods wherein the grains lie, ought to be thoroughly steeped first in rain water: soone after, when they be punned or stamped in a mortar, the sayd juice is pressed forth with certaine instruments seruing for the purpose: which done, they let it remaine within mortars in the sun, and there take the thickening; and soat length reduce it into certain trochisks, and reserue them for vse. There is a juice likewise drawne out of the leaues, but the same is not so effectual as the other. The curiours vse to dresse their skins with the seed or grains thereof, in lieu of Galls. The juice which the leaues of the Galatian thorne aboue said doth yeeld (and namely, the blackest) is reiected for naught; like as that also which is of a deepe red colour. Contrariwise, that which is either purple or ash-colored and russet to see too, as also that which will be soone dissolved, is of exceeding efficacy to thicken and coole withall; and is preferred before all other in collyries or eie-salues: now for these vses, some are wont to wash the troches abovesaid, others torrefie and burn them. They are good to colour the haire of the head black: they heale *S. Anthonis* fire, and corrosiue sores; yea and all grienances of the body that consist in moisture: they cure any impostumes, joints that are bruised, kided heels, and the turning

M
ring

of Plinies Naturall History.

A ning vp of the skin and flesh from the naile roots. They repress the exceeding flux of womens monthly fleurs: the matrice and tiwell if they be slipt and faln out of the body, they reduce into their place again. In sum, for the eies, for the sores and infirmities of the mouth, and naturall parts seruing for generation, they be soueraigne.

CHAP. XIII.

¶ Of the common Thorne: of the wilde or wood Thorne: of Erysisceptron: of Spina Appendix: of * Pyxacanthus, and * Paliurus: of Hulver or Holly: of Yeugh: and Brambles: with the medicinable vertues of them all.

* E. v. thorne:
* Some call it
Cistus thorn.

The common Thorne also, wherewith the Fullers vse to fill their vats and caudrons, hath the same operation that * Struthium, and is put to the same vse. Many there be verily in all parts of Spaine, who vse it both in sweet Pomanders, and also in ointments, calling it *Aspalathus*: and without all doubt, there is a kind of wild white thorne of this race growing in the easterly countries (as I haue said) among the woods, and riseth to the full height of a good tree. Yea and a shrubby plant there is, lower than the other, but as full of pricks, growing in Nisyrus and the Islands of the Rhodians, which some call *Erysisceptron*; others, *Adipsatheon*, or *Dipsacon*, or *Dracheton*: the best is that which groweth nothing like to the *Ferula*, and being despoiled of the rind, is of a reddish colour inclining to purple. It is found in many places, but not euery where odoriferous. Of what force it is, when the rainbow seemeth to rest vpon it, I haue shewed already. It healeth the filthy cankers or sores of the mouth, and the stinking vlcers or alepocks in the nostrils: likewise the sores, botches, and carbuncles in the priuy parts, the crenifes also and clifts in the fundament, or else where, applied vnto the place affected: but if it be drunk, it abateth all swelling of ventosities: the bark or rind thereof dispatcheth those obstructions and impediments which cause the strangury or pissing by drop-meale. The decoction is a singular remedy for them that either pisse or vomit blood. The foresaid rinde stoppeth the flux of the belly. The like effects is that thought to work which groweth in the woods [and is called *Aspalathus* of the Leuant.]

There is a kind of thorny bush called * Appendix, for that there be red berries hanging thereto, which be likewise named Appendices. These berries, either raw by themselves, or else dried and boiled in wine, do stay the flux of the belly, and besides assuage the torments and wrings thereof. As for the berries of *Pyxacanthus*, they be drunk to right good purpose against the sting of serpents. *Paliurus* also is a kind of thorny bush: the people of *Africk* call the seed of it *Zura*, which is found to be most effectual against scorpions; and for those who are troubled with the stone, and the cough. The leaues haue an astringent or binding qualitie. The root resolueth and dispatcheth biles, impostumes, and borches; and if the same be taken in drink, it procureth urine: if it be sodden in wine, and the decoction drunk, it stoppeth a laske, and is a defensarime against the poison of serpents: the root especially is giuen in wine: some there be who stamp the leaues, putting salt thereto, and being reduced into the forme of a cataplasme, apply the same to the gout. The leaues be good to stay the immoderat flux of womens termes, the loosenesse of the belly occasioned by a feeble stomack, the bloody flux, and the inordinat motions of cholerick humors both vpward and downward. The root boiled and brought to a liniment, draweth forth what soeuer sticketh within the body. Soueraign it is and of exceeding great operation, in case of dislocations and swellings.

As touching the Holly of Hulver tree, if it be planted about an house, whether it be within a city, or standing in the country, it serueth for a countercharm and keepeth away all ill spels or enchantments. *Pythagoras* affirmeth, that the floure of this tree wil cause water to stand all vpon an yce: also that a staffe made thereof, if a man doe sling it at any beast whatsoever, although it chance to light short for default of strength in his arms who flung it, wil notwithstanding etch forward and roll from the place where it fell vpon the earth, and approach neere to the beast afore said; of so admirable a nature is this Holly tree.

The fume or smoke of any Yeugh tree, killeth mice and rats. Neither hath Nature produced brambles for nothing els but to prick and do hurt; for such is her bounty, that the berries which they beare are mans meat, besides many other medicinable properties: for they haue a desiccative and astringent vertue, and serue as a most appropriate remedy for the gums, the inflammation

* Some take it
for the Barber
ry bush.

tion of the Tonills, & the priuy members: the flours also as well as the berries of the brambles, be singular against the Hemorrhoid and the Prester, which are the two wickeddest and most mischeuous serpents that be. The wounds inflicted by scorpions, they close & heale vp againe without any danger of rankling or apostemation: and withall, they haue a property to prouoke vrine. The iuice drawne and pressed out of the tendrons or yong sprouts of brambles stamped, and afterwards reduced vnto the consistence of honey by standing in the Sun, is a singular medicine either taken inwardly or applied outwardly, for all the diseases of the mouth and eies; for them that reach vp bloud, for the squinancy, the accidents of the matrice and fundament, finally, for the immoderat flux of the belly occasioned by the weaknesse of stomach. As for the sores and infirmities of the mouth, the very leaues alone of the bramble if they be but chewed, are passing good: but if they be reduced into a liniment and so applied, they heale running sores or any scalls whatsoeuer in the head: & euen so being laid alone vpon the left pap, they be wholesome for such as are giuen to the fainting & trembling of the heart, and subiect to fall into cold sweats: likewise being applied accordingly, they ease the pain of the stomach, and such as haue their eies ready to start out of their head: and to help the infirmities of the ears, their iuice is excellent to be dropped into them. The same iuice incorporat with the cerot of roses, healeth the clifts and swelling knubs in the fundament: & for the said infirmity, the decoction of yong tendrils in wine, is a present remedy, in case the place be bathed and fomented therein. The same yong springs eaten alone by themselves in a salad, in manner of the tender crops and spurts of the Colewort; or boiled in some harsh, grosse, and Greene wine, do fasten the teeth which be loose and shake in the head: they stop a lask, and restrain an vnaturall issue or flux of bloud, and besides, are good in the bloody flux. Being dried in the shade, and afterwards burnt, their ashes are singular to stay the vula from falling. The leaues also being dried and beaten to powder, are excellent good for the farcines and sores in horses, and such like beasts. As for the blacke berries which these brambles do beare, there is a kind of Diamoron made of them, which is far better for the infirmities of the mouth, and more effectual, than the other of the garden mulberries. The same being so prepared in that stomacall composition aforesaid, or drunk only with Hypocistitis and hony, be singular to repress the fury of choler prouoking both waies: they be cordiall likewise, in case of faintings and cold sweats: and lastly, a preseruatiue against the poison of the venomous spiders. Among those medicines which they cal Stypticke or astringent, there is not a better thing than to boile the root of this blackberry bramble in wine to the thirds, and namely to make a collution therewith to wash the cankers or sores breeding in the mouth, or to foment the vlcers growing in the fundament. And verily of such a binding and astringent force is this bramble, that the very spongyous bals that it beareth, will grow to be as hard as stones.

Another kind of brier or bramble there is, vpon which groweth a rose: some cal it Cynosbator, others Cynospastoss: it beareth a leafe like to the print or sole of a mans foot. A little bal or pill it breedeth, furred or bristled much after the manner of the Chestnut, which serueth as a speciall remedy for those that be subiect to the stone. As for Cynorhonos, it is another plant different from this; wherof I will speak in the next book.

CHAP. XIV.

¶ Of *Cynosbator, and the Raspe: of the Rhamnos, and of Lycium and Sarcocolla. Of a certaine composition in Physicke called Oporice.

* is the Cane-brier or Caner-brier.

* Rubus canis.

* Of how to confounde the Physicke with downe the flowers of Cynosbator, and Chamæbator, the Cynocolla, and the blackberry bramble.

AS for the bramble named Chamæbator, it beareth certain black berries like grapes, within the kernell wherof it hath a certain string like a sinew, whereupon it came to be called Newrospastoss: it is a different plant from the Caper, which the Physitians haue named also Cynosbator. Now the tender stems of the foresaid *Cynosbator or Chamæbator condite in vineger, are good for them to eat who are troubled with the opilation of the spleen, & with ventosities, for it is a singular remedy for those infirmities. The string or sinew thereof chewed with Mastick of Chios, purgeth the mouth. The wild roses that grow vpon this brier, being incorporated with swines greafe, are excellent for to make the haire grow againe, when it is shed by some infirmity. *The berries of these brambles if they be tempered with oile oliue made of green and vnripe oliues, colour the haire black. The proper season to gather the floures of these brambles that cary berries like to mulberries, is in harvest time: the white kind of them drunk in wine, is a soueraign remedy for the pleurisie, & the flux of the stomach: the root sodden to the thirds,

stoppeth

A stoppeth a lask, and staieth the flux of bloud: likewise a collution made therewith, fastneth loose teeth, if they be washed withall. The same decoction or liquor is good to foment the vlcers of the feat priuy parts. The ashes of the root burnt, keep vp the vula from falling.

The Raspis is called in Latin Rubus Idæus, because it groweth vpon the mountain Ida, and not elswhere* [so plenteously.] Now is this bramble more tender, & lesse in growth: it putteth forth also fewer stalkes vpright, and those more harmelesse and nothing so prickly as the other brambles before named: besides, it loueth well to grow vnder the shade of trees. The floures of this bramble reduced into a liniment with hony, restrain the flux of rheumaticke humors into the eies, and keepeth down the spreading of S. *Anthonyes* fire: and giuen in water to drink, it cureth infirmities of the mouth. In all other cases, it hath like operations to the former brambles.

* Ex Dioscor.

B Among the diuers kinds of brambles, is reckoned the Rhamne, which the Greeks cal Rhamnos, notwithstanding that it is whiter & more branching than the rest. This Rham beareth many flours, spreading forth his branches armed with prickles not crooked or hooked as the rest, but streight and direct, clad also with larger leaues. A second kind there is of them growing wilde in the woods, blacker than the other, & yet inclining in some sort to a red colour: this carieth as it were certain little coals. Of the root of this Rham boiled in water, is made the medicine that is called Lycium. The seed of this plant draws down the after-birth. The former of these two, (which also is the whiter) hath a vertue more astringent and cooling than the other, & therefore better for impostumations and wounds: howbeit the leaues of both, either green or boiled, are vfed in liniments with oile for the said purpose. But as touching Lycium, the best of all other is

C (by report) made of a certain Thorne tree or bush, which they cal Pyxanthos Chironia, the form wherof I haue described among the Indian trees: & indeed the most excellent Lycium, by many degrees, is that Indian Lycium thought to be. The manner of making this Lycium, is in this wise: they take the branches of this plant, together with the roots which be exceeding bitter, & after they be well punned and stamped, seeth them in water within a brasen pan, for three daies together or therabout: which don, they take forth the wood, & set the liquor ouer the fire againe, where it taketh a second boiling, so long till it be come to the consistence or thicknes of hony: howbeit sophisticated it is many times with some bitter juices, yea and with the lees of oile & beasts gall. The very froth & scum, in manner of a stony that it casteth vp, some vse to put into colyries & medicines for the eies. The substance of the iuice besides is absterfue, it mundifieth the face, healeth scabs, cureth the exulcerations or frettings in the corners of the eies: it represseth old rheumes & distillations, clenseth ears running with filthy matter, represseth the inflammations of the almonds in the mouth, called Tonillæ, & of the gums; staieth the cough, restraineth the reaching & casting of bloud, if it be taken to the quantity of a bean: being spread in manner of a plaster or liniment and so applied, it drieth vp running and watery sores; it healeth the chaps and clifts in any part of the body, the vlcers of the secret parts seruing for generation, any place fretted or galled, new and green vlcers, yea and such as be corrosiue and withall growing to putrefaction: it is singular for the calosities, werts, or hard corns, growing in the nostrils, and all impostumations: moreover, women find great help by drinking it in milke, for any violent shift or immoderat flux of their monthly sicknes: the best Indian Lycium is known by this,

D That the masse or lump therof is black without, forth, red within when it is broken, but soon it commeth to a black colour. An astringent medicine this is, and bitter withall, and hath the same effects which the other Lycium is reported to haue, but specially if it be applied to the priue members of generation. As touching Sarcocolla, some be of opinion that it is the gum or liquor issuing from a certain thorny plant or bush: and they hold, that it resembleth the crums of frankincense, called Pollen or Manna Thuris, & in tast seemeth to be sweetish, & yet quick and sharpe withall. This Sarcocoll stamped with wine, and so applied, represseth all fluxes: & in a liniment, good it is for yong infants. This gum also by age and long keeping, waxeth black; but the whiter is the better, & thereby is the goodnesse knowne.

E But before I depart from this treatise of Trees, and their medicinable vertues, I must needs say, we are beholden to them yet for one excellent medicine more, which is called Oporice by the Greeks, as one would say, made of fruits. This composition is singular for the bloody flux or exulceration of the guts; also for the infirmities of the stomach. The manner of making it, is in this wise: Take 5 quinces, with their kernels, seeds & all, as many pomgranats likewise, let them boile gently ouer a soft fire in one gallon of new white wine, put therto the weight or measure or

one sextar of Seruises, and as much in quantity of the Sumach which is called Rhus Syriacum, together with halfe an ounce of saffron, seeth all these together to the height or consistence of hony. Thus much concerning the properties of trees seruing in Physicke. It remaineth now to annex hereunto a discourse of those plants which the Greek writers (by giuing them names in some analogie respectiue vnto trees) haue left an ambiguity, and made vs doubt of them whether they be trees or herbs.

CHAP. XV.

¶ Of * Chamædrys, i. Germander : * Chamædaphne, i. Lawrell : * Chamæla : * Chamæsyce : * Chamæcissos, i. Ale-boone : * Chamæleuce, i. Fole-foot : * Chamæpeuce : * Chamæcyparissus, i. Lauander-cotton : * Ampeloprassos : Stachys : Clinopodium, Centunculus, and Clematis Ægyptia, with the medicines that they afford.

Germander is an herb, called in Greek Chamædrys, and in Latine Triffago: some haue named it Chamædrope, others Teucrion: it beareth leaues for bignes resembling mints, in colour like vnto the oke leaues, cut and indented also after the same maner. Of some it is called Serrata; and they affirme that the first pattern of a saw was taken from the leafe of this herb, whereupon it should be so called. The floure beareth much vpon the purple colour: it longeth to grow in stony places, and would be gathered whiles it is full of iuice: and thus gathered in due season, whether it be taken in drink, or taken outwardly in a liniment, most effectually it is against the poison of serpents: likewise it is wholesome for the stomach, good against an inueterat cough, singular to cut, dissolve, and raise the tough steam sticking in the throat: a special remedy for ruptures, convulsions, and pleurifies: it waneeth away the ouergrown spleen: it prouokes vrine, and womens fleurs: in which regard, a bundle or handfull of Germander boiled in 3 hemines of water, vntill a third part be consumed, maketh a souveraine decoction or drinke for those who are newly fallen into a drop sicke. Some there be, who stamp this herb and sprinkle water among, and so reduce it into trofchs.ouer and besides the vertues before rehearsed, it is good to heale botches newly broken and full of matter, yea old vlcers, though they be filthy and putrified, if it be applied thereto: for the spleen, it is usually taken with vineger: & this iuice doth chaufe and heat those parts which be annointed therewith.

As touching Lawrell, called by the Greeks Chamædaphne, it ariseth vp with one only stem of a cubit high or thereabout: the leaues are but smal, howbeit like to those of the Lawrell: it bringeth forth a reddish seed appearing among the leaues, which being vsed in a liniment fresh and green, caseth the head-ach. The same cooleth all excessive heats: and if it be drunk in wine, appeaseth the wrings and torments of the belly. The iuice thereof taken in drink, drawes downe womens fleurs, and prouokes vrine: the same applied in wooll to the naturall parts of a woman, causeth her to be soon deliuered when she is in hard trauell of child-birth.

As for * Chamæla, it hath leaues like vnto those of the oliue: the same be bitter in tast, and in smell odoriferous. This plant groweth in stony grounds, and exceedeth not in heighth a hand-breadth or span at most: a purgatiue herb it is; for thereof is made an excellent syrrop to euacuat fleame and choler; namely, if there be taken one part of the leaues of this herbe, with two parts of wormwood, and so boiled; for certainly this decoction drunk with hony, is singular for to purge the foresaid humors. A cataplasme made with the leaues, clenseth vlcers. It is commonly said, that if this herb be gathered before the sun-rising, and the party to say expressly in the gathering, That it is for the pin and web in the eies; it will dispatch and rid away the said infirmity, if one do but weare it tied about him. And howsoeuer it be gathered, whether it be with any such circumstance and ceremony, or without, yet is it singular for the haw gnawing in the eies of horses and sheepe.

Chamæsyce beareth leaues resembling those of the Lentil, but they alwaies creep along the ground and rise not vp. This herbe groweth in drie and stony grounds: the same boiled in wine and vsed as a liniment vnto the eies, cleareth their sight; for it is singular to dispatch and remoue catarracts, suffusions, and cicatrices, growing therein: as also to rid away the misty clouds and films that ouercast the sight. Being put vp into the matrice within a linnen cloath in manner of a pessarie, it allaieth the paines thereof. VVarts of all sorts it taketh away, if they be annointed

Annointed therewith. It is a souveraine remedy also for those who cannot take their wind but sitting vpright.

* Chamæcissos groweth vp spiked with an ear like vnto wheat, and ordinarily putteth forth five branches, and those full of leaues. VVhen it sheweth in the floure, a man would take it to be the * white Violet or Gilloffe. The root is but small. They that are troubled with the Sciatica, vse to drinke the leau thereof to the weight of three oboli in two cyaths of wine, for seuen daies together: but it is an exceeding bitter potion.

As for Fole-foot, it is called in Greeke Chamæleuce: but we in Latine name it Farranum or Farfugium. It longeth to grow by riuers sides. The leaues somewhat resemble those of the Poplar, but that they be larger. If the root of Fole-foot be burnt vpon the coles made with Cyprus wood, the smoke or perfume thereof receiued or drunk through a pipe or tunnell into the

Bmouth, is singular for an old cough.

Touching * Chamæpeuce, in lease it is like vnto the Larch-tree: a plant very appropriat to the paine of the back and the loins. The herb Chamæcyparissos, if it be drunk in wine, is singular good against all the venomous stings of serpents and scorpions.

The herb Ampeloprassos groweth in vineyards, bearing leaues resembling Porret: but it causeth them to belch soure that eat thereof. Howbeit, of great power it is against the sting of serpents. It prouoketh vrine & womens monthly terms. And yet whether it be drunke or applied outwardly, it is passing good for them that pisse blood, & represseth the issue & eruption thereof. Our midwives vse to giue it vnto women newly deliuered and brought to bed: likewise it is found to auail much vnto them that be bitten with mad dogs.

CMoreouer, the herb called Stachys hath a resemblance also to * Porret, but that the leaues be longer and more in number: it yeeldeth a pleasant smell, and the leaues be of a pale colour, inclining somewhat to yellow. The nature of this plant is to moue the monethly purgation of women. As for Clinopodium (called otherwise Cleonicion, Zopyron, & Ocymoeides) like it is to running wilde Thyme, and full of branches, growing vp a span or handfull high at the least. It groweth in stony places, with a spoky tuft of floures shewing in a round compasse, and for all the world resembleth the feet or pillars that * beare vp a table or bed. This herb taken in drinke is good for convulsions, ruptures, stranguries, and serpents stings. So is the syrrop or juleb that is made thereof, by way of decoction. Thus much of those herbs, which in name carry a shew and resemblance of trees.

DIt remaineth now to write of some other herbs, which I must needs say are of no great name and reckoning, howbeit such as be indued with wonderfull vertues. As for the famous and notable herbs indeed, I will reserve the treatise of them for the books following. And first I meet with that which we in Italy call Centunculus, but the Greekes Clematis, with leaues pointed like the beak of a bird, or resembling the cape of a cloke, growing close to the ground in toiled corn fields. This herbe is most effectual and singular aboue all other, for to stay a iaske, if it be drunk in some red or green hard wine. The same beaten into pouder, and taken to the weight of one denier Roman, in five cyaths of Oxymell or hot water, stancheth bleeding: and yet in that sort it is of great effect to fetch away the after-birth of women lately deliuered.

EBut there be other herbes among the Greeke writers, going vnder the name of Clematides, and namely one, which some call Echites, others Lagines, and there are besides who name it Pety Scammonie, and in very truth, branches it hath a foot long, full of leaues, and not vnlike vnto those of Scammonie, but that the leaues be more black or dusky and smaller. This herbe is found as well in vineyards as corne lands. People vse to eat this herb with oile and salt, as they do Beets, Coles, and other such pot-herbs: and so eaten, it maketh the body soluble. And yet neuertheless, those who be troubled with the bloody flux, are wont to take it in some astringent wine with Linseed, and find it to work with good successe. The leaues applied to the eies with parched Barly groats, do restraîne the waterish humors which fall thither, so there be a fine linnen cloth wet * between. The same applied in a pulstesse to the wens called the kings euil, bring

Fthem first to suppuration, and afterwards hauing hogs grease put thereto, heale them thoroughly. Incorporat with green oile Oliue, they ease the hemorrhoids: and with honey, helpe those that be in a Phthisicke or Consumption. If nourees eat them with their meat, they shall haue good store of milke in their breasts. And if they annoint therewith the heads of their young infants, the haire will come the thicker. A collution made with them and vineger, assuageth the tooth-ach,

* It is not out of Alchove.
* Viola alba.

* Some take it for Chamæpitys.

* Clematis, Pety: but it seems that Pliny should have read clematis, i. Marubium, of Horehound, out of Dioscorides, as Rodericus hath observed.
* Whereupon it took the name Clinopodium.

* ground-oke, or petic oke.
* ground-bay, or petty Lawrell.
* ground-oliue, &c.
* ground fig-tree, &c.
* ground Irie.
* ground Poplar.
* ground-pine, or Patch tree.
* ground Cyprus.
* Porret vine.
* or Leek-vine.

* otherwise called Mergaron, Widow-waile.

* Supposito: some read contrariwise, Supposito.

ache, if the mouth be washed therewith. To conclude, it stirreth vp to fleshly lust.

There is besides another kind of Clematis, known by the name of the Egyptian Clematis: howsoever some call it Daphnoeides; others, Polygonoeides. Leaved it is like the Lawrel, save that the leaues be long and thin. But against all serpents, and especially the Aspides, it is a soveraigine counterpoison if it be drunk in vinegar. Egypt bringeth forth this herb in great abundance.

CHAP. XVI.

¶ Of Aron, Dracunculus, or Dracontium. Of Aris. Of Millefoile. Of another hearbe of that name. Of Pseudobunium. Of Myrrhis and Onobrichis: with their medicinable vertues.

Wake-robin.
Dragon.

These descriptions agree not with our wake Robin & Dragon.

There is a great difference betwene * Aron (of which herbe I haue written amongst those with bulbous roots) and * Dracontium: although writers be at some variance about this point, for some haue affirmed that they be both one. Howbeit *Glancius* hath distinguished them, in that the one groweth wild, and the other is planted: and hee pronounceth and calleth Dragon, the sauage Aron: others are of opinion, that there is no other difference between them, but that the onion root is called Aron, and the stem of the same herb Dracontium: whereas indeed there is no likenesse at all between the one and the other, if so be that Dracontium of the Greeks be the same that we call Dracunculus in Latine. For Aros hath a black root growing broad, flat, and round, yea, and far greater, in so much as it is a good hand full: but the root of Dracunculus is somewhat red, and the same wrythed and folded round in manner of a Dragon, whereupon it took that name. Nay, the very Greeks themselves haue made an exceeding great difference, between Dragon, and Wake-Robin: for they affirme, That the seed of Dragon is hot and biting, and besides, of such a virulent and stinking smell, that the very sent thereof is enough to driue a woman great with childe to trauell before her time, and to slip an vntimely birth. Contrariwise, they haue wonderfully commended Aron: for first and foremost, they preferre the female of this kind as a principall meat, before the male, which is harder to be chewed, and longer ere it be concocted and digested: moreover, they affirm, That as well the one as the other, doth expectorat the fleam gathered in the chest: and whether it be dried and brought into powder and so the drink spiced withall, or otherwise taken in form of a lioch or electuary, it prouoketh both vrine and also womens monthly termes. Drunke with oxymell, it mundifieth and comforteth the stomacke: and Physitians haue giuen it in Ewes milke for the exulceration of the guts: & roasted vnder the embers, they haue prescribed it to be taken with oil for the cough: Some haue sodden it in milke, and giuen the decoction thereof to be drunke in that case. They haue appointed it also to be boiled, and then applied accordingly, to watery eyes for to repress the violence of rheum: likewise, vnto places black and blew with stripes: as also for the inflammation of the amygdals: also, they haue giuen direction to inject the same with oile by way of clystire, as an excellent remedy for the Hemorrhoids: and to apply it in a liniment with hony, for to take away the pimples and freckles of the skin. *Cleophrantus* hath giuen it the praise of an excellent antidote or counterpoison: prescribing also the vse thereof for the pleuritic and inflammation of the lungs, in the same manner, as in case of the cough: he appointed likewise to beat the seed into powder, & being mixed either with common oile or oile of rose, to drop it into the eares for to assuage the pain. *Diuenthes* ordained, to take and temper it with meale, and so to worke it into a paste, & to giue the bread so made, vnto them that cough: to those who be short winded: such also as cannot breath vnlesse they sit vpright: and lastly, to as many as reach vp filthy matter out of their breest. *Diодотus* the Physitian made thereof an electuary or lioch with hony, for them to lick who are in a Phthisick, or otherwise diseased in the lights: and hee appointed it to be laid as a pulsette for fractures of bones. There is not a beast or liuing creature whatsoeuer, but if the shap or naturall parts be annointed therewith, it will fetch away the fruit of their womb. The juice drawn out of the root, if it be incorporat with Attick hony, scattereth the misty clouds and filmes in the eyes that trouble the sight: the same also cureth the defects and infirmities of the stomack. And a syrrip made with the decoction thereof & hony, is good to finte a cough. All vlcers whatsoeuer, be they woules, cankerous sores, or otherwise corrosiue and eating forward fillyea, the very ill-fauoured Polype and Noli-me-tangere in the nostrils, the

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A the iuice of this root doth cure and heale wonderfully. The leaues sodden in wine and oile, are good to be applied vnto any burne or place scalded. Being eaten in a salad with salt and vineger they purge the belly, sodden with hony, and applied as a cataplasme, they are good for dislocations and bones out of ioint. Semblably, the said leaues, whether they be green or dried, are excellent for the gout in any ioint, being laid too with salt. *Hippocrates* deuised a plaster of them and hony together, which was singular for all impostumations whatsoeuer. For to bring downe the desired sicknesse of women, 2 drams of the root or seeds (it skils not whether) taken in two cyaths of wine, is a sufficient dose. The same potion fetches away the after birth, in case it make no hast to come away after a woman is deliuered of child. And for this purpose *Hippocrates* appointed the very bulbous root of Aron in substance to be applied to the nature of a woman in the like case. It is said, that in time of pestilence it is a singular preseruatiue, if it be eaten with meats. Certes, it is excellent to keep them for being drunke, who haue taken their liquor liberally, or at leastwise to make them sober again. And yet the perfume or smoke thereof, when it burneth, chafeth serpents away, and especially the Aspides, or els doth intoxicate their heads, & make them so drunk, that a man shall find them lying benumbed and astonied, as if they were dead. The same serpents moreover will not come neere vnto those that be annointed all ouer with this herb Aros and oile of baies: hereupon it is thought, that it is a good preseruatiue against their stings, if it be drunk in grossered wine. They say moreover, that cheeses will keepe passing well, if they be wrapped within the leaues of Aron.

To come now to Dragons, called in Latine Dracunculus, wherof I haue spoken before: the only time to dig it out of the ground, is when barly beginneth to ripen, and within the two first quarters of the Moon, all the while that she doth increase in light. Let one but haue the root of this herb about him in any part of the body (it makes no matter how or where he carry it) he shall be sure that serpents wil flie from him. And therefore it is said, that the greater kind of them is singular to be giuen in drink vnto those who are stung already by them, as also that it stoppeth the immoderat course of womens fleurs, in case it touched no yron instrument when it was gathered. The iuice thereof is passing good for pain in the ears.

As for the Dragon which the Greeks name Draconatium, it hath bin shewed & described to me in three forms: the one leaued like vnto the Beets, growing with an vpright main stem with a floure of a purple colour: this Dragon is like vnto Aron. Others brought to me a second kind with a long root (as it were) marked forth and diuided into certaine ioints; it putteth out three small stems and no more: and they declared moreover and gaue direction to seeth the leaues thereof in vineger against the sting of serpents. There was a third sort shewed vnto me, bearing a leafe bigger than that of the Cornell tree, with a root resembling those of the canes or reeds: and (as they auouched) parted into as many joints and knots just, as it was yeares old, and so many leaues likewise it had, neither more nor lesse. Those that presented it to me, vsed to giue the same in wine or water against serpents.

There is an herb also named Aris, growing in the same Egypt: like vnto Aron abovesaid, save that it is lesse, hath smaller leaues, and not so big a root, and yet the same is full as great as a good round and large oliue. Of these, there be two kinds: the one which is white, riseth vp with two stalks: the other puts forth but one single stem. Both of them haue vertue to cure running scals and vlcers, to heale burns also and fistulous sores, if a collyrie or tent be made thereof and put into the sore: the leaues boiled in water, and afterwards stamped and incorporate with oile of rose do stay the spreading of corrosiue & eating vlcers. But mark one wonderful property that this plant hath: touch the nature or shap of any female beast therewith, she wil neuer linggading vntill she die with one mischiefe or other.

Touching Millefoile or Yarrow, which the Greeks call Myriophyllon, & we in Latine Millefolium: it is an herb growing vp with a tender and feeble stalk, like in some sort vnto Fenell, and charged with many leaues, whereupon it took the name: it groweth in moores and fennie grounds, vsed to very good purpose and with singular successe, in curing of wounds.ouer and besides, it is giuen to drink with vineger for the difficulty of vrine and the stoppage of the bladder, for those that take wind thick and shor, and such as are inwardly bruised by falling headlong from on high: the same is most effectually to take away the tooth ache.

In Tuscan they haue another herb so called, growing in medowes, which putteth forth on either side of the stalk or stem, a number of pretty leaues as smal in maner as hairs. The same also

is a most excellent wound-hearb. And it is auouched by the people of that countrey, That if an Oxe chance to haue his strings or sinews cut quite atwioth the plough-share, this hearb will conglutinat and foulder them againe, if it be made into a salue with swines greafe.

Concerning balsard Naveu, called in Greeke Pseudo Bunion, it hath the leaues of Naveu gentle, and brancheth to the height of a hand-bredth or span. The best of this kind groweth in the Isle Candy, where they vse to drink fise or six branches thereof for the wringing torment of the belly, for the strangury, the paine of the sides, midriffe, and precordiall parts.

Myrrhis, which some call Smyrrhiza, others Myrrha, is passing like vnto Hemlocke, in stakke, leaues, and floure; only it is smaller and slenderer, and hath no ill grace and vnpleasent tast to be eaten with meats. Taken in wine, it hasteneth the monthly course of womens fleurs if they bee too slow, and helpeth them in labour to speedy deliuerance. It is said moreover, that in time of a plague it is wholsom to drink it for feare of infection. A supping or broth made of it helpeth those who are in a Phrhythicke or consumption. This good property it hath besides, to stir vp a quick appetite to meat. It doth extinguishe and kill the venome inflicted by the sting or pricke of the venomous spiders Phalangia. The juice drawn out of this herb after it hath lien infused or foked three daies together in water, healeth any sore breaking out either in face or head.

Finally, Onobrychis carieht leaues resembling Lentils, but that they are somewhat longer: it beareth also a red floure: but resteth vpon a small and slender root. It groweth about springs and fountains. Being dried and reduced into a floure or powder, it maketh an end of the strangury, so it be drunk in a cup of white wine well strewed and spiced therewith. It stoppeth a lask. To conclude, the juice thereof causeth them to sweat freely who are annoiued all ouer with it.

CHAP. XVII.

¶ The medicinable vertues of Coriacea, Callicia, and Menais, with three and twentie other herbes, which some hold to be Magicall. Moreover, of Considia, and Aproxis, besides some other which are reuined and in request againe, hauing been long time out of vse.

TO discharge and acquit my selfe of the promise which I made of strange and wonderfull herbs, I cannot chuse but in this place write a litle of those which the Magitians make such reckoning of. For can there be any more admirable than they? And in very truth, *Democritus* and *Pythagoras*, following the tracts of the said wise men and Magitians, were the first Philosophers, who in this part of the world set those herbs on foot, and brought them into a name.

And to begin with Coriacea and Callicia, *Pythagoras* affirmeth, That these two herbes will cause water to gather it to an yce. I find no mention at all in any other authors, of these hearbes, neither doth he report more properties of them.

The same author writes of an herb called Menais, known also by the name of Corinthas, the juice whereof (by his saying) if it be sodden in water, presently cureth the sting of serpents, if the place be fomented with the said decoction. He affirmeth moreover, that if the said juice or liquor be poured vpon the grasse, whosoever fortuneth to go thereupon, and touch it with the sole of the foot, or otherwise chance to be but dashed or sprinkled therewith, shall die therupon remediless, and no way there is to escape the mischief. A monstrous thing to report, that this juice should be so rank a venome as it is, vnlesse it be vsed against poison.

The selfe same *Pythagoras* speaketh yet of another herb which hee calleth Aproxis: the root whereof is of this nature, to catch fire a farr off, like for all the world to Naphtha, concerning which, I haue written somewhat already in my discourse as touching the wonders of Nature: and he reporteth moreover, That if a man or woman happen to be sicke of any disease, at what time as this Aproxis is in the floure, although he or she be thoroughly cured of it, yet shall they haue a grudging or minding thereof as often as it falleth to floure againe yeare by yeare. And of this opinion he is besides. That Frumenty corne, Hemlock, and Violets, are of the same nature and property. I am not ignorant, that this booke of his wherein these strange reports are recorded, some haue ascribed vnto *Cleomporus*, a renowned Physitian: but the currant fame or speech holdeth still so constantly, time out of mind, that we must needs beleue *Pythagoras* to be the author of the said booke. True it is indeed, that the name of *Pythagoras* might giue authority and credit

Adit vnto other mens books attributed to him, if haply any other had laboured and trauelled in compiling some worke, which himselfe judged worthy of such a man as he was: but that *Cleomporus* should so do, who had set forth other books in his owne name, who would euer beleue? No man doubteth verily, but that the book intituled * *Chirocineta*, was of *Democritus* his making: and yet therein be found more monstrous things by a hundred fold, than those which *Pythagoras* hath deliuered in that worke of his. And to say a truth, setting *Pythagoras* aside, there was not a Philosopher so much addicted to the schoole and profession of these Magitians, as was *Democritus*.

In the first place he telleth vs of an herb called Aglaophotis, worthy to be admired & wondered of men, by reason of that most beautifull colour which it had: and for that it grew among the quarries of marble in Arabia, confining vpon the coasts of the realme of Persia, therefore it was also named Marmaritis. And he affirmeth, that the Sages or Wise men of Persia called Magi, vsed this herb when they were minded to coniure and raise vp spirits.

He writeth moreover, That in a country of India inhabited by the Tardisiles, there is another herb named Achemenis, growing without lease, and in colour resembling Amber: of the root of which herb there be certain Trochisks made: whereof they cause malefactors and suspected persons to drink some quantity with wine, in the day time, to the end they should confesse the truth: for in the night following they shall be so haunted with spirits and tormented with sundry fantasies and horrible visions, that they shall be driuen perforce to tel all, and acknowledge the fact for which they are troubled & brought in question. The same writer calleth this plant

* *Hippophobas*, because Mares of all other creatures are most fearfull and wary of it.

Furthermore, he reporteth, That so Schoenes from the riuer Choaspes in Persia, there groweth an herb named Theombrotion, which for the manifold and sundry colours that it hath, resembleth the painted taile of a Peacocke, and it casteth withall a most sweet and odoriferous sent. This herb (saith he) the Kings of Persia vse in their meats & drinks: and this opinion they haue of it, That it preferueth their bodies from all infirmities and diseases, yea, and keepeth their head so staied and settled, that they shall neuer be troubled in mind and out of their right wits: in such sort, that for the powerfull maiestie of this plant, it is also called Semnon.

He proceedeth moreover to another, knowne by the name Adamantis, growing onely in Armenia and Cappadocia: which if it be brought neare vnto Lions, they will lie all along vpon their backs, and yawne with their mouths as wide as euer they can. The reason of the name is this, because it cannot possibly be beaten into powder.

He goeth on still and beareth vs in hand, that in the realme Ariana, there is found the herbe Arianis, of the colour of fire. The inhabitants of that country vse to gather it when the Sun is in the signe Leo: and they ascribe, that if it do but touch any wood besmeared and rubbed ouer with oile, it will set the same a burning on a light fire.

What should I write of the plant Therionarca, which whensoever it beginneth to come vp and rise out of the ground, all the wilde beasts will lie benumbed and (as it were) dead: neither can they be raised or recovered againe, vntill they be sprinkled with the vrine of Hyena.

The herb Æthiopis, by his report groweth in Meroe, for which cause it is called also Merois: In lease it resembleth Lectuce: and being drunk in mead or honied water, there is not such a remedy againe for the dropisie.

Ouer and besides, he speaketh of the plant Ophiusa, found in a country of the same Æthiopia, named Elephantine: of a leaden hue it is and hideous to see to: whosoever drinke thereof, shall be so frighted with the terrors and menaces of serpents represented vnto their eies, that for very feare they shall lay violent hands on themselves: and therefore church robbers are enforced to drink it. Howbeit, if a man take after it a draught of Date wine, he shall not be troubled with any such fearfull visions and illusions.

Moreover, there is found (saith *Democritus*) the herbe Thalassigle about the riuer Indus, and thereupon is knowne by another name Potamantis: which if men or women take in drink, transporteth their senses so far out of the way, that they shall imagine they see strange sights.

As for Theangelis, which by his saying groweth vpon mount Libanon in Syria, and vpon Dicte, a mountain in Candy, also about Babylon and Susis in Persia: if the wise Physicopers (whom they term Magi) drinke of that herb, they shall incontinently haue the spirit of prophesie, and foretell things to come.

There

There is besides in the region called Baſtriana & about the riuer Boryſthenes, another ſtrange plant named Gelotophyllis, which (by his report) if one do drink with Myrrh and wine, it will cauſe many fantaſticall apparitions: and the party ſhal therupon fall into a fit of laughter without ceaſing and intermiſſion, and neuer giue ouer, vnleſſe it be with a draught of Date wine, wherein were tempered the kernels of Pine nuts together with pepper and hony.

Touching the herb of good fellowſhip Syſſitietis, found in Perſis, it tooke that name becauſe it maketh them exceeding mery who are met together at a feaſt. They call the ſame herb likewiſe Protomedia, for that it is ſo highly eſteemed among kings and princes. And another name it hath beſides, to wit, * Acaſignete, becauſe it commeth vp alone & no other herbs neere vnto it: yea, and one more yet, namely, Dionyſonymphas, becauſe wine and it fort ſo well together, and make as it were a good marriage.

The ſame Democritus talketh alſo of Helianthe: an herb leaued like to the Myrtle, growing in the country Themifcyra, and the mountrains of Cilicia, coaſting along the ſea. And he giues out, that if it be boiled with Lions greaſe, and then together with Safron and Date wine reduced into an ointment, the foreſaid Magi and the Perſian kings therewith annoint themſelues, to ſeem thereby more pleaſant and amiable to the people: which is the reaſon, that the ſame herb is called Heliocallis.

Ouer and beſides, he maketh mention of Hermefias (for ſo he termeth not an herb but a certain compoſition) ſingular for the getting of children, which ſhall proue faire, and of good nature beſides. Made it is of Pine nut kernels, ſtamped and incorporat with hony, Myrrh, Safron, and Date wine, with an addition afterwards of the hearbe Theombrotium and milke: and this confection he preſcribeth to be drunk by the man a little before the very act of generation; but by women vpon their conception, yea, and after their deliuey all the while they be nourses and giue ſuck: and in ſo doing they may be aſſured, thoſe children of theirs, thus gotten, bred, and reared, ſhall be paſſing faire and well fauoured, of an excellent ſpirit and courage: and in one word, euery way good. Of all theſe herbes before ſpecified, he ſetteth down alſo the very names which the ſaid Magi call them by. Thus much for the Magicke herbes found in Democritus his booke.

Apollodorus, one of his diſciples and followers, comes in with his two herbes to the other before named. The one he calleth *Æſchynomæne*, becauſe it draweth in the leaues, if one come neare vnto it with the hand: the other *Crocis*, which if the venomous ſpiders *Phalangia* do but touch, they will die vpon it.

Crates writeth of an herb called *Oenotheris*, which being put in wine, if any ſauage beaſts be ſprinkled therewith, they will become tame, gentle and tractable.

A famous * Grammarian of late daies made mention of another herb *Anacampſeros*, of this vertue, That if a man touched a woman therewith, were ſhe departed from him in all the hatred that might be, ſhe ſhould come again and loue him entirely. The ſame benefit alſo ſhould the woman find thereby, in winning the loue of a man. This may ſuffice for the preſent to haue written of theſe wonderfull Magicke herbes, conſidering that I meane to diſcourſe more at large of them and their ſuperſtition, in a more conuenient place.

CHAP. XVIII.

¶ Of *Eriphia*, *Lanaria*, and *Stratiotis*, with the medicines which they yeeld.

Many writers haue made mention of *Eriphia*. This herb hath within the ſtraw of the ſtem a certain ſie like a beetle, running vp and down, and by that meanes making a noiſe like vnto a yong kid, whereupon it tooke the foreſaid name. There is not a better thing in the world for the voice, than this herb, as folk ſay.

The herb *Lanaria*, giuen to ewes in a morning when they are faſting, cauſeth their vdders to ſtrout with milke. *Lactoris* likewiſe is a common herb and as well known, by reaſon that it is ſo full of milke, which cauſeth vomit, if one taſt thereof neuer ſo little. Some there be who ſay, that the herb which they call * *Militaris*, is all one with this *Lactoris*: others would haue it to be very like vnto it, and that it ſhould haue that name, becauſe there is not a wound made with ſword or edged weapon, but it healeth it within ſiue daies, in caſe it be applied thereto with oile.

Semblably, the Greek writers make great reckoning of their * *Stratiotes*: but this hearbe groweth

* As one would ſay, without brother or ſiſter.

* Apion called alſo *Pleiſionites*.

* The ſoulders hearbe.

* All one with *Militaria*.

A groweth onely in Egypt, and namely in ſloten grounds where the riuer Nilus hath ouerflowed: and like it is vnto Sengreen or Houſleek, but that it hath bigger leaues. It is exceeding refrigeraſtiue; and a great healer of green wounds, being made into a liniment with vineger: moreover it cureth *S. Anthonies* fire, and all apoſtumes which are broken and run matter: if it be taken in drinke with the male Frankincenſe, it is wonderfull to ſee how effectuell it is to repreſſe the flux of blood from the reins.

CHAP. XIX.

¶ Of the herbes that grow vpon the head and chapter of Images and Statues. Of herbes found in riuers. Of the herb called *Lingua*. Of herbes growing through a ſiue, and vpon dung hills. Of *Rhodora* and *Impia*, two herbes. Of *Peſcen Veneris*. Of *Nodia*. Of *Clauers*, or *Goole-graſſe*, called otherwiſe *Philanthropos*. Of the little *Bur* named *Canaria*: of *Tordile*. Of the ordinarie *Cotch-graſſe*, *Stitchwort*, or *Dent-de-chien*. Of the hearbe *Dactylus*, and *Fenigreeke*: with their medicinal vertues.

IT is commonly ſaid, That the herbes or weeds growing vpon the head of any ſtatue or Image, preſently allay the head-ach (if they be gathered in the lapper or any part of ſome garment) ſo as the Patient weare them tied about the necke, by red linnen thread, or inſolded with n ſome red linnen clout. Any herb whatſoeuer gathered out of ſome riuer, brook, or great riuer, before the Sun riſing, ſo as no man ſee the party during the time of the gathering, provided alwaies that it be tied to the left arm of the ſick Patient, and he or ſhe not know what it is, driues away any tertian ague, if it be true which is commonly ſaid. There is an herbe growing about fountains, called *Lingua*, i. a Tongue: the root therof being burnt into aſhes, & incorporat with the greaſe of a ſwine (but you muſt look, ſay they, that the ſwine be black and barraine) cauſeth haire to come againe, in caſe the place which is bare & bald, be annointed therewith in the ſun. Caſt a ſiue or riddle forth into any beaten path or high way, the graſſe or weeds comming vp vnderneath, and growing through the ſame, if they be gathered and bound about the neck or any other part of women with childe, doe haſten their trauell and deliuey. Thoſe herbes which be found growing vpon muck hills, about country farms, are paſſing good and effectual for the ſquancy, if they be drunk with water. The graſſe or hearb neere vnto which a dog liſts vp his leg and piſſeth, if it be plucked out of the ground without touching knife or yron inſtrument, cureth any diſlocation or bone out of joint, moſt ſpeedily.

Touching the tree (in manner of an *Opiet* or *Poplar*) called *Rumbotinus*, I haue deſcribed it in my treatiſe of Hortyards and Tree plots. Neare to one of theſe (and namely, when there is no vine coupled or married to it) there groweth a certain herb, which in France they call *Rhodora*: it riſeth vp with a ſtem pointed and knotted in manner of a fig tree rod or wand; beareth leaues reſembling nettles, ſo what whitith in the mids, but the ſame in proceſſe of time become red all ouer; and a ſiue of ſiue colour: this herb ſtamped and mixed with old hogs greaſe, makes a ſoueraigne liniment for all ſwellings, inflammations, and apoſtumes gathering to an head; provided alwaies that no edge tooke come neare to touch it, and that the party who is dreſſed or annointed therewith turn the head to the right hand, and ſpit thrice vpon the ground on that ſide. And the operation of this medicine will be the more effectual, if three ſundry men of three diuers nations, ſtand on the right hand when they annoint the Patient.

Concerning the herb *Impia*, which is of a hoary colour and white withall, it reſembleth in ſhew the *Rosemary*, riſing vp with a main ſtem, leaſed and headed in manner of a *Coleſtocke*: from which principall body, there grow forth other ſmall branches, euery one bearing little tufts or heads riſing and mounting about the mother ſtocke (whereupon they called it in Latine *Impia*, for that the children ouer-topped their parents) yet there be others who haue thought it rather ſo called becauſe there is no beaſt wil touch or taſt it. This herb, if it be ground between two ſtones, waxeth as hot as fire, & yeeldeth a iuice which is excellent for the ſquancy, if the ſame be tempered with milke and wine. But this is ſtrange that is reported moreover, namely, That whoſoeuer hath once taſted of this hearb, ſhall neuer be troubled with that diſeaſe; and therefore they uſe to giue it in waſh and ſwil, to ſwine: but look which of them reſuſe to drinke of this medicine, ſhal die of the ſaid ſquancy. Some are of opinion, That in birds neſts there is ſome of this hearbe commonly ſet and twiſted among other ſtickes, whereby it commeth to

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pasſe that the yong birds neuer be choked, gobbler they their meat as greedily as they will.

As touching the herb called Veneris Peſcen, which took that name of the reſemblance that the long cods thereof haue to combe or rake teeth: the root, if it be ſtamped with mallowes, and ſo reduced into a cataplaſme, draweth forth all ſpils, thornes, or whatſoeuer ſticketh within the fleſh. The herb * Exedum, is ſingular to cure the lethargy, and all drow ſineſſe.

* It ſeemeth
by name and
effect, to be of
ſome theriac
and ſtrength
giving
quality.

* The graſſe
of the
dog.

As for Nodia, it is an herb well knowne in curriers ſhops. They call it alſo Mularis, & other names beſides they haue for it: but tearme it how you will, it healeth corroſiue vlcers: and I find that it is of ſingular operation againſt the poiſon of ſcorpions, if it be drunk in wine or oxycrat, (i.) vineger and water mingled together. There is a certaine rough and prickly herbe, which the Greeks call by a pretty name * Philanthropos, for that it ſticketh to folks cloaths as they paſſe by. A chaplet or guirland made of this herb, and ſet vpon the head, eaſeth the pain thereof. As for the little Bur called Lappa Canaria, if it be ſtamped with Plantaine and Millefoile, and together with them conſecrated in wine, it healeth all cancerous ſores, ſo it be applied vnto the place, and removed once in three daies. The ſame herb digged forth of the ground without any ſpade or yron inſtrument, cureth ſwine, if it be put into the trough where they bee ſerued with draſſe and ſwill, or given them in milk and wine. Some adde moreover, that this charm muſt be ſaid in the digging, *Hæc eſt herba Argemon, quam Minerva reperit ſuis remedium, qui de illa guſtauerint: (i.)* This is the herb Argemon, which Minerva inuented as a remedy for diſeaſed ſwine, as many as taſted thereof.

As for Tordile, ſome haue ſaid that it is the ſeed of Sefeli, or Siler of Candy: others take it to be an herb by it ſelfe, which alſo they called Syreon: for mine own part, I find by my reading nothing of it, but that it delighteth to grow vpon mountains; and that being burnt, it is good to be drunke for to prouoke womens monethly terms, and to expectorat the ſuperfluous ſleame out of the breſt: for which purpoſes (they ſay) that the root is more effectual in operation: alſo that the iuice thereof taken in drinke to the weight of three oboli, is ſingular for the reins: finally, that the root is one of the ingredients which go to the making of emolliſtiue plaſters or cataplaſmes.

The Quich-graſſe, otherwiſe named Dent-de-chien, or Dogs-graſſe, is the commoneſt herbe that groweth: it runneth & creepeth within the earth by many knots or ioints in the root, from which, as alſo from the branches and top-frigs trailing aboue ground, it putteth forth new roots and ſpreadeth into many branches. In all other parts of the world, the leaues of this graſſe grow ſlender and ſharp pointed toward the end: only vpon the mount Pernaſſus (wherupon it is called Gramen Pernaſſi) it brancheth thicker than in other places, and reſembleth in ſome fort Ivie, bearing a white floure, and the ſame odoriferous. There is not a graſſe in the field whereon horſes take more delight to feed, than this, whether it be greene as it groweth, or dry and made into hay, eſpecially if it be given them ſomewhat ſprinkled with water. Moreover, it is ſaid, that the inhabitants about the ſaide mount Pernaſſus, do draw a iuice out of this graſſe, uſed much to increaſe plenty of milk; for ſweet and pleaſant it is: but in other parts of the world, in ſtead thereof, they uſe the decoction of the common graſſe, for to conglutinate wounds: [and yet the very herb it ſelfe in ſubſtance will do as much, if it be but ſtamped and ſo applied: and beſides, a good deſenſatiue it is to keep any place that is cut or hurt, from inflammation.] To the ſaid decoction, ſome put wine and hony: others adde a third part in proportion of Frankincenſe, Pepper, and Myrrhe: and then ſet all ouer the fire againe, and boile it a ſecond time in a pan of braſſe: which compoſition they uſe as a medicine for the tooth-ach and watering eyes, occaſioned by the flux of humors thither. The root ſodden in wine, appeaſeth the wrings & torments of the guts, openeth the conduits of the vrine, and giueth it paſſage; beſides, it healeth the vlcers of the bladder; yea, it breaketh the ſtone. But the ſeed is more diureticall, and with greater force driueth downe vrine than the root. And yet it ſtoppeth a laſke, and ſtaieſh vomit. A peculiar vertue it hath againſt the ſting of dragons or ſerpents. Moreover, ſome there be, who giue direction in the cure of the kings euil, and other flat impoſtumes called Pani, to take nine knots or ioints of a root of this graſſe: and if they cannot find one root with ſo many ioints, to take two or three roots, vntill they haue the ſaide number: which done, to enwrap or fold the ſame in vnwaſhed or greaſe wooll which is black [with this charge by the way, that the party who gathered the ſaid roots be faſting] and then to goe vnto the houſe of the patient that is to be cured, waiting a time when hee is from home: and be ready at his returne to receiue him with the

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A theſe words three times pronounced, *Ieiunus ieiuno medicamentum do*, [i. I being yet faſting, giue thee a medicine alſo whiles thou art faſting:] and with that, to bind the ſaide knots & roots vnto the parts affected, and ſo continue this courſe for three daies together. Furthermore, that kind of graſſe which hath ſeuen ioints in the root, neither more nor leſſe, is ſingular for the head ach, and worketh great effects if the Patient carrieth it tied faſt about him. Some Phyſicians do preſcribe for the intolerable pain of the bladder, to take the decoction of this graſſe boyled in wine vnto the conſumption of one halfe, and giue it to drinke vnto the Patient, preſently vpon the coming out of the baine or hot houſe.

Touching the graſſe, which by reaſon of the pricks that it beares is named Aculeatum, there be three ſorts of it: the firſt is that which ordinarily hath five ſuch prickles in the head or top thereof, and thereupon they call it Penta Daſtylon, i. the five finger graſſe: theſe prickles when they be wound together, they uſe to put vp into the noſthrils, and draw them downe againe, for to make the noſe bleed. The ſecond is like to * Scengreen or Houſleek: ſingular good it is for the whitſlows, and excreeſences or riſings vp of the ſkin about the nail roots, if it be incorporat into a liniment with hogs greaſe: and this graſſe they call Daſtylos, becauſe it is a medicine for the fingers. * The third kind named likewiſe Daſtylos but ſmaller than the other, groweth vpon old decayed wals or tyle houſes: this is of a cauſtick & burning nature, good to reſſeſſe the canker in running and corroſiue vlcers. Generally, a chaplet made of the herbe Gramen or Dogs-graſſe, and worn vpon the head, ſtancheſh bleeding at the noſe. The Gramen that groweth along the high waies in the country about Babylon, is ſaid to kill camels that graſe vpon it.

Fenigreeke cometh not behind the other herbs before ſpecified, in credit and account for the vertues which it hath: the Greeks call it Telus and Carphos: ſome name it Bueras and Agoceras, for that the * ſeed reſembleth little hornes: we in Latine tearme it Silicia or Siliqua. The manner of ſowing it, I haue declared in due place ſufficiently. The vertues thereof, is to dry, molliſie, and reſolue: the iuice drawne out of it after the decoction, is right ſoueraigne for many infirmities and diſeaſes incident to women, and namely in the naturall parts, whether the matrice haue a ſchirre in it and be hard or ſwolne, or whether the necke thereof be drawne too ſtreight and narrow: for which purpoſes, it is to be uſed by way of fomentation, inſeſſion, or bath; alſo by inſuſion or inſection with the matrenchyte. Very proper it is to extenuate the ſcurf or ſcales like dandruffe, appearing in the viſage: being ſodden and applied together with ſal-nitre, it helpeth the diſeaſe of the ſpleen. The like effect it hath with vineger: and being boyled therin, it is good for the liuer: for ſuch women as haue painful trauel in child-birth, & be hardily deliuered. Diocles appointed Fenigreeke ſeed to the quantity of one acetabule, to be giuen in nine cyaths of wine cuit for three draughts: with this direction, that the woman firſt ſhould take one third part of this drinke, and then go to a hot bath, and whiles ſhe were ſweating therein, to drinke one halfe of that which was left: and preſently after ſhe is out of the bain, ſup off the reſt. And he ſaith there is not the like medicine to be found in this caſe, when all others will take no effect. The floure or meale of Fenigreeke ſeed boyled in mead or honied water, together with barley or Linſeed is ſingular for the paine of the matrice, either applied to the ſhare in manner of a cataplaſme, or put vp into the naturall parts as a peſſary, according as the abouenamed Diocles ſaith: who was wont likewiſe to cure the leproy or S. Magnus euil, to clenſe & mundifie the ſkin, of freckles & pimples, with a liniment made with the ſaide floure incorporat with the like quantity of brimſtone: with this charge, to prepare the ſkin by rubbing it with ſalnitre, before the ſaid ointment were uſed, and then to annoint it oftentimes in a day. Theodorius uſed to mixe with Fenigreeke a fourth part of the ſeed of garden crefſes wel clenſed, & to temper them in the ſtrongest vineger that he could come by, which he took to be an excellent medicine for the leproſie. Damion ordained to make a drinke with half an acetabule of Fenigreeke ſeed put into 9 cyaths of cuit or ſheere water, and ſo to giue it ſo prouoking of womens flours: & no man doubts but the decoction of Fenigreeke is moſt whoſome for the matrice and the exulceration of the guts: like as the ſeed it ſelfe is excellent for the ioints & precordial parts about the heart. But in caſe it be boyled with Mallows, it is good for the matrice & guts, ſo there be put to the ſaid decoction ſome honied wine, & then giuen in drinke: for euen the very vapor or ſume of the ſaid decoction doth much good to thoſe parts. Alſo the decoction of Fenigreeke ſeed rectifieth the ſtinking rank ſmel of the arm-pits, if they be waſhed therewith. The floure made of Fenigreeke ſeed, incorporat with nitre & wine, quickly clenſeth the head of ſcurf, ſcales, & dandruffe. But

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ſe, or ſome ſay
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tal, for Puck-
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thought to be
the ſame Stone-
creep, wild Par-
cellane, or
Wall pepper.
* Or rather the
cods wherein
the ſeed is en-
cloſed.

boiled in hydromell (i. honyed water) and brought into a liniment with hogs greafe, it cureth the swelling and inflammation of the members ſeruing to generation:likewiſe it is ſingular for the broad and flat apoſtēms called Pani, the ſwelling kernels and inflammations behinde the ears, the gout as well of the feet as of the hands and other ioint; alſo the putrifaction of the fleſh ready to depart from the bone: and being incorporat in vineger, it helpeth diſlocations: being boiled in vineger and hony only, it ſerueth as a good liniment for the ſpleen: and tempered with wine, it clenſeth or mundifieth cancerous ſores; but put thereto hony, it healeth them throughly in a ſhort time. The ſaid flour of Fenigreeke ſeed taken in a broth or ſupping, is an approved remedy for an vlcer within the breſt, and any inueterat cough; but it asketh long ſee- thing, even vntill it haue loſt the bitterneſſe: and afterwards hony is put thereto, and then it is a ſingular grewell for the infirmities beforeſaid. Thus you ſee what may be ſaid of thoſe hearbes which are in compariſon but of a mean account: it remaineth now to diſcourſe of thoſe which are of more account and eſtimation than the reſt.



THE TWENTY FIFTH BOOKE OF THE HISTORIE OF NATVRE,

WRITTEN BY C. PLINIVS
SECVNDVS.

CHAP. I.

¶ *The nature and properties of Hearbs growing wild and of their owne accord.*

When I conſider the excellency of ſuch hearbes, whereof now I am to treat, and which the earth ſeemeth to haue brought forth onely for the vſe of Phyſick, I cannot chuſe but grow withall into a wonderfull admiration of the great induſtry and careful diligence of our Antients before-time, who haue made experiments of all things, and left nothing vntried: neither reſerued they afterwards this hidden knowledge to themſelues, nor concealed ought, but were willing to communicate the ſame vnto poſteritie for their good and benefit: but we contrariwiſe in theſe daies, are deſirous to keep ſecret and to ſuppreſſe the labors of other men, yea and to defraud the world of thoſe commodities which haue been purchaſed by the ſweat of other mens browes: for verily we ſee, it is an ordinary courſe, that ſuch as haue attained to ſome knowledge, enue that little ſkil vnto their neighbours: and to keepe all forſooth to themſelues and teach none their cunning, they thinke the onely way to winne a great name and opinion of ſome deepe and profound learning. And ſo far be we off from deu- ſing new inuentions, and imparting the ſame to the general profit of mankind, that for this long time men of great wit and high conceit haue ſtudied and praſiſed to compaſſe this one point, That the good deeds of their Anceſtours might with themſelues die and be buried for euer. But certes, wee ſee and know, that the ſeuerall inuentions of ſome one thing or other, haue cauſed diuers men in old time to be canonized as gods: in ſuch ſort, as their memoriall hath bene eternized by the names euen of hearbes which they found out: ſo thankfull was the age in ſuſing, as to recognize and acknowledge a benefit from them receiued, and by this meanes (in ſome meaſure) to make recompence. This care and induſtrie of theirs, if it had bene employ- ed in Domeſticall Plants neere home, which either for pleaſure and delight, or elſe for the Kitchen and Table, are ſet and ſowed, could not haue bene ſo rare and wonderfull: but they

A they ſpared not to climbe vp the top of high mountaines, and to rocks vnacceſſible; to trauell through blind and vnpeopled deſerts, to ſearch euery veine and corner of the earth, & all to find and know the vertues of herbs: of what operation the root was, for what diſeaſes the leaues were to be vſed, yea, and to make whoſon medicines for mans health of thoſe ſimples, which the verry four-footed beaſts of the field neuer fed vpon, nor once touched.

CHAP. II.

¶ *The Latine Authors who haue written of herbs, and their natures. At what time the knowledge of Simples began to be praſtiſed and profreſed in Rome. The firſt Greeke writers who traueled in this Argument. The inuention of herbs. The ancient Phyſicke, and the manner of curing diſeaſes in old time. What is the cauſe that Simples are not now ſo much vſed for remedies of diſeaſes as they haue bin. Finally, of the ſweet Briar or Eglantine, and the herb Dragons, with their medicinall vertues.*

WE Romans haue bin more ſlack and negligent in this behalfe than was beſeeming vs, conſidering how otherwiſe, there was not a nation in the world more apprehenſiue of all vertues and things profitable to this life, than ours. For to ſay a truth, *M. Cato* (that famous clerke and great profeſſor, ſo well ſeen in all good Arts and Sciences) was the firſt (and for a long time the only author) who wrote of Simples: and howſoeuer he handled that argument but briefly and ſummarily, yet he omitted not the leech-craft belonging alſo to ſine and oxen. Long after him, *C. Fulgius* (a noble gentleman of Rome, & a man of approved literature) compiled a treatiſe of Simples which he left vnperfect; howbeit he dedicated the book to *Iu- guſtus Caſar* the Emperour, as may appeare by a preface by him begun, wherein (after a religious and ceremonious manner of ſupplication) he ſeemeth to beſeech the ſaid prince, That it might pleaſe his Maieſty eſpecially, to cure all the maladies of mankind. And before his time, the on- ly man among our Latines (as far as euer I could find) who wrote of Simples, was *Pompeius* the Great, the vaſſall or freed man of *Pompey* the Great. And this was the firſt time that the knowledge of this kind of learning was ſet on foot and profeſſed at Rome. For *Mithridates* (the moſt mightie and puiſſant king in that age, whoſe fortune notwithstanding was to be vanquiſhed and ſub- dued by *Pompey*) was well knowne vnto the world not only by the fame that went of him, but alſo by good prooſe and euident arguments, to haue bin of all other before his time, a prince moſt added to the publick benefit of all mankind: for the only man he was who deuſed to drinke poiſon euery day (hauing taken his preferuatiues before) to the end that by the ordinary vſe and continuall cuſtome thereof, it might be familiar vnto his nature, and harmleſſe. The firſt he was alſo who deuſed ſundry kinds of antidotes or counterpoiſons, whereof one retaineth his name to this day: he it was alſo and none but he, as men think, who firſt mingled in the ſaid antidotes and preferuatiues, the blood of Ducks bred in his own realme of Pontus, for that they fed and liued there, of poiſons and venenous hearbs. Vnto him, that famous and renowned profeſſor in Phyſicke *Aſclepiades*, dedicated his books now extant: for this Phyſitian being ſolicited to re- paire vnto him from Rome, ſent the rules of Phyſick digeſted into order, and ſet downe in writ- ing, inſtead of comming himſelfe. And *Mithridates* it was (as it is for certaine knowne) w- o alone of all men that euer were, could ſpeake two and twentie languages perfectly; ſo as for the ſpace of ſix and fiftie yeares (for ſo long he reigned) of all thoſe Nations which were vnder his dominion, there neuer came one man to his court, but he communed and parled with him in his own tongue without any truchman or interpreter for the matter. This noble Prince (amongſt many other ſingular gifts that he had, teſtifying his magnanimitie and incomparable wit) ad- duced himſelfe particularly to the earneſt ſtudie of Phyſicke: and becauſe he would be exqui- ſite and ſingular therein, he had intelligencers from all parts of his dominions) and thoſe took vp no ſmall part of the whole world) who vpon their knowledge, exhibited vnto him the parti- cular natures and properties of euery ſimple: by which means, he had a cabinet full of an infinite number of receipts and ſecrets ſet down together with their operations & effects, which he kept in his ſaid cloſet, and left behind him with other rich treaſure of his. But *Pompey* the Great, hauing vnder his hands the whole ſpoile of this mighty Prince, & meeting in that ſaccage with thoſe notes aboueſaid, gaue commendement vnto his vaſſall or enfranchiſed ſervant the aboue- named *Leuſus* (an excellent linguift & moſt learned grammarian) to tranſlate the ſame into the

Latine tongue: for which act of *Pompey*, the whole world was no lesse beholden vnto him, than G the common-wealth of Rome for the foresaid victorie.ouer & besides these, what Greeke authors haue travelled in Physicke, I haue declared heretofore in conuenient place. And among the rest, *Euax* a King of the Arabians, wrote a booke as touching the vertues and operations of Simples, which he sent vnto the Emperour *Nero*. *Cratenus* likewise, *Dionysius* also, and *Atterodorus*, wrote of the same Argument after a most pleasant and plausible manner (I must needs say,) yet so, as a man could picke nothing almost out of all their writings, but an infinit difficultie of the thing, for they painted every herb in their colors, and vnder their pourtraicts they couched and subscribed their seuerall natures & effects. But what certainty could there be therein? pictures, you know, are deceitfull; also, in representing such a number of colours, and especially expressing the lively hew of Herbs according to their nature as they grow, no maruell if they that limned and drew them out, did fail and degenere from the first pattern and originall. H Besides, they came far short of the mark, setting out hearbs as they did at one only season (to wit, either in their floure, or in seed time) for they change and alter their form and shape euery quarter of the yeare. Herof it came, that all the rest labored to describe their forms & colours, by words only. Some without any description at all of their figure or colour, contented themselves (for the most part) with setting downe their bare names, and thought it sufficient to demonstrate and shew their power and vertue afterwards, to whosoever were desirous to seeke after the same: and verily the knowledge thereof is no hard matter to attain vnto. For mine own part, it hath bin my good hap to see growing in the plant, all these medicinable herbes (excepting verily few) by the meanes of *Antonius Cassor* (a right learned and most renowned Physitian in our daies) who had a pretty garden of his own well stored with simples of sundry sorts, which hee maintained and cherished for his owne pleasure and his friends, who vsed to come and see his plot, as indeed it was worthy the sight: this Physitian was then about a hundred yeres old, & in all his life neuer found what sicknesse meant, neither for all this age of his, was his wit decayed, or memory any whit impaired, but continued as fresh still as if he had bin a yong man. But to proceed forward with our discourse: Certes we shall not find a thing againe which our Ancestors so much admired and were more rauished withall, than the knowledge of simples. True it is, I confesse, that the inuention of the Ephemerides (to fore-know thereby not onely the day & night, with the eclipyses of Sun & Moon, but also the very hours) is ancient: howbeit, the most part of the common people haue bin and are of this opinion (received by tradition) from their forefathers) That all the same is done by enchantments, & that by the means of some forceries and herbes together, both Sun and Moone may be charmed, and enforced both to lose and recover their light: to doe which feat, women are thought to be more skilfull and meet than men. And to say a truth, what a number of fabulous miracles are reported to haue bene wrought by *Medea* queen of Colchis, and other women; and especially by *Circe* our famous witch here in Italy, who for her singular skil that way, was canonized a goddesse. And from hence it came (I suppose) that *Æschylus* a most ancient Poet, made report of * Italy to be furnished with herbes of mighty operation: and many others haue spoken much of the mountaine *Circeios* bearing her name, wherein the said Lady sometime dwelt & kept her residence. And for a notable proof of her singular skil in that kind, the same knowledge in some measure continueth vnto this day L in the Marsians (a nation descended from a son of hers) who are well knowne to haue a naturall power by themselves to tame and conquer all serpents, and not to be subiect to any danger from them. As for *Homer* verily (the father and prince of all learning & learned men, and the best author that we haue of antiquities) howsoeuer otherwise he was addicted to extoll and magnifie that we haue of antiquities) howsoeuer otherwise he was addicted to extoll and magnifie dame *Circe*, yet he attributeth vnto Egypt the glory and name for good herbes; yea though in his time there was not that base Egypt watered as now it is, with Nilus: for afterwards it grew by the mud left there by the inundation of the said river. Truly this Poet maketh mention of many singular herbes in Egypt, which the * Kings wife of that country gaue to that lady of his, *Helena*, of whom he writeth so much; and namely, the noble *Nepenthes*, which had this singular vertue and operation, To work obliuion of melancholy & heauinesse, yea and to procure easement and remission of all sorrowes: which, I say, the queene bestowed vpon *Helena* to this end, That she should communicate and impart it to the whole world for to be drunke in those cases abouesaid. But the first man knowne by all records to haue written any thing exactly and curiously of simples, was *Orpheus*. As for *Musæus*, and *Hesiodus* after him, in what admiration they held

* *Tullius* *de* *officiis* *lib. 2.*
* *Plinius* *de* *herbis* *lib. 20.*

* *Polydamus*,
* *Suetonius* *de* *Caesare* *lib. 1.*
* *Plinius* *de* *herbis* *lib. 20.*
* *Dionysius* *de* *herbis* *lib. 2.*
* *Dionysius* *de* *herbis* *lib. 2.*

A held, and how highly they esteemed the herb *Polion* about the rest, I haue shewed already. *Cerres*, *Orpheus* and *Hesiodus* both haue highly commended vnto vs perfumes and suffumigations. And *Homer* likewise writeth expressly of certain herbes by name, of singular vertue, which I will put downe in their due places. After him came *Pythagoras*, a famous Philosopher, who was the first that composed a booke, and made a treatise purposely of sundry herbes, with their diuers effects; ascribing wholly the inuention and originall of them to the immortall gods, and namely, to *Æsculapius* and *Democritus* compiled a volume of the same argument. But both hee and *Pythagoras* had travelled before al ouer Persis, Arabia, *Æthiopia*, and *Ægypt*, and there conferred with the Sages and learned Philosphers of that country, called *Magi*. In summe, so far were men in old time rauished with the admiration of herbes and their vertues, that they bashed not to atouch euen incredible things of them. *Xanthus* an ancient Chronicler, writeth in the first booke of his histories, of a Dragon, which finding one of her little serpents killed, raised it to life againe by a certain herbe, which he nameth *Balis*: and with the said herbe, a man also named *Thylo*, whom the Dragon had slaine, was reuiued and restored to health againe. Also King *Inba* doth report, That there was a man in Arabia, who being once dead, became aliue againe by the vertue of a certain herbe. *Democritus* said, and *Theophrastus* gaue credit to his words, That there is an herb, with which a kind of foule (whereof I haue made mention before) is able to make the wedge or stopple to flie out of the hole of her nest, into which the shepheards had driuen it fast, in case she bring the same herbe, and but once touch the foresaid wedge therewith. These be strange reports and incredible, howbeit they draw men into a wonderfull opinion of the thing, and fill their heads with a deep conceit, forcing them to confesse, That there is some great matter in herbes, and much true indeed which is reported so wonderfully of them. And from hence it is, that most are of this opinion and hold certainly, That there is nothing impossible, but may be performed by the power of herbes, if a man could reach vnto their vertues: many few there be who haue attained to that felicity: and the operation of most simples is vnkowne. In the number of these, *Herophilus* the renowned Physitian may be reckoned: who was of this mind and gaue it out in his ordinary speech, That some herbes there were, which were effectuell and did much good, if a man or woman chanced but to tread vpon them vnder their feet. And verily, this hath bin knowne and found true by experience, that some diseases would be more exasperat and angry, yea, and wounds grow to fretting and inflammation, if folk went but ouer certain herbes in the way as they passed on foot. Lo what the Physick in old time was! and how the same lay wholly couched in the Greek language, and not elswhere to be found. But what might be the reason, that there were no more simples knowne? Surely it proceeds from this, That for the most part they be rustickall peasants, and altogether vnlettered, who haue the experience and triall of herbes, as those who alone liue and conuerse among them where they grow. Another thing there is, Men are careless and negligent, and loue not to take any paines in seeking for them. Againe, euery place swarmeth with Leeches and Physitians, and men are so ready to run vnto them for to receiue some compound medicine at their hands, that little or no regard there is made of herbes and good Simples. Furthermore, many of them which haue bin found out and knowne, haue no name at all: as for example, that herb which I spake of in my Treatise concerning the cure and remedies of corne growing vpon the lands: and which we all know, if it be entered or buried in the foure corners of the field, will skar away all the foules of the aire, that they shal not settle vpon the corne, nor once come into the ground. But the most dishonest and shamefull cause why so few simples in comparison be knowne, is the naughtie nature and peeuish disposition of those persons who will not teach others their skill, as if themselves should lose forever that which they imparted vnto their neighbor. ouer and besides, there is no certain meanes or way to direct vs to the inuention and knowledge of hearbes and their vertues: for if we looke vnto these herbes which are found already, we are for some of them beholden to meere chance & fortune: and for others (to say a truth) to the immediat reuelation from God. For prooffe hereof, mark but this one instance which I will relate to you. For many a yeare vntill now of late daies, the biting of a mad dog was counted incurable: and looke who were so bitten, they fell into a certain * dread & feare of water: neither could they abide to drink, or to heare talk thereof, and then were they thought to be in a desperat case: it fortun'd of late, that a souldier, one of the gard about the * Pretorium was bitten with a mad dog, and his mother saw a vision in her sleep, giuing (as it were) direction vnto her for to send the roote vnto her sonne for

* *T. 1. 1. 1. 1.*

* or the prince;

to drink, of an Eglantine or wild rose (called Cymorhodon) which the day before she had espied growing in an hortyard, where she took pleasure to behold it. This occurred fel out in * Lactania, the nearest part vnto vs of Spain. Now, as God would, when the souldier before said vpon his hurt receiued by the dog, was ready to fall into that symptome of Hydrophobie, and began to feare water; there came a letter from his mother, aduertising him to obey the wil of God and to do according to that which was reuealed vnto her by the vision. Whereupon he dranke the root of the said sweet brier or Eglantine, and not only recovered himselfe beyond all mens expectation: but also afterwards as many as in that case tooke the like receit, found the same remedy. Before this time, the writers in Physick knew of no medicinable vertue in the Eglantine, but only of the sponge or little ball, growing amid the prickly branches therof, which being burnt and reduced into ashes, and incorporate with honey into a liniment, maketh haire to come againe where it was shed by any infirmity. But seeing I am fallen into the mention of Spain, it commeth to my mind, what I my selfe knew and saw in the same prouince, within the lands and domaines belonging to an host of mine; namely, a certaine plant or herb there lately found called * Dracunculus, which carried a main stem or stalk an inch or thumb thick, beset with spots of sundry colors, resembling those of vipers and serpents: and I was told, that it was a singular remedy against the sting or biting of any serpents. This Dracunculus differeth from another herb of that name, wherof I spake in the book going next before, for this hath a distinct form from that; and besides, another strange and wonderful property, namely, to shew two foot or thereabout aboue ground in the Spring time, when serpents first doe cast their sloughes or skins: & the same is no more seen, at the very time that serpents all retire into their holes and take vp their Winter harbor within the ground. Let this plant be gone once into the earth and hidden, you shal not see a Snake, Adder, or any other serpent stirring abroad. Whereby we may see what a kind and tender mother Nature is vnto vs (if there were nothing els to testifie her loue) in giuing vs warning beforehand of danger: and pointing vnto vs the very time when wee are to be afraid and to take heed of serpents.

CHAP. III.

¶ Of a certain venomous fount aine in Germany: of the herb Britannica. What diseases they be that put men to the greatest paine.

S O vnfortunat is our condition, and so much exposed are we to manifold calamities, that the searh is not pestered with wicked beasts only for to doe vs harme: but also there be otherwhiles venomous waters and pestilent tracts to work vs more wo and misery. In that voiage or expedition which prince *Cesar Germanicus* made into Germany, after he had passed ouer the riuier Rhene, and had giuen order to aduance forward with his army, he incamped vpon the sea-coasts along Friseland, where there was to be found but one spring of fresh water; and the same so dangerous, that whosoeuer drunk of that water, within two yerres lost all their teeth, and were besides so feeble and loose iointed in their knees, that vnneth they were able to stand. These diseases the Physitians termed * Stomacace and Scelctyrbe: as one would say, the malady of the mouth, and palfie of the legs. Yet they found a remedy for these infirmities, and that was a certain herb called * Britannica, which is very medicinable, not only for the accidents of the finewes and month, but also for the squinancy and stinging of serpents. It hath leaues growing somewhat long, and those inclining to a browneish or dark greene colour, and the root is blacke; out of which, as also from the leaues, there is a iuice drawne or pressed. The floures by a peculiar name be called Vibones: which being gathered before any thunder be heard, and so eaten, do assure and secure the parties altogether from that infirmity. The Frisians, nere vnto whom we lay incamped, shewed our men this herb. But I muse much and wonder what should be the reason of that name, vnlesse the Frisians bordering vpon the narrow race of the ocean, which lieth only between them & England (called in those daies Britanica) should therupon for the neighborhood & propinquity of that Island, giue it the name Britannica. For certain it is, that it took not that name because there grew such plenty therof in that countrv of England, that it should be transported ouer from thence to our camp; for as yet that Island was not wholly subiect to vs and reduced vnder the Roman seignorie. For an ordinary thing it was in old time practised by those that found out any herbs, to affect the adoption (as it were) of the same, & to call them by

* Some thinke this disease to be the Schor-buck or Scorbut, which raigeth yet at this day.
* Which is taken to be our Cochlearia, a Spoonwort, commonly called Scorbut-grasse or Scorbut-grasse.

A by their own names, wherein verily men took no small contentment: according as I purpose to shew by the example of certain kings and princes, whose names liue and continue yet in their herbs: so honorable a thing it was thought in those daies to find and it were but an hearbe that might do good vnto man. Whereas in this age wherein we now liue, I doubt not but there bee some who will mock vs for the pains taken in that behalfe, and think vs very simple for writing thus as we do of Simples; so base and contemptible in the eyes of our fine fooles and delicate persons, are euen the best things that serue for the benefit & common vility of mankind: howbeit, for all that, good reason it is and meet that the authors and inuentors of them, as many as can be found, should be named and praised with the best; yea, and that the operations & effects of such herbs should be digested and reduced into some method, according as they be appropriate to every kind of disease. In the meditation whereof, I cannot chuse nor contain my selfe, but deplore and pity the poore estate and miserable case of man: who ouer and besides the manifold accidents and casualties which may befall vnto him, is otherwise subiect to many thousands of maladies, which we haue much ado to deuise names for, euery houre of the day happening as they do, and wherof no man can account himselfe free, but every one is for his part to feare them. Of these diseases so infinit as they be in number, to determine precisely and distinctly which be most grievous, might seeme more folly, considering that every one who is sicke for the present, imagineth his owne sickness to be worst & fullest of anguish. And yet our forefathers haue giuen their judgement in this case, and by experience haue found, That the most extreme pain & torment that a man can indure by any disease, is the Strangury or pissing dropmeale, occasioned by the stone or grauell in the bladder. The next is the griefe and anguish of the stomack: and the third, Head-ach: for setting these three maladies aside, lightly there are no pains that can kill a man or woman so soon. And here by the way, I cannot for mine owne part but maruell much at the Greeks, who haue published in their writings venomous and pestilent herbs, as well as those that be good and wholesome. And yet there is an appearance and shew of reason, why some poisons should be knowen: for otherwhiles it falleth out that men liue in such extremity, as better it were to die, than so to lie in anguish and torment; inso much, as death is the best port and harbor of refuge that they haue. Certes, *Marcus Varro* reporteth of one *Servius Clodius* a gentleman or knight of Rome who for the extreame pain of the gout, was forced to annoint his legs and feet all ouer with a narcotick or cold poison, whereby hee so mortified the spirits of the muskles and sinews, that he became paralyticke in that part: and euer after vnto his dying day, was rid as well of all fence, as of the paine of the gout. But say, that in these cases it might be tollerable to set down in their books some poisons: what reason, nay what leaue had those Greeks to shew the means how the brains and vnderstanding of men should be intoxicated and troubled? what colour and pretence had they to set downe medicines and receits to cause women to slip the vntimely fruit of their womb, and a thousand such like casts & deuises that may be practised by herbs of their penning? for mine owne part, I am not for them that would send the conception out of the body vnaturally before the due time: they shall learne no such receits of me, neither will I teach any how to temper & spice an amatorious cup, to draw either man or woman into loue, it is no part of my profession. For wel I remember, that *Lucullus* a most braue Generall, and a captain of great execution, lost his life by such a loue potion. Much lesse then shall ye haue me to write of Magick, witch-craft, charmes, inchantments and forceries, vnlesse it be to giue warning that folk should not meddle with them, or to disprove those courses for their vanities, and principally to giue an Item, how little trust and assurance there is to be had in such trumpery. It sufficeth me and contenteth my mind, yea and I think that I haue done wel for mankind, in recording those herbs which be good and wholesome, found out by men of wit and learning for the benefit of posterity.

CHAP. IIII.

¶ Of Moly, and Dodecatheos: of Paony, otherwise called Pentorobus or Glycyfide. Of Panaces, *Asclepium*, *Heracium*, and *Chironium*. Of Panaces *Centarium* or *Pharnaceum*. Of *Heracium*, *Siderium*. Of Henbane called *Hyoisamus*, *Apollinaris*, or *Altercangenus*.

H Omer is of opinion, That the principall and foueraigne hearb of all others, is Moly; so called (as he thinketh) by the gods themselues. The inuention or finding of this hearbe hee

* ascri-

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* ascribeth vnto *Mercury*; and sheweth that it is singular against the mightiest witchcraft & enchantments that be. Some say, that this herb Moly, euen according to *Homer's* description, with a round and black bulbous root to the bignesse of an onion, and with a leafe or blade like that of *Squilla*, groweth at this day about the riuier or lake *Peneus* and vpon the mountain *Cylleum* in *Arcadia*; also that it is hard to be digged out of the ground. The Grecian Simplists deseribe this Moly with a yellow floure, whereas *Homer* hath written, that it is white. I met with one phisitian, a skilful Herbarist, who affirmed vnto me, That this Moly grew in Italy also: and in verie truth he brought and shewed me a plant which came out of *Campaine*, about the digging vp whereof among hard and stony rocks, he had bin certain daies: but get he could not the entire root whole and sound, but was forced to break it off, and yet the root which he shewed mee was thirtie foot long.

Next vnto Moly in account and reputation, is that plant which they call *Dodecatheos*, for that it doth represent & comprehend the maiesty of all the chiefe gods. They say it it be drunk in water it is a foueraign medicine for al maladies. Seuen leaues it hath, resembling very much those of *Leetuce*, and the same spring from a yellow root.

As touching *Pæony*, it is one of the first herbs that were euer known and brought to light, as may appeare by the author or inuentor thereof, whose name it beareth still. Some call it *Pentorobos*: others *Glycyfide*. [where by the way I am to aduertise the Reader, of the difficulty in the knowledge of herbs by their names, considering that the same herbe hath in sundry places diuer appellations.] But to proceed forward with our *Pæony*: it groweth among bleake and shady mountains, rising vp with a stem between the leaues, * 4 fingers high, and bearing in the top 4 or 5 heads, fashioned somewhat like to *Filberds*, within which there is plenty of seed both red and black. This herb is good against the fantastick illusions of the * *Fauni* which appeare in sleep. It is said, that this herb must be gathered in the night season: for if the *Rainbird*, woodpeck or *Hickway*, called *Picus Martius*, should chance to spie it gathered, he would flie in the face, and be ready to peck out the eyes of him or her that had it.

The herb * *Panace*, promisseth by the very name a remedy of all diseases. A number there be of herbs so called: and all ascribed to some god or other for the inuention of them: for one of them hath the addition of *Aesclepien*, for that *Aesculapius* had a daughter named also *Panacea*. As touching the concret juice named *Opopanax*, it is drawn from the root of this plant (beeing of the *Ferula* or *Fennell* kind, such as I haue heretofore shewed) by way of incision, the which root hath a thick rind, and of a saltish fauor. When the root is pulled out of the ground, there is a religious ceremony obserued to fil vp the hole again with all sorts of corn, as it were in satisfaction to the earth for the violence offered in tearing it vp. As for the said juice *Opopanax*, where and how it should be made, and which is the best kind thereof and not sophisticated, I haue declared already in my Treatise of forrain and strange plants. That which is brought out of *Macedony*, they call *Bucolicum*, because the Neat-herds of the country mark when the liquor breaks forth and runneth out of it selfe, and so receiue and gather it from the plant: this wil not last, but of all the rest soonest loseth the force. Moreover, in all sorts of it, that is rejected principally, which is black and soft, for these be markes to know that it is corrupted; and sophisticated with wax. A second kind there is of *Panaces*, which they call *Heraclium*: the inuention of the vertues and properties whereof is attributed vnto *Hercules*. Some there be who call it *Origanum Heracliticum* the wild, because it is like to *Origan*, whereof I haue heretofore written: but the root of this *Panaces* is good for nothing. A third kind of *Panaces* took the name of *Chiron* the Centaur, who was the first that gaue intelligence of the herbe and the vertues thereof. The leafe is like vnto the Dock, but that it is bigger and more hairy: the floure is of a golden yellow color: the root but small: it loueth to grow in rich, fat, and battell grounds. The floure of this *Panaces* is most effectuall in Physick: in which regard there is more vse and profit thereof than of all the former kindes. A fourth *Panaces* there is besides, found out also by the same *Chiron*, whereupon it hath the denomination of *Centaurium*: called also it is *Pharnaceum*: the occasion of this two-fold name is this: because there is some controuersie in the first inuention thereof; whiles some attribute to it the Centaur *Chiron*; others to *K. Pharnaces*. This *Panaces* is vsually set and planted, bearing leaues indented in the edges like a saw, and those longer than any of the rest. The root is odoriferous, which they vse to drie in the shadow, and therewith to aromatize their wine, for a pleasant and delectable taste it giueth vnto it. Hereof they haue made two speciall kinds:

* *Pæon*, who was equal in time to *Hercules*, and lived 160 before the Trojan warre.

* *Sesquipedali*. Diale. a foot and half.

* I suppose he meaneth the disease called *Ephorsus* or *Incubus* the night Mare.

* *Andæw*, i. a medicine for all ills: as one would say, All-heale.

A kinds: the one with a * thicker leafe: the other with a thinner and smaller.

As for *Heraclion Siderion*, a plant it is also fathered vpon *Hercules*. It riseth vp with a slender stalk to the height of foure fingers, bearing a red floure, and leaues in manner of the *Coriander*. Found it is growing neare to pooles and riuers: and for a wound herb there is not the like, especially if the body be hurt by sword, or any edged weapon made of yron and Steele.

There is a wild Vine, named *Ampelos Chironia*, for that *Chiron* was the first author thereof. Of this plant I haue written in my discourse of Vines [vnder the name of *Vitis Nigra*] like as also of another * herb, which hath the goddesse *Minerva* for the inuentress.

Moreover, vnto *Hercules* is ascribed *Henbane*, which the Latines call *Apollinaris*; the Arabians, *Altercum* or *Altercangenon*; but the Greeks, *Hyoecyamus*. Many kinds there be of it: the one beareth black seed, floures standing much vpon purple; and this herb is full of pricks. And in very truth, such is the *Henbane* that groweth in *Galatia*. The common *Henbane* is whiter, and brancheth more than the other: taller also than the *Poppy*. The third kinde bringeth forth seed like vnto the graine of *Iris*. All the sort of these already named, trouble the brain, and put men besides their right wits: besides that, they breed dizziness of the head. As touching the fourth, it carieth leaues soft, full of down, fuller and fatter than the rest: the seed also is white: & it groweth by the sea-side. Physitians are not afraid to vse this in their compositions, no more than that which hath red seed. Howbeit, otherwhiles this white kinde especially, if it be not thoroughly ripe, proueth to be reddish, and then it is rejected by the Physitians. For otherwise none of them all would be gathered, but when they be fully drie. *Henbane* is of the nature of * wine, and therefore offensive to the vnderstanding, and troubleth the head: howbeit, good vse there is both of the seed it selfe as it is in substance, and also of the oile or iuice drawn out of it apart. And yet the stalks, leaues, and roots, are imploied in some purposes. For mine owre part, I hold it to be a dangerous medicine, and not to be vsed but with great heed and discretion. For this is certainly knowne, That if one take in drink more than foure leaues thereof, it will put him beside himself. Notwithstanding the Physitians in old time were of opinion, that if it were drunk in wine, it would driue away an ague. An oile (I say) is made of the seed thereof, which if it be but dropped into the ears, is enough to trouble the brain. But strange it is of this oile, That if it be taken in drink, it serues for a counterpoison. See how industrious men haue bin to proue experiments, and made no end of trying all things, in so much as they haue found means and forced very poisons to be remedies.

* *Minerva* was the inuentress of *Warre*, *Arts*, *Handicraft*, &c.

* *Vitis*. Some read *Veneni*, i. poison.

CHAP. V.

¶ Of *Mercury*, called *Linozostis*, *Parthenium*, *Hermupoa*, or rather, *Mercurialis*: of *Achilleum*, *Panaces*, *Heraclium*, *Sideritis* and *Millefoile*: of *Scoparia*, *Hemionium*, *Teucrium*, and *Splenium*: of *Melampodium* or *Ellebores*, and how many kinds there be of it: of the black or white *Ellebores*, & their medicinable vertues: how *Ellebores* is to be giuen, how to be taken, to whom, and when it is not to be giuen: and how it killeth *Mice* and *Rats*.

E The herb *Mercury*, called by the Greeks *Linozostis* and *Parthenion*, was thought to be first found out by *Mercury*: whereupon many of the Greeks call it *Hermupoa*: and wee all in Latine name it *Mercurialis*. Of it be two kinds, the male and the female: howbeit, the female *Mercury* is of better operation than the other. It riseth vp with a stem a cubit high, which otherwhile brancheth in the top: the leaues be like vnto *Basil*, but that they are narrower: full of knots or joints the stalk is, and those haue many hollow concavities like arme-pits. The seed hangeth down from those ioints. In the female the same is white, loose, & in great plenty: in the male it standeth close vnto those joints, but thinner: and the same is small and as it were wreathed. The leaues of the male *Mercury* be of a dark and blacker green, whereas in the female they be more white. The root is altogether superfluous, and very little. Both the one and the other delight to grow in plains and champion fields well ordered and husbanded. It is wonderful if it be true, that is reported of both these kinds, namely, That the male *Mercury*, causeth women to beare boies: and the female, girls. For which purpose the woman must presently after that shee is conceived, drink the iuice of which *Mercury* she will, in sweet wine cutt, and eat the leaues either foddren with oile & salt, or els Greene & raw in a sallad with vinegar. Some there be who boyle

boile it in a new earthen vessell neuer vsed before, together with the hearbe Heliotropium or G Turnsol, and 2 or 3 cloues of Garlick, vntill it be thoroughly sodden. VVhich decoction they prescribe to be giuen to women, as also the herb it self to be eaten the second day of their monthly sicknes, and so to continue for 3 daies together: & then vpon the fourth day, after they haue bathed, to company with their husbands. *Hippocrates* giueth wonderfull praise vnto Mercury, as wel the male as the female, for all those accidents which follow women: but the maner of vying it, which he prescribed, there is no Physitian hath skil of. He appointed to make pessaries thereof with hony, oile of Koses, oile of Ireos or Lillies, and so to put them vp into the seuerer parts: and in this manner he saith that the herb is excellent good for to prouoke the monthly termes of women, and to fetch away the after-birth. Hee affirmeth also, that a potion or fomentation therewith wil do as much. Moreover, by his saying, the iuice of Mercury infused into the ears, or applied by way of liniment with old wine, is singular for them when they runne with stinking matter: he ordained likewise a cataplasme of Mercury to be laid to the belly, for to stay the violent flux of humors thither: for the strangury also and infirmities of the bladder. In which cases he gaue the decoction therof with Myrhe and Frankincense. And verily for to loosen the belly, although the Patient were in a feuer, there is a potion of Mercury singular good, made in this wise: Take a good handfull of Mercury, seeth the same in two sextars of water, vntill one halfe be consumed; let the party drink the same with salt and hony mixed therewith: but the said decoction if it be made with an hogs foot, with a hen, capon, or cock boyled withal, is the wholefomer. Some Physitians were of opinion, That for to purge the body, both Mercuries, as wel the male as the female are to be giuen, either boyled alone by themselves or els with Mallows: they cleanse the breest parts, and euacuate choler, but they hurt the stomacke. Touching all the other properties of Mercury, I will write in place conuenient.

As *Chiron* the Centaure found out the medicinable vertues of certaine herbes, so we are beholden to his scholler *Achilles* for one, which is singular to heale wounds, and of his name is called *Achilleos*. This is that wound-herb, wherewith (by report) he cured prince *Telephus*. Some haue thought that hee deuised first the rust of brasse or verdegreece, which is so excellent for salues and plasters: & therefore you shall see *Achilles* commonly painted scraping off the rust of his speare head with his sword into the wound of the said *Telephus*. Others say, that he tooke both the said rust or verdegreece, and also the herb *Achilleos* to worke his cure. Some would haue this *Achillea* to be *Panaces* *Heracleos*; and others *Sideritis*: we in Latine call it *Millefolia*. An herb it is growing with a stalk or stem to the height of a cubit, spreading into many branches, clad from the very root vp to the top, with leaues smaller than those of Fenell. Others confesse indeed that this herb is singular good for wounds: but the true *Achilleos* (say they) hath a blewish stalk a foot high & no more, bare and naked without any branches at all, howbeit finely deckt and garnished on euery side with round leaues, standing one by one in excellent order, and making a faire sight. There be again who describe it with a foursquare stem, bearing heads in the top in manner of Horehound, and leaued like vnto an Oke. And this they say is of that efficacy, that it wil conglutinate & vnite sinews again, if they were cut quite asunder. Moreover, you shall haue some who take it for *Achillea* that kinde of *Sideritis* growing vpon mud walls, which if it be brused or stamped, yeldeth a stinking sent. Moreover, there is another going vnder the name *Achilleos*, like to this last described, but that the leaues be whiter and fatter, the little stalks or sprigs more tender, & it groweth in vineyards. Last of all, there is one more called *Achilleos*, which riseth vp to the height of 2 cubits, bearing pretty fine & slender branches, and those three square, leaues resembling Fearn hanging by a long stele, & the seed is much like to that of the Beet. In one word, they be al of them most excellent for healing wounds. And as for that especially, which hath the largest leaues, our countymen in Latine haue called it *Scopa Regia*. And the same is holden to be good for to heale the Squinancy or Gargle in swine.

In the same age wherim *Achilles* liued, prince *Tueur* also gaue the first name and credit to one speciall herb, called after him *Teucion*, which some noninat *Hemionium*: this plant putteth forth little stalks in maner of rushes or bents, and spreadeth low: the leaues be small: it loveth to grow in rough and vntoiled places: a hard and vnpleasant fauor it hath in tast: it neuer flourisheth, and feed it hath none. Soueraigne it is for the swolne and hard spleene: the knowledge of which property came by this occasion, as it is credibly and constantly reported. It fortuned on a time when the inwards of a beast killed for sacrifice, were cast vpon the ground where this herb grew,

A grew, it took hold of the spleen or milt, and claue fast vnto it, so as in the end it was seen to haue consumed and wasted it clean: hereupon some there be that call it *Splenion*, i. *Spleenwort*: and there goeth a common speech of it, That if swine doe eat the root of this herbe, they shall be found without a milt when they are opened. Some there be, who take for *Teucion* and by that name do call, another herb full of branches in manner of hyssop, leaved like vnto beans, and they giue order, that it should be gathered whiles it is in floure; as if they made no doubt but that it would floure. The best kind of this herb they hold to be that which cometh from the mountains of Cilicia and Pindia.

VVho hath not heard of *Melampus* that famous diuiner and prophet? he it was of whom one of the *Ellebore*s tooke the name, and was called *Melampodion*: and yet some there be who attribute the finding of that herb vnto a shepherd or heardman of that name, who obseruing wel that his the goats feeding therupon, fell a scouring, gaue their milk vnto the daughters of king *Prætus*, whereby they were cured of their furious melancholy, and brought again to their right wits. This herb then being of so excellent operation, it shall not be amisse to discourse at once of all the kinds of *Ellebore*, whereof this maketh one. And to begin withal, two principal sorts there be of it; namely, the white and the black: which distinction of colour, most writers would haue to be meant and vnderstood of the roots only, and no part else: others there be, who would haue the root of the blacke *Ellebore* to be fashioned like vnto those of the Plane-tree, but that they be smaller and of a more darke & duskyish green, diuided also into more jags and cuts; but those of the white *Ellebore*, to resemble the yong Beet new appearing about the ground, save onely that they be of a more blackish colour, and along the back part of their concavities melting to red. Both the one and the other bringeth forth a stalke in fashion like the *Fern* or *Fenel*-geant, a span or good hand-breadth high, and the same consisteth of certain tunicles or skins folded one within another in manner of bulbous plants, rising from the like root; and the said root is full of strings or fringes, as is the head of an onion. The blacke *Ellebore* is a very poison to horses, kine, oxen, and swine, for it killeth them; and therefore naturally these beasts beware how they eat of it, whereas confidently they feed vpon the white. The right season of gathering the *Ellebore*s, is in haruett time. Great store thereof groweth vpon the hill *Oeta*, but the best is that which is found in one only place thereof neere about * *Pyra*. The black *Ellebore* cometh vp euery where; but the best is in *Helicon*, a mountaine much renowned and praised for other herbs beside it, wherewith it is well furnished. As touching the white, that of the mount *Oera* is counted the principall: in a second degree, is the white *Ellebore* of *Pontus*: in the third place is to be ranged, that which cometh from *Elaea*, which (they say) groweth among vines: in the fourth and last place, for goodnesse, is that of the mount *Parnassus*, which is sophisticated with the *Ellebore* of *Ætolia* neare by. The blacke *Ellebore* is called *Melampodium*, wherewith took vse to hallow their houses for to driue away ill spirits, by strewing or perfuming the same, and vsing a solemne prayer withall: it serueth also to blesse their cattell after the same order. But for these purposes they gather it very deuoutly and with certain ceremonies: for first and foremost, they make a round circle about it with a sword or knife, before they go in hand to rake it out of the ground: then the party who is to cut or dig it vp, turneth his face into the East, with an humble prayer vnto the gods, That they would vouchsafe to giue him leaue with their fauor to do the deed; & with that he markes and obserueth the flight of the Egles; for lightly while they be cutting vp of this root, ye shall see an *Ægle* foring aloft in the aire: now in case the said *Ægle* flie neere vnto him or her that is cutting vp *Ellebore*, it is a certaine preface and foretoken, that he or she shall surely die before that yeare go about. Much ado also there is about the gathering of the white *Ellebore*; for vnlesse the party do eat some garlick before, and eatfoomes in the gathering sup off some wine, and withall make hast to dig it vp quickly, it wil stiffe and offend the head. The blacke *Ellebore* some call *Eutomon*, others *Polyrrhizon*; it purgeth downward; the white, by vomit, upward, and doth euacuate the offensive humors which cause diseases. In times past it was thought to be a dangerous purgatiue, and men were afraid to vse it: but afterwards it became familiar and common, inso much as many students tooke it ordinarily for to cleanse the eyes of those fumes which troubled their sight, to the end that whiles they read or wrote, they might see the better or more clearly. It is wel known, that *Carnedes* the Philosopher purposing to answer the bookes of *Zeno*, prepared his wits and quickened his spirits, by purging his head with this *Ellebore*. And *Drusus* our Countrey-man, one of the most famous and

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renowned Tribunes of the Commons that were euer knowne at Rome (a man who aboute all others woon the fauour and applaufe of the commality, how fouer the nobility charged him to haue bin the cause of the Marfians war) was perfectly cured of the falling sicknes in the life Anticyra, by this only medicine: and indeede thofe Iflanders haue a way by themfelues to prepare their Ellebore with the mixture of Scamoeides (as I haue faid before) whereby the taking of it is moft fafe. Ellebore is called in Latine * Veratrum: the pouder as well of the one as the other snuffed vp into the noftrils, either alone by it felfe, or mixed with the pouder of the Fullers herbe Radicula, wherewith they wafh and fcoure their woollen cloth, * prouoketh sneezing; and yet both of them procure fleep. Now for vfe in Phyficke, there would be chofen the fmalleft roots of Ellebor, fuch as be fhort alfo, and as it were curtelled, and not fharp pointed in the bottome: and the beft part is that which is toward the nether end; for the vppermoft part of the root which is the thickeft and bulbous like to an onion head, is good for dogs onely, and giuen vnto them for to make them fcummer. In old time they vfed to chufe the Ellebore root by the bark, and took that for the beft which had the moft flefhy or thickeft riind, to the end that they might take out the finer pith or marrow within; which they vfed to lap and couer with moift fponges, and when it began to fwell, they diuided or fliued it longwife into fmal filaments with the point of a needle or bodkin. Thefe filaments or strings, they dried in the fhade, & laid them vp to ferue as need fhould require. But now adaies they cut the fmal fhoots or flips branching from the root, fuch as are moft charged with bark, and thofe the Phyficians giue vnto their Patients. The beft white Ellebore is that, which in taft is hot and biting at the tongues end, and in the breaking feemeth to fmoke or fend duft from it: it is commonly faid, that it will continue in force thirty yer. The black is good for the palfie, for thofe that be lunatick and beftaught in their wits, for fuch as be in a dropfie (fo they be cleare of a feuer) for inueterat gouts as well of feet and hands as other joints: it purgeth downward by the belly, both choler and flemme: being taken in water, it gently mollifieth and loofeneth the body: and from foure oboli (which is a fmall or mean dofe) you may rife to a full dramme, fo you exceed not that weight. Some were wont to mingle Scammonium therewith; but the fafer way is to put falt only thereto: being giuen in any fweet liquor to fome great quantity, it is dangerous: and yet a fomentation therewith is good to rid away and difpatch the miftineffe that troubleth the eies: and therefore fome vfe to beat it into pouder, and when it is reduced into a liniment or oile falue, therewith to annoint them for the faid purpose. This property moreover it hath, to bring to maturation the fwelling wens called the kings euill, to mollifie any hard tumors, to mundifie alfo the foresaid wens and any borches or impoftumes that be fuppurat and broken. It clenfeth likewife the hollow vlcers called fifuloes, provided alwaies that it be not taken out of the fore in 2 daies and 2 nights, but the third day it ought to be removed. Incorporat with the skales of braffe and red orpiment, it taketh away warts. Made into a pulteffe or cataplafme with barley meale and wine, it is fingular good for the dropfie, if it be applied vnto the belly: take a fliuing or flip of the root and draw it through the eare of fheep or horfe in manner of rowelling, and the morrow after take it forth again at the fame houre; this healeth the gid or wood-euill in fheep, and cureth the glandres in horkes: incorporat with frankincenfe or wax, together with pitch or oile of pitch, it is fingular good for the farcins or fcarb in any foure-footed beaft. Touching white Ellebore, the beft is that which moft fpeedily prouoketh sneezing: it is without comparifon far more terrible than the blacke, efpecially if a man reade what adoe and preparation there went vnto it in the old time, when they were to drink it againft fhuietings and fhakings, againft the rifing of the mother and danger of fuffocation: in cafe alfo of immoderate and extraordinary drowfineffe, of exceffive hicquets and yexing without intermiffion, and of continual sneezing: moreover, when they were troubled with weakeneffe and feebleneffe of stomacke: in like manner in cafe of vomits, when they came either too faft or ouer-flow, either too little or too much: for this was a rule obferued among them, to giue with Ellebore fome other drugs, for to caufe it work the fooner, and to haften vomit more fpeedily: alfo they vfed means to fetch away the very Ellebore again if it lay ouer-long in the body, either by other purgatiue medicines, or by clyfters: oftentimes alfo by opening a veine or bloud-letting. And fay that Ellebore taken in manner aforefaid, wrought very well, yet they vfed to obferue euery vomit, the diuers colors of humors that came away, which many times were fearfull to behold: yea and when the Patient had done cafting, they confidered alfo the ordure and excrements that paffed away by the belly: they gaue order

* *Veratrum*, vnder *veratrum* & *veratrum*: and becaufe fuch prophets were counted mad & out of their wits, therefore it was fo called, for that it cured fuch. * *Scammonium*, *scammonium*, I doubt whether this be true: I fuppofe it fhould be read according to the old copy (*Scammonium*) (i.e.) they diftill or fhak off fleep, vfed to that purpose in lethargies & fuch drowfie difafes.

A be fides, for *bathing either before or after the taking of Ellebore, as occafion beft required, yea and they took great heed and regard of the whole body be fides; and yet, did what they could, the terrible name and report that went of this medicine, paffed all their care and circumfpection whatfoeuer: for it was an opinion generally held and receiued, That Ellebore doth eat away and confume the flefh feething in the pot, if it be boiled therewith. But herein were the ancient Phyficians much too blame and greatly in fault, in that they were ouer timorous, and for feare of fuch accidents infuing vpon this medicine, gaue it in too fmall a dofe: for inas much the greater quantity that one taketh of it, the more fpeedily it worketh, and the fooner paffeth out of the body, when it hath once done the errand. *Themifon* vfed to prefcribe two drams, and not aboue. The Phyficians who followed after, allowed the dofe of foure drammes; grounding vpon a notable and famous apothegme or fpeech of *Herophilus*, who was wont to fay, that Ellebore was like vnto a valiant and hardy captaine: for when (quoth he) it hath ftirred all the humors within the body, it felfe flieth forth firft and maketh way before them. Moreover, there is a ftrange and fingular deuife, To clip the root of Ellebore with fmall fizzers or fhears into little peeces, then, to lift them through a ferece, that the bark or rind may remain ftill, and when it is clenfed and purged from the pith or marrow within, the fame may fall thorow and paffe away: which is paffing good to stay vomits, in cafe the Ellebore doe worke too extremely: furthermore, if we looke for good fuccesse in our cure by miniftring of Ellebore, in any wife we muft take heed and be carefull, how we giue it in clofe weather, and vpon a darke and cloudie day; for certainly it patteth the Patient to a jumpe or great hazard, and caufeth mo^t grievous and intollerable pains and torments. For that it fhould be taken in fummer rather than in winter, no man doubteth thereof. Ouer and be fides, the bodie ought to be prepared a feuen-night before; during which time, the Patient is to eat tart and * sharp meats and poignant fauces, to abftaine from wine altogether, and the fourth and third day before, to affay by little and little to vomit gently: laft of all, to forbear fupper ouer-night, when hee is to take his Ellebore the morrow. As touching the manner of giuing Ellebore: the white may be drunke in fome fweet wine; but the beft and chiefeft way of taking it, is in milke, gwell, or portage. Of late daies there is come vp a pretty inuention, To flit or cut Radifh roots, and within thofe gashes to fteck or enterlace peeces of white Ellebore, which don, to bind them clofe vp again, that the ftrength and vertue thereof may be incorporat in the foresaid roots: and thus by the means of this kind temperature with the Radifh, to giue it vnto the Patient. Ordinarily this medicine of Ellebore continueth not aboue foure houres within the body, but it commeth vp againe, and within feuen it hath done working. And thus being vfed as is beforefaid, it is a moft foueraine remedie for the falling fickneffe, the fwimming or dizzineffe of the head: it cureth melancholicke perfons troubled in mind; fuch as be brain-fick, mad, lunaticke, phrantick, and furious: it is fingular good for the Elephantie, the foule and dangerous morphew called Leuce, the filthie leprofie, and the generall convulfion whereby the body continueth ftiffe and ftarke, as it were all one peece without any ioynt. It helpeth thofe that be troubled with trembling, fhuietings, and fhaking of their lims, with the gout, and the dropfie, and namely fuch as bee entering into a tympanie: fingular it is for thofe that haue weake and feeble stomackes and can keepe nothing that they take; for fuch as are giuen to fpaimes or crampes, lie * bed-rid of the dead palfie or fuch chronicke difeafes, encumbered with the Sciatica, haunted with the quartaine Ague, which will not be ridde away by any other meanes; troubled with an old cough, vexed with ventofities and griping wrings and torments which be periodically, and vfe to come and goe at certaine fet times howbeit, Phyficians forbid the giuing of Ellebore vnto old folk and yong children: Item, to fuch as be of a fœminine and delicate bodie; as alfo to thofe that be in minde effeminate: likewife to thofe who are thinne and flender, foft and tender: in which regards, wee may not be altogether fo bold to giue it vnto women as vnto men. In like manner, this is a medicine that would not bee miniftered inwardly to fearefull, timorous, and faint-hearted perfons; neither to thofe who haue any vlcir in the precordiall region about the midriffe, ne yet vnto fuch as vfuallly bee giuen to fwell in thofe parts; and laft of all vnto thofe that fpeit or reach vp bloud; no more than to fickely and crafe perfons who haue fome tedious and lingring maladie, as phthysicke, &c. hanging vpon them; and namely, if they be grieved and difeafed in their fides or throat. Neuertheleffe, applied without the bodie in manner of a liniment with falted hogs greafe, it cureth the breaking forth of flegmaticke wheals and pimples; as alfo healeth old

* *Elleborus* apointeth them to take before, who purge neceffarily with Ellebore: & in cafe of convulfions or other difeafes, therefore, I prefcribe both like wide the bain.

* As Radifh roots and oymell.

* *Elleborus* fowernead Cypris, &c. then it fignifieth thofe that haue their mouths downe aware to their earre the difeafes of the fides.

fores remaining after imposthumes suppurate and broken : mixed with parched or fried braley-groats, it is a very rats-bane, & killeth both them & mice. The Gauls or Frenchmen when they ride a hunting into the chafe, vse to dip their arrow heads in the juice of Ellebore, & they haue this opinion, that the venison which they take will eat the tenderer; but then they cut away the flesh round about the wound made by the foresaid arrows. Furthermore it is said, That if white Ellebore be beaten to powder and strewed vpon milk, all the flies that tast thereof will die. To conclude, the said milke is good to rid away lice, nits, and such like vermin out of the head and other parts of the body.

CHAP. VI.

¶ Of the herbe Mithridation. Of Scordotis or Scordium. Of Polemonia, and Philetaria, otherwise called Chiliodynama. Of Eupatorie or Agrimonia. Of great Centaury, otherwise named Chironia. Of the little Centaury, named also Libadion and Fel terra. Of Triorchies : and the medicinable vertues vpon these Simples depending.

C Raterus hath ascribed the inuention of one herb to K. Mithridates himselfe, called after his name Mithridation : this plant putteth forth no more than two leaues, and those directly and immediatly from the root, resembling the leaues of Branc. vñ: there riseth vp a stem between them both in the mids, carrying an incarnat floure in the head like a rose.

Pompeius Lenens (who by the commandement of Pompey the Great translated into Latine the Physick notes and receipts of K. Mithridates) saith moreover, that the said prince found out another herb named Scordotis or Scordium; and that among other his writings hee met with the description of the said herb, set down vnder the kings own hand in this manner; namely, That it grew a cubit high, with a main stem four-square, and the same full of branches garnished with downy or furred leaues, indented and cut like to those of the oke. This herb is found ordinarily growing within the region of Pontus, in battle and moist champian grounds, and in taste is very bitter. There is another kind of Scordium, with larger and broader leaues, and like it is vnto wild Minth or Calamint: both the one & the other be of great vse in Physicke, either by themselves alone, or els put into opiats and antidots among other ingredients.

Touching * Polemonia, which others call Philetaria, it tooke the name vpon occasion of the strife and controuersie between certaine princes which debated about the first inuention thereof. The Cappadocians know it by the name Chiliodynama, i. as one would say, endued with a thousand vertues. This plant hath a thicke and grosse root, but smal & slender branches, from the tops whereof there hang down certaine berries in tufts and clusters, inclosing within them black seed: in all other respects it resembles rue, & groweth commonly vpon mountains.

As for Agrimony, called otherwise Eupatoria, it hath gotten credit & reputation by a * king, as it may appeare by the name. The stalk or stem of this herb is of a woody substance, blackish in colour, hairy, and of a cubit in height, or rather more. The leaues grow disposed and distant by certaine spaces asunder, much like vnto those of cinquefoile or hempe, snipped & cut about the edges ordinarily in five parts, the same are of a blackish or dark green, and full of a kiade of plume or downe. The root is superfluous for any operation that it hath in Physick : the seed of this herb drunk in wine, is a singular remedy for the dysentery or bloody flux.

The greater * Centaury is that famous herbe wherewith Chiron the Centaure (as the report goeth) was cured, at what time as hauing entertained Hercules in his cabin, hee would needs be handling & tempering with the weapons of his said guest, so long vntill one of his arrows light vpon his foot and wounded him dangerously: wherupon some there be who name it Chironia. The leaues grow large, broad, and long, indented or cut rather, like a saw round about the edges: neare vnto the root they come vp very thick : the stems run vp three cubits high, full of knots and joints all the way: knotted in the top like vnto Poppie heads: the root is of a mighty bignesse, inclining to a red colour, howbeit tender and easie to break or knap in sunder : two cubits it beareth in length, full of a liquid juice : bitter in taste, and yet sweet withal: it loneth to grow vpon banks and pretty hills, where the ground is fat and battle. The best Centaury of this greater kinde, cometh out of Arcadie, Elis, Messenia, Pholoe, and mount Lycæus : and yet there is good found vpon the Alpes, and in many other places. Some there be, who out of this plant draw

* Of mshuas, which signifies, war, or debate.

* Eupator.

Rha poutick.

A draw a juice in manner of Lycium. Of such efficacy it is to incarnat wounds, that (by report) if it be put into the pot to seeth among many gobbets or pieces of flesh, it will cause them to grow together and vnite. The root only is to be giuen inwardly, and namely in drinke, to the weight of two drams, in such cases as I will shew hereafter: with this charge, That if the Patient haue an ague hanging vpon him, it be stamped and taken in water: others may drinke it well enough in wine. Also the juice drawn forth of it when it is boiled, is good for the diseases or rot of sheep.

Another Centaury there is, surnamed also in Greeke Lepton (i. Small) for that it hath little leaues in comparision of the other : some name it Libadion, for that it loneth to grow neere to springs or fountains : it is somewhat like to Origan, save that the leaues be narrower and longer : the stalk is cornered, rising vp to a smal height, to wit, a hand-breadth or a span at most: the same also putteth forth little branches : the floure hath some resemblance of the * red-Rose of singular operation. This herb would be gathered in Autumne, when it is fresh, full of leaues, and floures, for then it yeeldeth best juice. Some take the stalks and branches, shred them smal, let them lie infused in water 18 daies, and then presse forth the juice. This is that * Centaury, which we here in Italy call Fel Terra, i. the Gal of the earth, by reason of the exceeding bitterness which it hath: the Gauls terme it Exacos, because if it be drunk it sendeth downward by feege out of the body, any hurtfull poison whatsoever.

There is a third Centaury named Centauris, knowne by the addition Triorchies : who soeuer cometh to cut this herb, he quits himselfe well and escapeth faire, if he wound not himselfe. This plant yeeldeth forth a certaine red juice like vnto blood. Theophrastus hath deliuered in his history of Plants, that the hawkes * Triorchides protect and defend this herbe, & are ready to encounter and fight with them that come to gather it; wherupon it took the foresaid name Triorchis. But many ignorant and vnskillfull persons there be, who write confusedly of all these Centauries, and attribute this last property and name, to the first Centaury the great.

CHAP. VII.

¶ Of Clymenos, Gentian, Lyfimachia, Parthenis or Artemisia, Ambrosia, Nymphaea, Heraclum, and Euphorbium, with their operations in Physicke.

D The herb Clymenos beareth the name of K. Clymenus, the first inuenter and finder out thereof. Leased it is like vnto Ivie, full of branches : the stalkes or stems be hollow and empty within, diuided by joints and partitions: of a strong and vnpleasant smell : the seed resembleth the grains or berries of Ivie ; and it taketh pleasure to grow in wilde woods and among mountains. As touching the operations which it hath, & namely what diseases it cureth being taken in drinke, I will shew hereafter : mean while, I will not put off any longer, but aduertise the Reader, euen in this place, That this herb as it doth good one way, so it hurteth another ; for if they be men that drinke it, wel may it cure them of the maladies for which it is giuen, but surely it killeth their naturall seed and disableth them for getting children, so long as they vse it. The Grecian writers described it to be like in leaf vnto Plantain : in stem four square, bringeth forth certain little cods full of seed, infolded and interlaced one within another after the manner of the tufted and curled haire about the Pourcuttle fishes called Polypi. But be it what it will, the juice of the herb is refrigeratiue, and of great vse in Physicke.

As for the herb Gentian, we must acknowledge Gentium king of the Illyrians for the Authour and patron thereof, for he brought it first into name & credit: and howsoeuer it grow in all places, yet the best is that which is found in Illyricum or Sclauonia. The leaues come neare in fashion and forme to those of the Ash tree, but that they be small in manner of Lettuce : the stem is tender, of a thumb thickness, hollow as a kex and void within : leaved here and there with certain spaces betweene, growing vp other while 3 cubits high. The root is pliable and will winde euery way, somewhat blacke or dusky, without any smell at all : it groweth in great plenty vpon waterish hillocks that lie at the foot of great mountains, such as the Alps be. The juice of the herb is medicinable, like as the root it selfe also, which is very hot of nature and not to be giuen in drinke to women with childe.

Lyfimachia, the herbe so much commended by Erasistratus, beareth the name of king Lyfimachus,

* Ichnidis.

* Our Centaury.

Our Buzzards (as I say) thinketh)

machus, who first gaue light of the vertues that it hath: greene leaues it beareth like vnto those of the willow: the floures be purple: giuen much it is to branch from the root, and those stalkes grow vpright: a * sharp smell it carrieth with it, and delighteth to liue in watery places. Of so effectuell vertue it is, that if it be laid vpon the yoke of two beasts which will not draw gently together, it staith their strife and maketh them agree well enough.

Not men only and great kings, but women also and queens haue affected this kind of glory, To giue names vnto herbes. Thus queen *Artemisia* wife to *Mausolus* king of Caria, eternized her owne name by adopting (as it were) the herb Mugwort to her selfe, calling it *Artemisia*, where-as before, it was named *Parthemis*. Some there be who attribute this denomination vnto *Diana* (called in Greek *Artemis* Ilihya) because it is of speciall operation to cure the maladies incident to women. It brancheth and busheth thick much like to wormwood, but that the leaues be bigger, far and wel liking withal. Of this Mugwort there be two kinds: the one carrieth broad leaues, the other is tender and the leaues smaller: this grows nowhere but along the sea coasts. There be writers who call by this name *Artemisia*, another herb growing in the midland parts of the main and far from the sea, with one simple stem, bearing very small leaues and plentie of floures, which commonly break forth and blow when grapes begin to ripen, and those cast no vnpleasant smel, which herb some thereupon name * *Botrys*, others *Ambrosia*: and of this kind there is great store in *Cappadocia*.

* *Nenuphar* is called in Greeke *Nymphaea*, the originall of which herb and name also, arose by occasion of a certain maiden Nymph or yong lady, who died for ieiouise that she had conceived of prince *Hercules* whom she loued: and therefore by some it is named also *Hieraclion*, of others *Rhopalos*, for the resemblance that the root hath to a club or mace. But to come againe to our first name *Nymphaea*; this quality it hath alluding and respectiue thereunto, That whoeuer do take it in drink, shal for 12 daies after find no prick of the flesh, no disposition (I say) to the act of venery or company of women, as being depriued for that time of all naturall feed. The best *Nemphar* or *Nymphaea*, is found in the lake *Orchomenus*, and about the plain of *Marrathon*. The people of *Boeotia*, who also vse to eat the seed thereof, commonly call it *Madon*. It taketh great contentment to grow in waters: the leaues float vpon the face of the water, be broad and large, while others put forth from the root. The floure resembleth the *Lillie*, which when it is once shed, there be certain knobs remaining like vnto the bolls or heads of *Poppie*. The proper season to cut the stems and heads of this plant, is in Autumne. The root is blacke, which being gathered and dried in the Sunne, is counted a soveraigne remedy for those that be vexed with the flux or fretting of the belly. A second * *Nemphar* or *Nymphaea* there is, growing in *Theffaly*, within the riuer *Peneus*, with a white root, but a yellow floure in the head about the bignesse of a rose.

No longer ago than in our forefathers daies, *Iuba* king of *Mauritania*, found out the herb *Euphorbia*, which he so called after the name of his own Physitian *Euphorbus*, brother to that learned *Musa* Physitian to *Augustus Caesar*, who saued the life of the said Emperor, as heretofore I haue declared. These two brethren Physitians, ioined together in counsell, and gaue direction for to wash the body all ouer in much cold water, after the hot baine or stouue, thereby to knit and bind the pores of the skin: for before their time, the maner was to bathe in hot water only, as we may see plainly in the Poet *Homer*. But now to return vnto our herb *Euphorbia*, the foresaid *K. Iuba* wrote one entire booke (at this day extant) wherein he doth nothing els but expressly set forth the commendable vertues and properties of this one herb. He found the same first vpon the mountain *Atlas*, where it was to be seen (saith he) bearing leaues resembling *Brace-vrins*: so strong and forcible it is, that those who receiue the juice or liquor issuing from it, must stand a good way off; for the manner is to launce or wound it first, and then presently to retire backe, and so at the end of a long pole to put vnder it a pail or trey made of kids or goats leather for a receptory; into which there runneth forth out of the plant, a white liquor like vnto milke: which when it is dried and growne together, resembleth in shew a lump or masse of *Frankincense*. They that haue the gathering of this juice called *Euphorbium*, find this benefit thereby, M That they see more clearly than they did before: an excellent remedy this is against the venom of serpents, for what part soeuer is stung or wounded by them, make a light incision vpon the

* crown [of the head] and apply thereto this medicinable liquor, it will surely cure it. But in that country, the *Getulians* (who commonly do gather *Euphorbium*, for that they border vpon the

* Or the vpper part of the hurt place.

* *Odore acri*: Surely Willow or *Lyfmechia* hath a kind of sharp coole fen: not vnpleasant: al though *P. iay* vs the word (*acri*) for hot and biting in other places. Hereupon it might well bee called *donuaga*, (*i.*) I. nettles, and not of *K. Lyfmechia*.

* Or rather *Botrys* (i. oke of *K. of filem*) is of some called *Artemisia*, of others *Ambrosia*, as *Plin.* *Dioscorid.* * *Water-lilly*.

A mount *Atlas* sophisticate it with goats milke. Howbeit, fire will soon dete & this imposture of theirs, for that which is not right but corrupt, when it burneth, doth yeeld a lothsome fume and stinking sent. The juice or liquor which in France is drawn out the herb *Chamaelea* (the same that beareth the red grain, named by the Latines *Coccum*) commeth far short of this *Euphorbium*. The same being grown thick and hard, if a man break it, resembleth gum *Ammoniacke*. Taft it neuer so little at the tongues end, it setteth all the mouth on a fire, and so continueth it a long time hot, but more by fits, vntill in the end it parcheth and drieth the chawes and throat al-

CHAP. VIII.

B ¶ Of *Plantain*, *Buglosse*, and *Borrage*. Of *Cynoglossa* or *Hounds tongue*. Of *Buphthalmus*, *i.* *Oxe cie*, or *Many-weed*. Of *Scythica*, *Hippice*, and *Ischamon*. Of *Veronica* and *Cantabrica*. Of * *Confiligo* and *Hiberis*. Of *Celandine* the great, *Canaria* and *Elaphoboscos*. Of *Distannum*, *Aristolochie* or *Herrwort*: That fish are delighted so much therewith, that they will make hast vnto it, and be soon taken. Also the medicinable vertues of those herbes above named.

T *Hemison*, a famous Physitian, set forth a whole booke of the herbe *Way-bred* or *Plantaine*, wherein he highly praiseth it, and challengeth to himselfe the honor of first finding it out, notwithstanding it be a triuiall and common herb, trodden vnder euery mans foot. Two kinds of it be found: the one which is the lesser, hath also narrower leaues, and inclining more to a blackish green, resembling for all the world theepe * or lambs tongues, the stalke is cornered bending downward to the ground, & it growes ordinarily in medows. The other is greater, with leaues enclosed (as it were) within certain ribs resembling the sides of our body, which being in number seuen, gaue occasion to some herbarists for to call it *Heptapleuron*, as a man would say, the seuen ribbed herb. The stem of this *Plantain* riseth to a cubit in height, much like to that of the *Naphew*. That which groweth in moist and watery places, is of greater vertue than the other. Of wonderful power and efficacy it is by the attringent quality that it hath, for to dry and condensate any part of the body, and serueth many times in stead of a cautery or searing yron. And there is nothing in the world comparable vnto it, in staying of fluxes and distillations, which the *Creeks* call *Rheumatismes*.

To *Plantain* may be ioined the herb * *Buglossos*, so called, for that the leafe is like an *Oxe* tongue. This herb hath one speciall property about the rest, that if it be put into a cup of wine it cheareth the heart, and maketh them that drink it, pleasant and merry; whereupon it is called *Euphrosynon*.

Vnto this for affinity of name, it were good to annex *Cynoglossos*, *i.* *Hounds tongue*, for the resemblance that the leaues haue to a dogs tongue: a proper herb for vinet-works and knots in gardens. It is commonly said, That the root of that *Cynoglossos* which putteth forth 3 stems or stalks, and those bearing seed, if it be giuen to drink, cureth tertian agues: but the root of that which hath foure, is as good for the *Quartains*. Another * *Cynoglossos* there is like to it, which carrieth small burs: the root whereof being drunke in water, is a singular counterpoison against the venom of toads and serpents.

E An herb there is with flours like vnto *oxe cie*s, whereupon it took the name in Greek * *Buphthalmos*: the leaues resemble *Fennel*: & it groweth about town sides: it shutteth forth stalkes from the root plentifully, which being boiled, are good to be eaten. Some there be who call it *Cachla*. This herb made into a salve with wax, resolueth all * *schirrous* and hard swellings.

Other plants there be, which beare the names not of men but of whole nations, which first found them and their vertues out. And to begin withall, beholden we are to *Scythia* for that which is called *Scythica*. It groweth notwithstanding in *Boeotia*, and is exceeding sweet in taft. Also there is another of that name, singular good for the cramps, called by the *Greeks* *Spasmata*. An excellent property it hath besides, for that whoeuer holds it in their mouth, shall for the time be neither hungry nor thirsty. Of the same operation there is another herb among the *Scythians* or *Tartars*, called * *Hippice*, because it workes the like effect in horses, keeping them from hunger and thirst. And if it be true that is reported, the *Scythians* with these herbes will endure without meat or drink for twelue daies together.

Touching the herbe *Ischamon*, the *Thracians* first found out the rare vertue that it hath in staunching

Scotterwoort, or Boats foot, as some think.

Whereupon it seemeth to be called in Greeke *distannum*.

Our Borrage.

This is our common Hound-tongue with little burs.

Some call them Moons, *Schirromata*, otherwise *Stomata*, which be bunches or swellings in the flesh full of a greasie matter.

* *Theophrastus* writeth the like of the sweet root or *Liquorice* and *Hippice*, that is, cheefe made of mares milke, but not of any herb *Hippice*.

stanching blood, according as the very name implies. For (say they) it will stop the flux of blood running and gushing out of a veine not only opened, but also if it were cut through. It coucheth and creepeth low by the ground, and is like unto Millet, but that the leaues be rough and hairy. The manner is to stutte the nothrials therewith for to stay the bleeding at nose. And that which groweth in Italy stancheth blood, if it be but hanged about the neck, or tied to any part of the body.

The people in Spaine named Vetroneſe, were the firſt authors of that herb, which is called in France * Vetronica, in Italy Serratula, and by the Greeks Ceſtron or Psychotrophon: Surely an excellent herb this is, and above all other ſimples moſt worthy of praife. It commeth forth of the ground, and riſeth vp with a cornered ſtalke, to the height of two cubits, ſpreading from the very root leaues of the bigneſſe of Sorrell, cut in the edges, or toothed in manner of a ſaw, with floures of a purple color growing in a ſpike, & ſeed correſpondent thereto. The leaues dried and brought into powder, be good for very many uſes. There is a wine and vinegar made or condite rather with Betony, ſoueraign for to ſtrengthen the ſtomack, and clarify the ſieſight. This glorious prerogatiue hath Betony, that look about what houſe ſoener it is ſet or ſowed, the ſame is thought to be in the protection of the gods, and ſafe enough for committing any offence, which may deferue their vengeance and need any expiation or propitiatory ſacrifice.

In the same Spain groweth * Cantabrica, lately found by the people Cantabri, and no longer since than in the daies of *Augustus Caesar*. This herb is to be seen euery where, rising vp with a benty or rufhy stalk a foot high, vpon which you may behold small long floures, like to cups or beakers, wherein lie enclosed very small seeds. Certes, to speake the truth of Spain, it hath bin alwaies a nation curious in seeking after simples. And euen at this day in their great feasts where they meet to make merry Sans-nombre, they haue a certain wassell or Bragar, which goeth round about the table, made of honied wine or sweet mead, with a hundred distinct herbs in it: and they are persuaded that it is the most pleasant and wholesomest drinke that can be deuised: yet there is not one amongst them all who knoweth precisely what speciall herbs there be in all that number, in this only they be all perfect, that there go a hundred severall kinds thereto, according as the name doth import.

In our age we remember well, that therewas an herō discovered in the Marſians country: and yet it groweth alſo amongſt the people named *Æquiccol* e, neare vnto the borough *Nerueſia*, and they call it * *Conſiligo*: this is a ſoueraigne plant, as we ſhall ſhew hereafter in place conuenient, for thoſe that be ſo farre gone in a *Phthiſicke* or conſumption, as no man would hight their life and recovery.

Of late daies *Servilius Damocrates*, a famous practitioner in Physick, brought to light an herb which he termed *Hiberis*, a deuified and fained name for his own pleasure, and nothing significant, as may appeare by a certain * Poem that he made as touching the discovery of that herbe. It commeth vp most willingly about old tombes and sepulchres, decayed wals, and ruinaul buildings, in vntoiled and neglected places, and namely, common high waies. It beareth floures at all times, and is leaued like to Cresses: the maine italke is a cubit high, but the seed so fine and small, that hardly they can diserne it. The root also hath the very smell of Cresses: it serueth to many good purposes, but with most successe in Summer time, & neuer but when it is green and fresh gathered. Much ado and trouble there is about the punning and stamping of it. Being tempered and incorporate with a little hogs greafe, it is singular to be applied to the paine of the hucklebone called Sciatica, as also to the gout of any ioints whatsoeuer. If the patient be a man it must lie bound fast vnto the place four houres at the most: but women may abide it but half so long, provided alwaies, that presently vpon this medicine they go down into an hot bain, and after they haue bathed, annoint their bodies all ouer with wine and oile. Thus must the patient doe once every 20 daies, so long as there remaineth any grudging or minding of the forefaid pain. And surely in this sort it drieth vp and cureth all inward and secret rheums running neare vnto the bones. Howbeit, this caueat would be giuen, not to lay this plaster too in the very heart and fure of the pain or disease, but the time must be waited when the extremity is somewhat slackened and ouer past.

Moreover other living creatures also there be besides men, to which we are to attribute the
our Celendine: invention of herbs: as first and principally, the great * Celendine, called in Greek Chelidonia,
for that the old Swallows with the helpe of this hearb helpe their young ones to see again, yea
though

A though their eies were plucked out of their head, as some are of opinion. Of this herb there be two kinds: the greater, which putteth forth many stems, & those full of branches, beareth leaues like vnto the wild * Parsnep, but that they be larger. The herb it selfe groweth vp to the height of two cubits. The leaues be whitish or hoary, like as the whole plant is felical faue the floure, which is yellow. The whole herb yeeldeth a biting and fretting iuice, of the colour of Saffron: and it bringeth forth seed resembling that of Poppy. The lesse * Celendine is seen with leaues fashioned much after the Ivy, but that they be rounder. Both Celendines do floure in the spring about the time that the swallows come abroad and shew themselves vnto vs, and those floures begin to fade again vpon the departure of that bird from vs. The onely time to draw or presse their iuice from them, is whiles they be in the floure: which if it be put into a brazen pan, and seeth gently vpon hot embers or ashes only, together with the best Atticke honey, is a singular medicine to discusse and scatter the cloudy filus that dim the eie-sight. The said iuice alone without any other preparations, goeth to the making of many collyries or eyefalues, which be called Chelidonia, by reason of that ingredient.

Touching the Dogs gaffe Canaria, it took that name in Latin, because dogs use therewith to discharge their gorge & whet their stomackes when their appetite to meat is gone. A strange thing of these dogs we see them chew this herb in our sight ordinarily every day, yet so, as we neuer can tell which * herb it is that they have bitten: for we may perceiue it only when it is eaten down. But no maruel if this creature be so frightful as to concale from vs a purgatiue herb, considering a greater malice that he sheweth in another: for it is said, that if a dog be bitten by a serpent, he hath recourse by and by to a certaine herb that cureth him presently; but he will be sure that no man shall see him when he croppeth that herb.

Yet the poore hinds (simple and harmlesse creatures they) are not so coy and dainty of their knowledge, for they haue shewed vs the plant * Elaphoboscon, whereof I haue already written like as the herb * Sefelitalfo, which presently after they haue calued, they feed vpon in our sight, & make it not strange. Nay, they haue not thought much to impart to vs the vertue of the herb Diatamnus (as I haue partly declared heretofore) for we may euidently see them after they bee thor or wounded, to go forthwith vnto this hearb, and no sooner haue they eat of it, but immediately the arrows or darts wherewith they were hurt and sticking in them, fall out of their bodies. This plant is found growing no where but in the Island Candy. The branches be exceeding fine and slender: it resembbeth in some sort Penyrroial. At the tongues end hot it is and biting. And the leaues only are in vief: for * neither floure nor feed it hath, ne yet any stem or stalk. As for the root, as it is smal and little, so is it * needlesse for any good it doth in Physick: a rare plant this Diatamnus is, for euen in Candy, the naturall place therof, it grows not euery where, but within some small compasse of ground within that Isle, and there Goats haue a wonderful desire to be feeding vpon it. Mary in lieu of this true Diatamnus, there is a ballard kind found in many countries, called Pinguicula, which groweth in leafes like to those of the true Diatamnus, but

Henbane, stamped leaues and all, is singular to be taken in wine, especially against the sting G
of the Aspides.

But of all other herbs, there is none more honored among the Romans than * Hierobotane, called also otherwise in Greek Peristereon: which we in Latine name Verbenaca. This is that hearb, which (as I haue declared heretofore) our Embassadors vse to cary with them when they go to denounce war, and to giue defiance vnto our enemies. VVith this herbe the feastiuall table of * Iupiter is wont to be swept and clenfed with great solemnitie, our houses also be rubbed and hallowed, for to driue away ill spirits. And herof be two kinds. That which they take to be the female, is stored well with leaues, the male hath them growing but thin: yet both of them put forth many small and slender branches, commonly a cubit long, and cornered. The leaues be lesfer and narrower than those of the Oke, but deeper they be indented, and the partition wider: the floures be of a * gray colour, the root long and small. It groweth euery where vpon plains subiect vnto waters. Some writers make no distinction at all of male & female, but hold them all to be of one and the same kind, because they work the same effects. In France the Druides vse them both indifferently, in casting lots, telling fortunes, & foreshewing future events by way of prophesie. But the wise men or sages called Magi, ouerpasse themselves mightily in this herb, and shew their foolery and vanity without all fence and reason: They would beare vs in hand forsooth, that whosoever be rubbed all over the body therewith, shall obtaine whatsoeuer their heart desireth, be able to cure and driue away all manner of agues, reconcile them that be fallen out, make friendship between whom they list, and in one word, giue remedy to any disease whatsoeuer: they giue moreover expresse order, that it be gathered about the rising of the great dog- star, but so, as neither Sun nor Moon be at that time about the earth to see it; with this especial charge besides, that before they take vp the herbe, they bestow vpon the ground where it groweth, honey with the combs, in token of satisfaction and amends for the wrong and violence done in depriving her of so worthie an hearbe. They rest not so, but when these ceremonious circumstances be performed, they inioine them also who are to dig it vp, for to make a circle round about the place with some instrument of yron and then to draw and pluck it vp with the left hand in any wise & so to fling it aloft ouer their heads vp into the aire: which done, they appoint precisely that it be dried in the shade, leaues, stalkes, and roots, euery one apart by themselves. To conclude, they adde moreover and say, that if the hall or dining chamber be sprinkled with the water wherein Veruaine lay steeped, all that sit at the table shall be very pleasant, and make merrie more iocundly. VVell, to leaue these roies and fooleries, the truth is this, stamp and beat it, giue the juice or powder therof in wine, it is a good defenfatue against the poison of serpents.

An herb there is much resembling Mullen or Langwort, and indeed so like as oftentimes one is taken for the other, howbeit, the leaues be not altogether so white, and more little branches it putterth forth, bearing likewise a pale yellow floure: cast this herb or strew it in any place all the moths therabout will gather to it, whercupon at home they call it Blattaria.

The herbe Lemonium yeeldeth a white juice, much like vnto milke, which will harden and grow together in manner of a gum: and it groweth in moist places. The weight of one denarius giuen in wine, is a singular preseruatiue against the dangerous sting of serpents.

As for Cinque foile or five leaved grassie, there is not one but knoweth it: so common it is, and commendable besides for the * strawberries which it beareth. The Greeks call it Pentapetes, Chamæzelon, or Pentaphyllon: the Latines Quinquifolium. The root when it is new digged, looketh red: but as it beginneth to drie about ground, so it waxeth black, and becommeth also cornered. It tooke the common name both in Greeke and Latine, of the number of leaues which it beareth. This herb herein is of great affinitie with the vine, that they both bud, spring, leaue, and shed the same together. It is vsed also about purging & blessing of the house, against naughty spirits or enchantments.

As for Sparganium, an herb so called by the Greeks, the root thereof is good to be giuen in white wine against venomous serpents.

Of Carrots, Petronius Diodotus hath set downe 4 seueral kinds. But what need I to go through them all foure, seeing they may be reduced well enough into * twaine, and doe require no other distinctions. The best and most approued Carrots be those of Candy: the next to which in goodnesse come out of Achaia. But generally in what country soeuer they grow, the better be

A be such as come vp in the foundier and drier grounds. As touching the Candy Carot, it resembleth fennel, but that the leaues stand more vpon the white, they be smaller also and hairy with all. The stem groweth vpright a foot high, and hath a root odoriferous to smell vnto, and of a most pleasant tast: this ioieth in stony places exposed to the South quarter of the world. As for the other Carots of a wild nature, in what country grow they not? you shall finde them vpon earthie bankes and hils, you shall haue them about high waies, but neuer shall a man meet with them in a leane and hungry ground; they loue a battle and fat soile: their leaues come neare to the Coriander: their stem ariseth to a cubit heighth, bearing round heads, three ordinarily, and otherwhiles more: the root is of a woody substance, and being once dried, it serueth to no purpose. The seed of this kind is like vnto Cumin; but of the former, to Millet grain, white, quick, and sharp, and they be all odoriferous and hot in the mouth. The seed of the second is more agree and biting than the former, and therefore ought to be taken in lesse quantitie. As for the third kind (it we list to make so many) it is much like to the wild Parsnep, called in Greek Staphylinos, and in Latine Pastinaca Erratica: the same beareth a seed somewhat long in form, and a sweet root. All the sort of these Dauci or Carots, are safe enough from the bit of four-footed beasts both winter & summer, vnlesse it be after they haue cast their abortiue fruit before time [for then they seek therto to be clenfed of their gleane.] Of all Carots, the seeds be vsed only: but that of Candy affordeth the root also, which is sweet: but both the seed of the one sort and the root of the other, be most appropria remedies against serpents: a dram weight in wine is a sufficient dose at a time: which also may be giuen in a drench to foure-footed beasts that be stung by them.

C Touching the herb Therionarca (I mean not that which the Magitians vse) it groweth also in this part of the world here with vs in Italy: many branches it putteth forth, and springs thick with diuers shoots from the root: the leaues be of a light green, and the floure of a red-rose colour: it killeth serpents outright; besides, it hath this property, That if it be brought neere vnto any wild beast whatsoeuer, it benummeth their senses [whereupon it took that name.]

Perfolata, which the Greek writers call * Arcion, there is not one but knoweth: large leaues it hath, and bigger than the very Gourds, more hairy, blacker also and thicker; a white root and a great: this root taken in wine to the weight of two deniers Roman, is good likewise against the venom of serpents. In like manner, the root of Cyclaminus or Sow-bread is as effectual against them all: leaues it hath somewhat resembling those of Ivy, but that they be of a more duskyish and sad greene, smaller also and without corners, wherein a man may perceiue certaine whitish specks. The stem is little, and hollow within: the flours of a purple colour; the root broad (so as a man would take it to be a Turnep) and covered ouer with a black rind: it groweth in shadowy places. Our countrymen here in Italy call it in Latine Tuber terra, that is to say, The knur or bunch of the ground. Sowne and planted it would be in euery garden about an house, if so be it be true that is reported of it; namely, that whersoever it groweth, it is as good as a countercharm against all witchcraft and forceries: which kind of defenfatue is called properly A-muletum. Moreover, this root (they say) if it be put into a cup of wine, turneth the brain presently, and maketh as many drunk as drink therof. For the better keeping and preseruing of this root, it must be ordered after the manner of Squilla or Sea-onion roots, (i.) cut into thinne slices or roundles, then dried, and so laid vp: the same also is vsually sodden to the consistence or thicknesse of hony. As good as this root is in those former respects, yet it is not without some venomous quality, for it is commonly said, That if a woman with child chance to step ouer it, shee will fall presently to labour before her time, and lose the fruit of her wombe. A second kind of Cyclaminus or Swine-bread I finde, surnamed by the Greekes * Cissanthemos, growing with

D and sad greene, smaller also and without corners, wherein a man may perceiue certaine whitish specks. The stem is little, and hollow within: the flours of a purple colour; the root broad (so as a man would take it to be a Turnep) and covered ouer with a black rind: it groweth in shadowy places. Our countrymen here in Italy call it in Latine Tuber terra, that is to say, The knur or bunch of the ground. Sowne and planted it would be in euery garden about an house, if so be it be true that is reported of it; namely, that whersoever it groweth, it is as good as a countercharm against all witchcraft and forceries: which kind of defenfatue is called properly A-muletum. Moreover, this root (they say) if it be put into a cup of wine, turneth the brain presently, and maketh as many drunk as drink therof. For the better keeping and preseruing of this root, it must be ordered after the manner of Squilla or Sea-onion roots, (i.) cut into thinne slices or roundles, then dried, and so laid vp: the same also is vsually sodden to the consistence or thicknesse of hony. As good as this root is in those former respects, yet it is not without some venomous quality, for it is commonly said, That if a woman with child chance to step ouer it, shee will fall presently to labour before her time, and lose the fruit of her wombe. A second kind of Cyclaminus or Swine-bread I finde, surnamed by the Greekes * Cissanthemos, growing with stems full of knots or joints, hollow within and good for nothing; far different from the former, winding and clasping about trees; bearing berries much like to those of Ivy, but they are soft; a white floure faire and louely to see too, but a needlesse root for any goodnesse in it: the berries that it beareth be only in vse, and those are of a sharp and biting tast, & yet they be viscous and clammy to the tongue: these being dried in the shadow and stamped, are afterwards reduced into certain bals or trofches. My self haue seen a third kind also of Cyclaminus, carrying the name besides of Chamæcissos, which brought forth but one only leafe: the root was much forked & diuided into branches, wherewith folk vsed to kil fishes. But among al other herbs of name, Peucedanum is much talked of and commended: principally, that which groweth in Arcadie: next

* Some take it to be the Clotbury, or Bitter-bur.

* Cicuthemos, Distill. id est, i. caud like to ivy.

* Pliny herein er. th. glosely. Indica the leaues of Cinque foile are much like to the Strawberry: ate: but as the one hath no true or berry at all, so the other (to wit the Strawberry) puts forth but three leaues. * The same and the wilde.

to it, most account is made of that in Samothrace: a slender stalk it carrieth and a long, resembling the stem of Fennell: neere vnto the ground it is replenished well with leaues: the root is black, thick, full of sap, and of a strong and vnpleasant smell: it delighteth to come vp and grow among shady mountains. The proper time to dig it out of the ground, is in the later end of Autumne: the tenderest roots and those that run deepest downe into the earth, are most commendable. The manner is to cut these roots ouerthwart into certaine cantels or pieces of foure fingers in length, with kniues made of bone, whereout there issueth a iuice which ought to be dried & kept in the shade: but the party who hath the cutting of them, had need first to annoint his head all ouer and his nostrills with oile of rose, for feare of the gidd, and least he should fall into a dizzinesse or swimming of the braine. There is another iuice or liquor found in this plant lying fast within the stems thereof, which they yeeld forth after incision made in them. The best iuice is knowne by these marks, It carrieth the consistence of honey, the colour is red, the smell strong, and yet pleasant, and in the mouth it is very hot and stinging. Much vse there is of it in many medicines, as also of the root and decoction thereof: but the iuice is of most operation, which being dissolved with bitter almonds or rue, people vse to drink against the poison of serpents; & in case the body be annointed all ouer with oile, it preferueth them safe against their stings.

CHAP. X.

¶ Of ground Elder or Wallwort. Of Mullen or Taper wort. Of the Aconit called Thelyphonus. Of remedies against the pricke of Scorpions, the venome of Hedge-toads, the biting of mad Dogs: and generally against all poisons.

The smoke or perfume also of VVallwort (a common herb and knowne to euery man) cha-feth and putteth to flight any serpents. The iuice of * Polemonia, is a proper defensatiue especially against scorpions, if one haue it tied about him or hanging at his neck: likewise it resisteth the pricke of the spiders Phalangia, and any other of these venomous vermins of the smaller sort. Aristolochia hath a singular vertue contrary vnto serpents: so hath Agaricke, if foure oboli thereof be drunke in as many cyaths of some artificiall or compound aromatized wine. Vervaine is a soueraigne herb also against the venomous spider Phalangium, being taken in wine or oxycrat, i. vineger and water: so is Cinquefoile, and the yellow Carrot.

That herb which the Latines call Verbascum, i. Lungwort or Hightaper, is named in Greek Phlomos. Two special kinds there be of it: the one is whiter, which you must take for the male; the other black, & that may go for the female. There is a third sort also, but it is found nowhere but in the wild woods. The leaues of all the former, be broader than those of the Colewort, and hairy withal: they beare a main vpriight stem, a cubit in height with the vantage: the seed is black and of no vse in Physicke: a single root they haue, of a finger thicknes. These grow also vpon plains and champion grounds. The wild kinde beareth leaues resembling sauge: the branches be of a woody substance, & the same grow high. There be moreover of this kind two other herbs named * Phlomidis, both of them hairy, their leaues be round, and they grow but low. A third sort there is be sides, named by some Lychnitis, and by others Thryallis: it sheweth 3 leaues or foure at the most, and those be thick & fat, good to make wyks or matches for lights. It is said, that if figs be kept in the leaues of that which I named the female, they will not rot. To distinguish these herbs into feuerall kinds, is a needlesse peece of work, considering they agree all in the same effects: their root together with rue, is to be drunk in water against the poyson of scorpions: true it is, that the drinke is very bitter, but the effect that it worketh maketh amends.

There is an herb called by some * Thelyphoton, by others Scorpion, for the resemblance that the root hath to the Scorpion; and yet if Scorpions be but touched therewith, they will die thereupon: no maruell therefore if there be an ordinary drinke made of it against their poison: [and here commeth to my mind that which I haue heard, namely, that if a dead scorpion be rubbed with the white Ellebore root, it wil reuiue and quicken again.] The said Thelyphoton hath such a spightful nature against the four-footed beasts [of the female sex] that if the root be laid to their shap or naturall place, it killeth them: and if the leafe, which is like vnto the Cyclamin or Sowbread leafe about named, be applied in that manner, they will not liue one day to an end. This herb is parted and diuided into knots or joints, taking pleasure to grow in coole and shady places. To conclude and knit vp these remedies against scorpions, the iuice of Betonic, of

A of Plantaine likewise, is a singular remedie for their poison.

Moreover, Frogs (such especially as keep in bushes and hedges, and be called in Latine Rubetrix, i. toads) are not without their venom: I my self haue seen these vaunting Montebanks calling themselves Pfylli, as comming from the race of those people Pfylli who feared no kind of poison; I haue seen them (I say) in a brauery (because they would seem to surpass all others of that profession) to eat those toads baked red hot between 2 platters; but what became of them? they caught their bane by it, and died more suddenly than if they had bin stung by the Aspis: but what is the help for this rank poison? surely the herb * Phrynon drunk in wine. Some call it Neuras, others Poterion: pretty flours it beareth: the roots be many in number, full of strings like vnto sinews, and the same of a sweet & pleasant sent. Likewise Alifura is counted another remedy in this case: an herb it is, called by some Damoforium, by others Liron: the leaues might be taken for Planta in, but that they be narrower, more jagged and plaited, bending also toward the ground; for otherwise ribbed they be and full of veins, as like as may be to Plantain. As for the stalk, it is likewise one and no more, plain and slender, of a cubit in height, in the head whereof it hath knobs: roots growing many and thick together, and those but small, like vnto those of the blacke Ellebore, but they be hot and biting, of a sweet and odoriferous smell, and of a fatty substance withal: it groweth ordinarily in watery and moist places. And yet there is a second kind of it which commeth vp in woods, of a more dusky and blacker colour than the former, bearing bigger leaues: the root of both is of singular operation against the venomous frogs or toads about said: also against the sea-hare, if it be taken in wine to the weight of one dram. And

C since we haue mentioned the sea-hares, take this withall, That Cyclaminos also is soueraigne against their venom. Moreover, a mad dog letteth in a dangerous poison by the wound that his rooth maketh, against which there is not a better thing than dog-rose of the Eglantine called Cynorrhodon, as I haue before declared. Plantain is a singular herb against the biting of any venomous beast whatsoever, whether it be taken inwardly in drink, or outwardly applied. Betonic is likewise good therefore if it be drunk in old wine. Veruain, which the Greeks call Peristereos, is an herb bearing one main stalk of a good height, furnished well with leaues, spreading forth toward the head into other branches, much sought to by doves and pigeons, whereupon it took the foresaid name Peristereos. They say, whofoeuer carry this herb about them, there dare not a dog bark at them. Thus much as touching the dangers proceeding from venomous beasts.

D What remaineth now but in the next place, to treat as well of such forceries and maleficall poisons, as men haue deuised and practised to the mischief of their own kind, as of their remedies where in the first place there presenteth it self vnto vs that noble herb Moly, so much commended by the Poet Homer, as a soueraigne preferuatiue not only against all those wicked inventions, but also against the secret and diuinish practises; to wit, charmes and inchantments, wrought by Art magick and witchcraft. Next vnto which, the herbs * Mithridation, Scordotis, and Centaury: also the seed of Betony drunk in honied wine or sweet cuit: the powder also of the dried herb it selfe, to the weight of one dram taken in 4 cyaths of old wine, doth expell out of the body & euacuat by the seege any poison whatsoever; but the patient must be forced to vomit vp the first potion, and then to recharge again & take another draught of the foresaid medicine. And verily it is a common speech, That whofoeuer vse to tast euery day a little of Betony, shall neuer catch harm by any poisoned cup. If a man or woman chance to haue drunk down any poison, the root of Aristolochia is a present remedy, used in that order as I haue prescribed before in case of stinging by venomous serpents. The like effect hath the iuice of Cinquefoile. Semblably Agarick, if it be taken to the weight of one denier Roman in three cyaths of honied water or mead, is of the same operation; with this charge, That the party do lay vp his stomach or cast before. There is an herb called Calves-snout, in Greeke Antirrhinon or Anarrhinon, a kind of wild Lichnis like vnto Line or flax, with little or no root at all, carying a floure resembling the Hyacinth or Crowtoes, and the seed much like a calves snout or muzzle: the Magicians haue a great opinion of this herb, That whofoeuer be rubbed all ouer with it, or annointed

F thoroughly with the iuice thereof, shall looke more beautifull, louely, and amiable: and whofoeuer weareth it in a bracelet about the wrest or arme, shall take no harme by charme, forcerie, witchcraft, or poison. The like conceit they haue of another herb called * Euploea; and they affirme, That if any man or woman be annointed therewith, they shall grow in great credit and reputation with the people. Moreover, they say, that the herb Artemisia or Mugwort will pre-

* Some take it for Rata may a-lu, or Salvia vltia, a kind of Saxi-rag, or rather Maiden-haire.

* Whereof he writeth in the beginning of the sixt chapter of this booke.

* Euploea indeed signifieth in Homer, a bon-voiage, or prosperous nauigation: but what is that to this place? No doubt I shoud haue read in Theophrastus, which is no heauy, but the happinesse of a good name among men, whereof I haue speake here, & which Theophrastus attributeth to Antirrhinon, as of the effects of that herb. But I say the fault (I pray you) as well here as elsewhere, vnto Plinies Anguills or Rea-ders, who either read wrong, or pronounced not their words distinctly and precisely vnto

* Sauge de Bois.

* Some take these for the Cowslip and Primrose.

* Aconitum Pardalianchet, Libard-baine.

all those who haue it about them, from witch-craft, forcerie, and poison, from danger by ver-
mous beasts, yea and from the hurtfull and maligne aspect of the very Sun. The same, if it be ta-
ken in wine, helpeth and saueth those that are poisoned with Opium: being either drunke, or
worn about the neck, or but tied to any part of the body, it hath a peculiar vertue against the ve-
nom of todes. There is an herb of the bulbous or onion-root kind named * Pericarpum: where-
of the two sorts, the one hath a red bark or rind [about the roots,] the other a black, and is like vn-
to the Poppy; of greater operation this is than the former, but both of them be very hot: which
is the reason, they serue to good purpose for to be giuen vnto them that haue drunk Hemlock: a-
gainst which venomous herb, Frankincense, and Panaces (especially that which they call Chi-
ronium) be counted singular: and this Panaces also last named, is an excellent antidote for them
that are poisoned with venomous Mushrooms.

CHAP. XI.

¶ Proper receipts and remedies for the diseases of the head.

Since wee are waded so far into the deep secrets of Physick, it will not be amisse to proceed
forward and to set downe many good medicines for all the maladies incident either in ge-
nerall to the whole body, or particularly to euery speciall part and member thereof, begin-
ning first at the head.

There is an vnscemely accident happening otherwhiles to the head, and disgraceth it much,
called * Alopecia, when as the haire vnnaturally falleth off. The cure of this inconuenience, is
to make a liniment with the roots of Nymphaea and Hemlocke stamped together, and therewith
to annoint the bald and naked places, for it will cause the haire to come vp againe & grow thick.
Polytricha & Callitrica [both capillare herbs] differ one from another, for that Polytricha hath
white benty filaments or threds, the leaues be also more in number & greater with all: besides,
the very plant it selfe spreadeth and brancheth more than the other: this herb is singular to fa-
sten the haire of the head at the root, and to make it bush and grow thick, being otherwise ready
to shed. In like manner, there is an herb called in Latine * Lingulaca, which loneth to grow a-
bout springs or fountains, & is singular for the same imperfection of shedding haire, if the root
together with the leafe burnt and beaten to powder, be incorporate with the greafe of a blacke
swine (but in any wise she must be a yong gilt that neuer farrowed or had pigs) and so brought
into a liniment, and the head rubbed and annointed therewith: with this charge besides, That af-
ter the annointing, the Patient sit bare headed in the sun; for that helps forward the cure verie
much. And in the same case there is the likewise of the Cyclamine or Sowbread root.

Touching the scurfie or brannie scales called Dandruffe, the root of Veratrum or Ellebore,
sodden either in oile or water, maketh a most excellent medicine to rid it away, & to cleanse the
head thereof.

As for head-ache, the roots of all the kinds of Panaces, stamped and tempered with oile, doe
cure the same: so doth Aristolochia and Iberis, if they be applied in manner of a frontall and
bound to the forehead, the space of an houre or longer if the Patient can abide it, so that a bath
be vsed presently vpon it. The yellow carot also called in Latine Daucus, is a good remedy for
the pain in the head. Moreover, the foresaid herb or root Cyclaminos, if it be mixed with hony
and put vp as an erhin or nasal into the nostrills, purgeth the brain, & the same brought into an
ointment, beaeth the scalls and sores in the head. Of the like operation is Veruain, which they
call in Greek Peristeros. The wild Caraway, named Cacalia or Leontine, beareth certain grains
resembling smal seed pearls, which a man shal see hanging between the leaues, which be big &
large: and it groweth lightly vpon hills: take 15 of these grains or seeds, steep them well in oile,
and maketherof a liniment, it is passing good to rub and annoint the head withall, so it be done
vpward against the haire. Furthermore, the herb Callitriche, is singular good to prouoke snee-
zing; it beareth leaues much like vnto those of Lentils or Ducks meat: the stalks be very small
like fine bents, and the root is as little: it delighteth to grow in coole, shady, and moist grounds,
and is of a sharp and hot tast.

For the lowsie disease, wherein lice and such vermin cawle in exceeding abundance all ouer
the head, there is not a better medicine than an ointment made of hyssope and oyle stamped
and incorporat together: the same likewise killeth the itch in the head. Now the best hyssop is
that

* So called,
because the
fruit claspeth
round about
the stem or
is like of the
heabe.

* Because fox-
es are much
subiect vnto
it, who are il-
l in Greeke
Alopektes
* Capillus vne-
ris, or Maiden
haire.

* Adders
tongue.

H

I

K

L

M

A that of Cilicia, growing vpon the mountaine Taurus: and in a second degree, there is reckoning
made of that which commeth out of Pamphylia and Smyrna. An herb this is, nothing friend-
ly to the stomack: being taken with figs, it purgeth downward, with hony, by vomit: howbeit,
stamped with hony, salt, and cumin, and so reduced into a plaster, it is thought to be a proper re-
medy for the sting of serpents.

Lonchitis is not the same herb (as most men haue thought) that Xiphion or Phasganion, al-
though the seed be pointed like to a speare head; for it beareth leaues resembling lecke blades,
which toward the root be red, and more in number than about the stem it selfe: it carrieth little
heads in the top, made after the fashion of maskes or visors, such as players in Comedies are
wont to weare, lilling out pretty little tongues, and the roots be exceeding long, & yet it grow-
eth in drie grounds far from water. Contrariwise, * Xiphion or Phasganion delighteth in water. * Our Glades
or Flages.
B rich and moist places: at the first coming vp, it maketh a shew of a sword blade: the stem ri-
seth vp to the heigh of two cubits: the root hath beards or fringes as it were hanging about it,
and is in fashion shaped to a filbert nut: which ought to be digged out of the ground before
haruest, and to be dried in the shade: the vpper part of this root (for it groweth double) stamp-
ed with Frankincense and mixed with wine of equal weight, and so made into a salve, draweth
out the spills or broken scales in the brain-pan or scull: the same is good likewise to draw any
impostume that is broken, and to fetch out corruption in any part of the body: and it is singu-
lar for the bones that be broken and crushed * vnder cart or waggon wheels: lastly, the same is * Carpentils
an effectuall remedy against poisons.

C But to returne againe to the head-ache, the said Ellebore boiled either in common oile, or els
in oile rosat, and applied in manner of a liniment, doth assuage the same, so doth Peucedanum
[i. Hare-strange] being incorporat in oile of roses and vinegar. The same also being laied vnto
the head warm, doth mitigat the pain called the migrain, when as the one half of the head doth
ake; and it cureth beside, the dizziness of the braine. The root of Peucedanum made into an
ointment and vsed accordingly, prouoketh sweat, by reason of the hot nature that it hath, which
is burning and causticke. The herb Fleawort, which some call Psyllion, others Cynoides, Chry-
stallion, Sicelion, and Cynomyia, hath a small root, whereof there is little or no vse in Physick.
The branches that it bringeth forth, be slender and pliable in manner of vine shoots, bearing in
the top certain big berries or knobs like vnto beans; the leaues not vnlike to * dogs heads; the

D seed resembleth dogs fleas, whereupon it hath that name Cynomyia, and the same lieth within
the foresaid berries. The herb it selfe is ordinarily growing in vineyards: of great vertue it is to
refrigerat and to discusse or resolute withall: but the seed it is which yeeldeth most vse in Phy-
sicke; and the same is applied in a frontall to the forehead and temples, with vinegar and oile of
roses, or else with vinegar and water together, for to allay the paine of the head. For other acci-
dents, when it is applied in forme of a liniment, the manner is to take the measure of one acetab-
le, and to infuse it in a sextar of water vntill it gather together into a thicke and clammy
substance; then it would be stamped, and the mucilage or slime drawne out thereof serueth for
any paine, impostume, and inflammation.ouer and besides, Aristolochia is a singular herb for
the wounds of the head: it draweth forth broken bones and spills in any part of the head, and so
doth Pistolochia. To conclude, there is an herb called * Thysselum, not vnlike to garden Par-
sley: the root whereof if it be but chewed in the mouth, purgeth the head of phlegmaticke hu-
mours.

* Whereupon
it is called
Cynoides.

* Hydrostylis,
Dioscorides it
Water-parsley

CHAP. XII.

¶ Receipts for the diseases of the eyes, made of Centaurie, Celendine, Panaces, Hen-
bane, and Euphorbium.

IT is thought that the Rha-pontrick (which is the greater Centaurie) helpeth the cie-sight ve-
rie much, if a fomentation be made therewith and water together. The juice of the lesse Cen-
taurie tempered with hony and applied, helpeth the imperfections of the cies; namely, when
there seeme gnats to flie before them, or when they are ouer cast with a cloud; for it scattereth
the dimnesse and web which darkeneth the sight, and doth subtiliate the cataraet or cicatrices
that ouergrow the ball or apple. The herbe Sideritis is so appropriate vnto the cies, that it cu-
reth the verie haw that groweth in horses cies. But so excellent is the herbe Celendine, that it
passeth

passeth them all, and is a soueraigne medicine for all such imperfections. The root of Panaces mixed with parched or fried barley meale, maketh a good cataplasme for to repress the rheume of watery and weeping eyes. And there is a singular drink commended for the staying of such humors, made of Henbane seed one obulus, of Opium or the juice of Poppy and wine as much: Some put thereto the like quantity of the juice of Gentian, which also they vied to mingle with collyries and eye-salues (that require some sharpnesse and acrimony) * in stead of the foresaid Opium or Poppy juice. Moreover, Euphorbium clarifies the eye-sight, if there be an inunction made therewith. For bleered eyes, it is good to drop the juice of Plantain into them. As for the thick mists that hinder the eye-sight, Aristolochia doth dissolve and resolve them. The herb Iberis bound vnto the forehead, together with Cinquefoile, stoppeth the fall of humors into the eyes, and cureth all other maladies incident vnto them. Mullen or Lungwort is likewise a great defensarive against the foresaid rheums which haue taken a course to the eyes and cause them to water; so is Veruain, if it be applied with oile rosat or vineger: For the cataraft or suffusion of the eyes, for the pin and web which offend the eye-sight, the Trofches of Cyclamine being dissolved and so applied, are soueraigne. As for the juice of Peucedanum, (i. Hare-strange) it is (as I said before) a notable medicine for to cleare the sight, and rid away the muddy mists before the eyes, if it be laid to with Opium and oile rosat. Finally, Flea-wort staieeth and keepeth vp the flux of humors into the eyes, if the forehead be annointed with the mucilage thereof.

CHAP. XIII.

¶ Of Pimpernell, named Anagallis and Corchoros. Of Mandragoras or Circeium. Of Hemlocke, Cressmarine or Sampire, named in Greeke Crithmos Agria. Of the herbe Molybdana. Of Fumiterre. Of Acorus or Galangale. Of Floure-de-lys. Of Coryledon or Venus nauiell. Of Sengreen, and Parcellane. Of Groundswill. Of Ephemerion. Of the Tazell, and of Cromfoot: with the medicinal vertues of the said hearbes, appropriate to the diseases of the eyes, eares, nostrils, teeth and mouth.

The herbe Pimpernell, some call Anagallis, others Corchoros. Of it be found two kinds; the male with a red floure, the female with a blew: neither of them both be taller than the hand-bredth or a span at most: tender they be likewise in all parts: the leaues be very smal, round, and lying vpon the ground: they grow as well the one as the other in gardens and watery places: that with the blew floure bloweth first: the juice of them both tempered with hony, dissipeth the mist and dimnesse of the eyes, consumeth the rednesse occasioned by a stripe or bruise, and taketh away the red spots in the white of the eye; and so much the sooner, if the hony be of the best, and made about Athens, wherewith the eyes be annointed. The said medicine likewise is good for to extend and dilate the tunicles that make the ball or apple of the eye: and therefore it is an ordinary course that their eyes be annointed therewith beforehand, who are to be pricked with a needle for couching of a cataraft. These herbes be singular good likewise for the haw in horses or beasts eyes. The iuice of Pimpernell conueyed vp into the nostrils, cleanseth the braine by the munitory of the nose, so that afterwards the Patient do draw vp wine into the nostrils, for a collution to wash them. A dram of the said iuice drunk in wine, is a counterpoison against the venom of snakes. But this is strange, and I cannot chuse but maruell of it, that sheep should so much hate and abhor the female Pimpernell as they do: howbeit, in case they should mistake the one for the other because they are so like (for in floure only they differ) and tast the Pimpernell with the blew floure, presently they haue recourse (by a natural instinct) to an herbe for remedy called in Greeke Asyla, and by vs in Latine Ferus oculus (i. the wild and cruell eye, or Margellane.) Some there be, who set down certain ceremonies and circumstances to be obserued by them who are to dig or plucke vp this hearbe; namely, That they goe to this businesse before the Sun-rising, and salute or bid good morrow to it three times, before they speak any other word that morning; and then to take it vp and cast it on high: which don, to presse forth the iuice of it. Thus ordered forsooth, they say it is of better operation, and will do the deed surely.

Toucing Euphorbium, what it is I haue sufficiently spoken. The iuice thereof is singular for bleered eyes, especially if they be swelled withall: likewise wormwood stamped and incorporat with hony: as also the powder of Betony. There groweth many times a fistulous vicer betweene

A twene the corner of the eye and the nose, called Agilops; for to heale which sore, there is a soueraigne herbe of that * name growing among Barly: in blade or leafe it resembleth that of whear: the seed or graine whereof, beaten into powder and mixed with meale or floure, or the juice drawne out of the herbe, they vse for the said purpose to applie vnto the affected place in manner of a salve or liniment. Now the said iuice must be pressed out of the stalke and leaues thereof, whiles they be fresh and fullest of sap: but then the haw or care that it beareth, ought to be taken away, which being incorporat with the floure of three moneths corn, is made vp into bals or trofches. Some were wont in this cure to vse the juice also of Mandragoras, but they gaue it ouer afterwards. Howbeit, for certain, the root of Mandragoras bruised or stamped, and tempered with the oile of roses and wine, cureth weeping and watering eyes; yea, and assuageth their pain: & the said iuice, how soeuer it be rejected in the former case, goeth into many collyries or eye-salues.

This herbe Mandragoras, some writers call Circeium; and two kinds there be of it: the white which is supposed the male; and the black, which you must take for the female: the leaues of this female resemble those of the * Lectuce, but that they be narrower: hairy also they are, and all of an * equall bignesse. Two or three roots it hath, and those of a reddish or russet colour without; but white within: of a fleshy substance and tender, running downe into the earth almost a cubit in length. A certain fruit or apple they beare, of the bignesse of Filberds or Hazel-nuts, within which there be seeds like vnto the peppens or Peas. The white Mandrage some name Arsen, (i. the male; others * Morion: and there be again who call it Hypophlomos. The white leaues of this Mandrage be broader than the other, and indeed equall to the garden Docke or Patience:

In the digging vp of the root of Mandrage, there are some ceremonies obserued: first they that goe about this worke, looke especially to this, that the wind be not in their face, but blow vpon their backs: then with the point of a sword they draw three circles round about the plant, which don, they dig it vp afterwards with their face into the West. There is a iuice pressed forth both of the fruit, and also of the leaues shred and minced of the * item likewise being first headed or the top cut off, and also of the root, which sometime they do pounce and prick for to let out the liquor; otherwhiles they boile it: and the root so prepared, is as good as the iuice. The same also being cut into certain thin rundles they vse to * preserve in wine. Howbeit, Mandrage is not found alwaies and euery where full of iuice: but in what place soeuer such may be gotten, the right season to seek for it is about vintage time: the sent thereof is strong, but the root and fruit do smell the stronger. The apples of the white, when they be ripe, the manner is to dry in the shadow; but the juice drawn out of them, is permitted to stand in the Sun for to gather and harden.

In like sort, the juice of the root whether it be bruised and stamped, or sodden in grosse red wine to the consumption of a third part. The leaues moreover of Mandrage are commonly kept and condite in a kind of pickle or salt brine: for otherwise the juice of them whiles they be fresh and green, is pestiferous and a very poison. And yet order them so well as you can, hurtfull they be euery way: the only smell of them stuffeth the head, and breedeth the murre and the poise. Howbeit, in some countries they venture to eat the apples or fruit thereof; but those that know not how to dresse and order them aright, lo se the vse of their tongue thereby, and proue dumbe for the time, surprised and ouertaken with the exceeding strong sauer that they haue. And verily if they be so bold as to take a great quantity thereof in drinke, they are sure to die for it. Yet it may be vnder safely enough for to procure sleep, if there be a good regard had in the dose, that it be answerable in proportion to the strength and complexion of the patient; one cyath thereof is thought to be a moderat and sufficient draught. Also it is an ordinary thing to drink it against the poison of serpents: likewise before the cutting or cauterizing, pricking or launcing of any member, to take away the sence and feeling of such extreme cures. And sufficient it is in some bodies to cast them into a sleep with the smell of Mandrage, against the time of such Chirurgery. There be that drink it in lieu of Ellebore, for to purge the body of melancholick humors, taking two oboles thereof in honied wine. Howbeit, Ellebore is stronger in operation for to euacuat black cholour out of the body, and to prouoke vomit.

As touching Hemlock, it is also a ranke poison, witnesse the publicke ordinance and law of the Athenians, wherby malefactors, who haue deferred to die, were forced to drinke that odious potion of Hemlock. Howbeit, many good vertues hath this herbe, and would not be rejected and cast aside for the sundry vses thereof in Physicke. The seed is euery way hurtfull and venomous.

* Agilops.
Some take it
for wild Ocea-
thers for
Dannells

* Whereupon
it is called
Thridactis.
* Aequalibus
not laudibus,
for Mandrage
bears no flama
* i. Monbrum
virile, vel Ce-
niale.

* Other Her-
barists describe
Mandrages
without a stem
or stalk.
* Seruator in v-
no, according
to Catevas,
dubie sine,
whereas * Dio-
corides saith,
dubie sine h-
intracetur li-
no, that is to
say, they file
them vp han-
ding by little
threads drawne
through them.

As for the stems and stalks, many there be that do eat it both green & also boiled or stewed between two platters. Light these stems be as kexes, and full of ioints like Reeds and Canes: of a darke gray or fullen colour, rising vp many times aboue two cubits high: and toward the top they spread and branch. The leaues in some sort resemble Coriander, but that they be more tender, and a strong stinking smell they haue with them. The feed is thicker and grosser than that of the Annise. The root likewise hollow, and of no use in Physicke. The leaues and seed are exceeding refrigeratiue: which if they haue gotten the mallery and vpper hand of any that hath taken them, so as there is no way but one without help, they shall feele themselves begin to wax cold in their extrem or outward parts, & so to die inward: howbeit there is a remedy euen then, before the cold haue taken to the vital parts: namely to take a good draught of wine, which may set the body in a heat, and chaufe it again: may if they drinke it with wine, there are no meanes in the world to saue their liues. There is a iuice pressed out of the leaues and floures both together, for that is the right reason, namely whiles it is in flour: the which is pressed out of that seed stamped, being afterwards dried in the Sun and made into bals or trofches, kills them that take it inwardly, by congealing & cluttring their blood; for this is a second venomous and deadly quality that it hath: which is the cause, that whosoever die by this means, there appear certain spots or specks in their bodies after they be dead. And yet there is a use of this iuice, to dissolue hot and biting medicines therein instead of water: moreover, there is made of it a very convenient cataplasme to be applied vnto the stomack, for to coole the extreame heat thereof. But the principal vertue that it hath, is to repress and slay the flux of hot humors into the eyes* in summer time, and to assuage their pains if they be annoiued therewith. It entreteth besides into collyries or medicines deuised to ease pain: and verily there is no rheumatick flux in any part of the body but it stoppeth it. The leaues also of Hemlocke doe keepe downe all tumors, appease paines, and cure watering eyes. *Anaxilans* mine Author saith, That if a pure maidendoe in her virginity annoiue her breasts with this iuice, her dugs will neuer grow afterwards, but continue still in the same state. True it is indeed, that being kept vnto the paps of women in child-bed, it drieth vp their milke: as also extinguieth naturall seed, if the cods and share be annoiued therewith. What remedies they should vse to saue themselves who are adjudged by law to drink it, I for my part purpose not to set down. The strongest Hemlocke and of speediest operation is that which growes about Susa in the confines of Parthia. Next to it for fearful working, is that which commeth out of Laconica, Candy, and Natolia. In Greece the Hemlocke of Megara is counted the quickest, and then that of Attica.

Crestmarine or Sampier, called the wild Crethmos, riddeth the eyes of the gummy & viscous water that sticketh in them, if it be applied thereto: and if it be made into a cataplasme with fried Barly meale, it assuageth also their swelling.

There groweth commonly an herbe named in Greeke Molybdæna, that is to say in Latine, Plumbago, euen vpon euery corne land; in lease resembling the Dock or Sorrell, with a thicke root, and the same rough and prickly. Let one chew this herb first in his mouth, & then eftsoons lick with his tongue the eye, it consumeth and taketh away the * Plumbum, which is a kinde of disease or infirmity incident to the eyes.

As touching the first * Capnos, which in Latine is commonly called Pedes Gallinæ, i. hens feet: it groweth about decayed wals and ruina buildings, among rubbish, & in hedges: the branches be very smal, & spread loosely or scattering, the floure of a purple colour, the leaues green, the iuice wherof dissoluth the dimness and thickeness about the eyes, and clarifieth the sight: and therefore it is usually put into eye-salues. There is another herb of the same * name, & like in effect, but different in form from it, which doth branch thicke, and is of a tender substance: the leaues for shape resembling Coriander, and those of a wan or ashie colour, but it beareth a purple floure: it groweth in Gardens, Hort-yards, and Barly-lands. If the eyes be therewith annoiued, it cleanseth and cleareth them: but it causeth them to weepe and water, like as smoke doth, whereupon it tooke the name Capnos in Greeke. If the haire of the eye-lids be once pulled forth, and then the edges or brims be annoiued therewith, it will keep them for euer coming M vp againe.

* Acorus hath leaues like to the Flour-de-lis, but that they be only narrower, & growing to a longer stele or taile: the roots be black & not so full of veins nor grained, otherwise they agree well with the Ireos root, hot & biting at the tongues end. To smel vnto they are not vnpleasant: and

A and being taken inwardly, they do gently moue rising, and cause the stomack to breake winde vpward. The best Acoros roots be those which come from Pontus: then they of Galatia: and in a third rank are they to be set which are brought out of Candy. Howbeit, the principall and the greatest plenty are those esteemed which grow in the region Colchis neere to the river Phasis: and generally in what country soeuer, they that come vp in watery grounds be chiefe: the fresher that the roots be and more newly drawn, the stronger sent and lesse pleasant taste they haue with them, than after they haue bin long kept aboue ground. Those of Candy be whiter than the other of Pontus. They vse to cut them into goobets as big as a mans finger, and then hang them within bags or pouches of leather a drying in the shade. I find in certain writers, that the root of Oxymyrine is called Acoros, and therefore some (alluding to the name of Acoros) chuse rather to call this plant Acoron the wild. Well, the root of Acorus is of great operation and effect to heat and extenuate: and therefore the iuice thereof taken in drinke, is singular against catarracts or any accidents of the eyes that cause dimness. Soueraigne likewise it is taken to be against the venome of serpents.

Cotyledon, named in Latine Vmbilicus Veneris, is a pretty little herb, hauing a tender and a smal stem, a leafe thicke & fatty, growing hollow, like to the concavity wherin the huckle-bone turneth, and therupon it took the foresaid name in Greeke. It groweth by the sea side and in rocky or stony grounds: of a liuely green colour, and the root round, much like to an Olive. The iuice is thought to cure the eyes. Another kind there is of Cotyledon, with grosse and * fattie leaues likewise, but broader than the former. Toward the root they grow thicker, which they seem to compass and inclose, as it were an eye. A most harsh & vnpleasant taste it hath: the stem is high, but very slender. This herb hath the same properties which the Flour-de-lis.

Of Sengreen or Houlleek, which the Greeks call Aizoon, there be two kinds. The greater is ordinarily planted in earthen pans or vessels set out before the windows of houses: which some name Buphthalmion, others Zoophthalmion, and Sregerethron, because it is thought so good in some drinks or amorous medicines: others againe giue it the name Hypogeson, for that it is seen to grow vnder the eaves of houses. There are also who loue to term it Ambrosia, or Amerimnos. Here in Italy they call it Sedum the greater, Oculus also, and Digitellus. For the second kinde is somewhat lesse, which the Grecians distinguish by the name * Erithales or Trithales (because it beareth floures thrice in the yeare;) others Chrysothales; and some againe, Isoetes. But both the one and the other they call Aizoon, because they be alwaies fresh and green: according to which name in Greeke, some giue it the Latine name Sempervivum. The greater kind beareth a stem a cubit high and more, and the same of the thickeness of a mans thumb, with the better. The leaues in the head or top whereof, be like vnto a tongue, fleshy and fat, full of iuice, a good inch broad, some bending downe and coping toward the earth, others standing vpright, but so, as if a man mark their round circle or compass where in they lie couched, he shall obserue the very proportion of an eye. The lesse Sengreen or Iubarb groweth vpon walls, and specially such as be ruinated and broken down: likewise vpon the tiles of house-roofs. This herb is tufted with leaues from the very root euen to the top of the branches. The leaues be narrow and sharp pointed, and full of iuice. The stalk groweth a good hand-breadth or span high. The root is not medicinable nor of any vse.

Much like to this is that herb which the Greeks call Andrachne Agria, i. wilde Purcellane; the Italians, Illecebra. The leaues be but small to speake of, howbeit broader than those of the herb before named, and shorter toward the top. It groweth vpon rocks and stony places: & folke vse to gather it for to eat. All these last rehearsed haue the same operation, for they be exceeding cold and astringent withall. Good they be to stay the rheum that falleth into the eyes and causeth them to water, whether the leaues be applied to them, or the iuice in manner of a liniment: moreover, they cleanse and mundifie the vlcers of the eyes, the do also incarnate, heale, and skin them vp: singular good besides to loose and open the eye-lids, when they are aglued and closed vp with viscous gum. The same do allay the head-ache, if either the temples be annoiued with the iuice thereof, or the leaues be applied to them. Moreover, they mortifie or kill the poison inflicted by the prick of the venomous spiders Phalangia: but the greater Sengreen hath this peculiar vertue, to resist the deadly poison of the herb Aconitum. Furthermore it is sayd, that whosoever carry it about them, shall not be stung by scorpions.

All the kinds of them are proper remedies for the pain in the ears. Like as the iuice of Henbane

* Epiphoras
affliction of
the eyes, as
hot rheum.

* Ambrosia, out
of Dioscor, not
iustly, as
Pliny seemeth
to read, when
he translated
it (Sordidus).

* Which some
take to be
Pick-madame
of the French
Trique-ma-
dame.

* Some take it
for a Catarrh.
* This Fuchsia
thinketh to be
Pistolochia or
our Aristolochia the round-
der.

* It seemes to
be our Fumitory, called in
Greeke Capnos.

* Alanguale.

* scilia.

bane also, if it be applied moderately, of Achillea and the best Centaury, of Plantaine and Harstrang, together with oile rofat and Opium: finally, the iuice of Acorns or Galangale vsed with Roses, is much commended in that case. But this would be noted, that the manner of preparing of all these iuices, is to heat them first, & then to conuey or infuse them into the ear by a * pipe for the purpose [called an Orenchyte.] Semblably, the herb Vmbilicus Veneris or Cotyledon is much commended for mundaying the ears, when they run with filthy matter especially, if it be tempered with deere sewer, and namely of a Stag or Hind, and so infilled hot. The iuice of the Walwort root clarified and strained through a fine linnen cloth, and soon after dried & hardened in the Sun, healeth the swelling impostumations vnder the ears, if as need requireth, it be dissolved in oile of Roses, and so applied hot. The like effect in that case hath Veruain & Plantain; Sideritis also being incorporat in old Hogs greafe.

After the same manner Aristolochia together with Cyperus, healeth the stinking and ilfaucored vicer of the nose, called Noli-me-tangere.

The root of Panaces, especially that which is called Chironia, if it be chewed in the mouth, assuageth the tooth-ache: so doth the iuice thereof, if there be a collution made therewith. The root of Henbane hath the like vertue, if one chew it with vineger, as also of Polemonia or sauge de bois: for which purpose it is passing good to chew the Plantain root, or to wash the mouth and teeth with the iuice or decoction thereof boiled in vineger. And the very leaues of Plantain be singular for the pain of the teeth; yea, though the gums were putrified with rank & corrupt blood, or in case there owled or issued out of them filthy bloody matter. And the seed of Plantain cureth the impostumations of the gums, albeit they gathered to suppuration and ran matter. Moreover, Aristolochia doth knit and consolidat the gums; yea, and fasteneth the teeth in the head. For these infirmities of gums and teeth, the root of Veruain is highly commended if it be chewed: or if it be boiled in wine or vineger, and the mouth washed with that decoction. The roots of Cinque-foile sodden likewise either in wine or vineger to the consumption of a third part, worke the same effect. But looke that before you boile them, they be wel rincd and washed either in sea water or salt water at the least: and when you vse this collution, see you hold the liquor or decoction in your mouth a long time. But some there be who thinke it better to rub the teeth with the ashes of Cinquefoile burnt, leaues, root, and all. Moreover, the root of Mullen or Taperwort sodden in wine, maketh a singular collution for the teeth. Likewise if the teeth be washed with the decoction of Hyssop or the iuice of Harstrang, together with Opium or Poppie iuice, much good and ease will insue thereupon. As also by the iuice of a Pimpernell root: and the rather of that which is counted the female, if the same be conueighed vp into the nostril of the contrary side to the tooth that aketh. There is an herb called Groundswel, which the Greekes name Erigeron, and we the Latines Senecio: they say if a man make a circle round about it with some instrument of yron, and then dig it out of the ground, and therewith touch the tooth that is pained, three seuerall times, and between euery touching spit vpon the ground, and then bestow the said herb, root and all, in the very same place where he drew it, so as it may liue and grow again, the said tooth shall neuer ake afterwards.

This Groundswel is an hearbe much like in shape vnto Germander, as soft also and tender as it, the small stalkes or braunches whereof incline to a reddish colour: and it loueth to grow vpon tiled houses or VValles. The Greekes imposed that name Erigeron, because in the Spring it looketh hoarie, like an old gray beard: in the top it diuideth it selfe into a number of heads, betweene which there cometh forth a light plume, much like vnto Thistle-downe: VVhich is the reason that *Callimachus* calleth it *Acanthus*; and others, *Pappos*. But in the farther Description of this Hearbe, it seemeth that the Greekes agreed not: for some haue sayd that it is alsow like to Rocket; others to an Oke, but that they bee much lesse. There bee VVriters also who hold the root to bee good for nothing in Physicke: and there bee againe that commend it to bee singular for the sinewes: besides, some others are of opinion, That it strangeth and choaketh as many as drinke it. Contrariwise, certaine Physitians prescribe it for the laundise to bee taken in VVine: for all the diseases likewise of the bladder, and against the infirmities of the Heart and Liuer. And they assure vs, That it scoureth the Reines or Kidneies of all grauell. In case of the Scitica they haue ordaind it to bee drunke to the weight of a dramme with Oxymell, presently after some exercise by walking: giuing out, that there is not a better thing in the VVorld for the gripes and torments

A ments of the guts, if it be taken in sweet wine cuit: esteeming it a singular herbe for the griefe of the midriffe and precordiall parts about the heart, if it be eaten with meat in a sallad with vineger: and in regard of these manifold commodities, they low and nourish it in their gardens for to be alwaies ready at hand. And some authours I find who haue made a second kind thereof: but they haue not described what manner of herbe it is, only they appoint it to be giuen in water against the sting of serpents, and to be eaten for the falling sicknesse. For mine own part, I will set downe the vse thereof in some cases, according as I haue found it by experience to work in the praefise here at Rome. The plume or downe which it beareth, if it be stamped and reduced into a liniment with Saffron and a few drops of cold water, and so applied, cureth the inordinat flux of waterish humors into the eyes. The same dried and parched against the fire, or otherwise fried with some cornes of salt, and laid to the swelling wens called the Kings euil, healeth them.

The May-Lillie (called in Greeke Ephemeron) is leasd like vnto the Lillie, but that the leaues be lesse: the stem is semblable and equall vnto it, vpon which it beareth a * blew floure. The seed which it carrieth is nothing medicinable. One single root it hath of a finger thickenesse, which is soueraigne for the teeth, if it be cut and minced small, and afterwards sodden in vineger for a collution to wash the teeth with it warme. The very substance also of the root is singular good to confirme the teeth standing loose in the head: and to be put into those that be hollow and worne eaten. Moreover, the root of Celendine is good for the teeth, if it be bruised or stamped, and so with vineger held in the mouth. If teeth be rotten and corrupt, the black

C Ellebore is singular to be put into their concauities. And both of them (as well the blacke as the white) serue in a collution to strengthen and keep them fast in their sockets, if they be boyled in vineger. As touching the Tazill (which is called in Latine Labrum Veneris) it grows in riuers and * waters: within the heads or burs which it beareth, there is found a little worne or grub, which for the tooth-ache they vse to binde about the teeth, or to put it in their holes and close them vp with wax. But when that herbe is pulled out of the ground, great heed must be taken that it touch not the earth. The herbe Crowfoot is called in Latine Ranunculus, in Greeke Batrachion; whereof be foure kinds: The first beareth leaues like vnto Coriander, but that they be fatter, and as broad as those of the Mallow, of a swert colour: the stalke is whirish, or griled and slender, the root also white: it groweth ordinarily along great rode waies, especially in cold, shadowie, & moist places. The second is better furnished with leaues, and those more

D ly in cold, shadowie, & moist places. The second is better furnished with leaues, and those more cut and indented than the former, and riseth vp with greater and higher stalks. The third is the least, hauing a strong sent, and bearing a yellow floure like vnto gold. The fourth is like to this, and hath likewise a yellow floure. They be all of them of a causticke and burning qualitie. For lay but the leaues raw and greene (as they grow) vpon any place, they will raise blisters in the skinne, as well as a light coale of fire: which is the reason, that they bee much vsed for leprogies and foule scabs; also to take out any markes imprinted in the skinne, or vnseemely scarre. In summe, it is one of the ingredients that go to the making of all potentiall cauterics or causticke medicines. VVhere the haire is gone, and the place bare and naked, they vse commonly to applie these hearbes for to recouer the haire againe: but they must be soone remooued. For E tooth-ache also it is an ordinary thing to chew of their roots, but if one continue so long, it will burst their teeth in pieces. The same beeing cut into roundles, and dried, and so beaten into pouder, serueth to prouoke sneezing. Our Herbarists here in Italy call this hearbe *Strumea*: because it helpeth and cureth the wens named *Strumæ* or the Kings euil, and the flat biles or pufes called *Pani*, if the same be hanged vp afterwards in the chimney to take smoke. For this opinion they haue, and be verily perswaded, that if it be set againe into the ground, the wens and biles afore said which were healed, wil returne and be sore again. The like forcery and witchcraft they vse with Plantaine: but in truth, the iuice of Plantaine is singular good for the cankers or vicers within the mouth: so are the leaues and roots, if they be only chewed, yea though the patient or diseased person were troubled with the spitting rheume; for they intercept all F those defluations, which take a course into the mouth. Cinque-foile is a very soueraigne herb for the sores of the mouth, and for stinking breath. Pysyllium, i. Fleawort, is good for the vicers thereof.

But since I haue named a stinking breath, which is a foule and nastie disease, putting man or woman to shame, as no infirmite more; I will set downe one or two compound receits for that

* *Discorides*
saith white.* It contains
water indeed
within the
concauities or
ar-me-pis (as
it were) of the
leaues where
they join to
the stem, but
surely in riuers
it grows not.Latter *Disco-*
i. white.

that imperfection. Take Myrtle & Lentisk leaues, of each a like weight, of the Gal-nuts grow-
ing in Syria, halfe as much in quantity; stamp them all together, and in the stamping, sprinkle
them with good old wine: giue the patient this composition in bole to chew and eat in the
morning, there is not the like medicine vnto it for a sweet breath. Also take Ivy berries, Casia or
Canell, and Myrrhe, of each an equall weight, incorporat them with wine in manner aforesaid,
and vse this confection accordingly. For the sores that be incident to the nose, the seed of dra-
gons made into powder, and tempered with hony, is singular to be applied therunto, yea though
they were very cankers, and had eaten deep. Where the skin looketh blacke and blew, whether
it be vnder the eies, or otherwise in any part of the visage, a salue made of Hyssope applied ther-
to, restoreth it to the fresh and natieue colour. To conclude, a liniment of Mandragoras taketh
out the markes or prints that be branded or seared in the face [if it be applied presently while
they be fresh.]



THE TWENTY SIXTH BOOKE OF THE HISTORIE OF NATVRE, WRITTEN BY C. PLINIVS SECVNDVS.

The Proeme.

CHAP. I.

¶ Of medicines appropriate and respectiue to all other parts and members of the body. Of
certaine new maladies: and namely, of the ill-fauored tetter called Lichenes:
what kinde of infection it is, and when it first entred into Italy.
Of the blain or sore called the Carbuncle. Of the filthy
leprosie or wild scab named Elephantia-
sis. And of the Collicke.



Long is it not since the face and visage of men began to be annoied with certaine
new and strange diseases, vnkowne in our forefathers daies, and neuer heard of
before in Italy, nor almost in any part of Europe. And euen of late daies when
these maladies first set foot in these parts, they were not seene so to spread
throughout all Italy, ne yet to range greatly in Illyricum, France, or Spain, al-
though some little sprinkling there was in those countries: but about Rome
only and those quarters adioining, as they rained first, so they raged most. These new come
diseases verily were nothing painfull to the Patients, nor dangerous any waies and deadly; but
so foule and filthy, so loathsome and ougly, that a man would haue chosen rather to die any
death, than to be so disfigured. But of them all, the worst and most detestable was that, which
by a Greeke name they called Lichenes, and in Latine (because ordinarily it began about the
chin) * Mentagra. A terme giuen vnto it (I assure you) at the first by way of jeast and in a meri-
ment (as commonly we see many are disposed to play and make good game at other mens mi-
series) but afterwards it went currant in euery mans mouth: and by no other name than Ment-
agra was it known, notwithstanding the disease possessed not the chin alon, but in many that had
it, took vp the whole visage, all faue the eies, yea, and ran downward to the neck & breast, pre-
ading also to the armes and the very hands: and in such sort was the skin of the poore wretches
be painted

* For Mentum
in Latine is a
chin.

A be painted and beraied with foule scurfe and filthy scales, as it would haue pittied one at the
heart to see them. This contagious disease, our fathers and ancestors in times past neuer heard
of, nor knew what it meant: for the first time that it crept into Italy, was in the daies of *Tiberius*
Claudius late Emperor of Rome, euen about the middle of his raigne; and that was by the means
of a certain knight or gentleman of Rome borne at Perusum, who being secretary or clerke vn-
to the Treaferer vnder the Romans in Asia, and giuing attendance according to his place, chan-
ced there to be infected, and so hee brought the disease ouer with him to Rome. But will you
heare the strange nature of this foule euil? women were not subiect vnto it; no more were slaues,
base and poore commoners, no nor citizens of mean state and condition: the greatest gentlemen
and those of the nobility, it made choise of, and picked them from among the rest: very car-
ching it was, and soone passed from one to another, especially by the mouth, and * by the means
of a kisse were it neuer so short: foule and ill-fauored enough was the disease it selfe, but the
B fear, remaining after it was healed (for many there were who came vnder the Chirurgians hand
and indured the cure) looked a hundred times worse: and why? no way there was to rid it, but
by caustick medicines or potentiall cauteries; and vnlesse the flesh were eaten away to the very
bones, it was not possible to kill and root it out clean, but it would reuiue and spring again: and
verily there came Physitians and Chirurgions out of Egypt (a countrey apt to breed the like
diseases and where they be common) such as professed only the skill in this kind of cure, who
filled their purses well, and mightily enriched themselves by their practise at Rome: for well
known it is, that *Marius Cornutus* (late L. Pretor, and lieutenant general for the state in the pro-
C uince of Guienne or Aquitaine in France) dealt with one of these Egyptian leeches for to be cured
of this disease, and agreed to pay him 200000 Sesterces for his paine. And thus much of
Mentagra.

Moreover, what a wonderfull thing is this obserued in these new kind of maladies, that many
times (contrary to the course of other sicknesses) they come together in troupes; that some of
them should all on a sudden light vpon a particular country; that they should take to one cer-
taine member of mans body; assaile those of such an age and no other, haue a spight to persons
of this or that quality, and spare the rest; as if they made choise, some to plague young chil-
dren, others elder folk; some to punish none but the rich and mighty, others to be doing with
the poore and needy? In our Annals or Chronicles we find vpon record, That while *Lucius Rati-*
lus and *Q. Marcius* were Censors of Rome, the pestilent carbuncle (a disease appropriat to Pro-
D uance and Languedoc in France) came first into Italy. Of which maladie, there died within the
compassse of one year (about that very time when I compiled this worke and history of mine)
two noble men of Rome and late Consuls; to wit, *Iulius Rufus* and *Q. Licanus Bassus*: of which
two, the former was cut for it by the counsell of vnskillfull Physitians, and * by that means lost
his life. As for the other, hauing it vpon the thumb of his left hand, he chanced * to pricke it
himselfe with a needle; and although the wound was so small, that hardly it could be seene and
discerned, * yet it cost him his life. This carbuncle riseth ordinarily in the most hidden and se-
cret parts of the body, and for the most part vnder the tongue: it is hard and red in manner of the
swelling veines called in Latine Varices: and yet in the head it looketh blackish; the skin also
E about it seemeth swert and dead: it stretcheth the skinne and the flesh in some sort stiffe, but
without any great swelling; no paine at all, no itching no other symptome but sleepe, where-
with it so possesseth the Patients, that in three daies it will make an end of them. Otherwhiles
it causeth the party to fall into a quietering and shaking as it were for cold, and raiseth certaine
blisters or angry pimples round about it; and verie seldome causeth an Ague: but looke in
whom soeuer it taketh to the stomacke or throat, it quickly dispatcheth and maketh an end of
them.

As touching the white leprosie, called Elephantiasis (according as I haue before shewed) it
was not seen in Italie before the time of *Pompey* the Great. This disease also began for the most
part in the face, and namely it tooke the nose first, where it put forth a little specke or pimple
F no bigger than a small Lentill; but soone after, as it spread farther and ran ouer the whole body,
a man should perceiue the skin to be painted and spotted with diuers and sundry colors, & the
same vneuen, bearing out higher in one place than another, thicke here, but thin there, and hard
every where, rough also like as if a scurfe or scab ouerran it, vntill in the end it would grow to be
blackish, bearing downe the flesh flat to the bones, whiles the fingers of the hands, and toes of
the

* Vt scilicet trans-
fusa scurfe
men vi deo
salute one a-
netter by a
kisse.

* Either by
some mori-
fication or effu-
sion of blood.
* Collicke

* Mentagra
It seemeth
by a gangre. e.
* Mentagra
signe. shew a
gangrene and
canker, rather
than our ar-
buncle.

the feet were puffed vp and swelled againe. A peculiar malady is this, and naturall to the Egyptians; but look when any of their kings fell into it, wo worth the subjects and poore people: for then were the tubs and bathing vessels wherein they sat in the bain, filled with mens blood for their cure. But surely this disease continued not long in Italy, before it was quite extinguished: like as another before it, and in old time * *Gemurfa*, which began between the toes: and so long agoe it is since any haue bin troubled therewith, that the very name also is forgotten and grown out of vse. Where by the way, this is to be noted as a strange and wonderfull thing, That some of our diseases should haue an end and lose their course for euer; and others againe continue still: as for example, the cholique passion, which came among vs no longer agoe than in the daies of *Tiberius Caesar* the Emperour: and the first that euer felt it, was the prince himselfe; whereupon arose no small question throughout the whole city of Rome: for when as the said Emperour published a certain proclamation, wherein he excused himself for not comming abroad to manage the affaires of the State, because he was sick of the cholique; the Senat and people reading this strange name of an vknowne maladie, entred into a deep discourse with themselves, what to thinke and make of it? But what should we say of all these kinde of diseases? and what an anger and displeasure of the gods is this, thus to plague and punish vs? Was it not enough to haue sent amongst men into the world a certaine number of maladies otherwise, and those not so few as three hundred, but we must be in feare and danger still every day of new? and yet feel as many as there be of them comming by the hand of God, yet men throw their owne excessse and disorders, bring as many more vpon themselves, and be causes still of farther troubles & miseries. Well, thus you see by that which I haue written in the former bookes, what was the old Physicke in times past; namely, consisting of the simples onely found in dame Natures garden, and how she alone at the first and for a long time, was our Physitian and furnished vs with remedies for all diseases.

CHAP. II.

¶ *The praise of Hippocrates, and other Physitians meere Simples.*

Hippocrates verily had this honor aboue all men, That he was the first who wrote with most perspicuity of Physicke, and reduced the precepts and rules thereof into the bodie of an art: howbeit, in all his bookes wee find no other receipts, but herbes. Semblably, the writings of *Diocles* the Carystian, were no lesse stored with the like medicines, and yet a famous Physitian he was, and both in time and reputation next and second to *Hippocrates*. *Praxagoras* also, and *Chrysippus*, yea and after them *Erasistratus* held on the same course. As for *Herophylus*, although he was the first that went more exquisitely to work and brought in a more subtil and fine method of Physick, yet none esteemed better of simples than hee. But surely, practise and experience (which as in all things else is found to be most effectuell, so in the profession of Physick especially) began in his daies by little and little to flake, vntil in the end all their Physicke proued nothing but words and bibble babbles; for beleue me, his schollers and disciples thought it more for their ease and pleasure to sit close in the schooles and heare their discourses out of the chaire discourse of the points of Physicke, than to go a simpling into the deserts and Forrests to seeke and gather herbes at all seasons of the yere, some at one time, and some at another.

CHAP. III.

¶ *Of the new practise in Physicke of Asclepiades the Physitian: and what course he tooke to alter and abolish the old Physicke for to bring in the new.*

What cunning means foeuer these new Physitians could deuise to ouerthrow the ancient manner of working by simples, yet it maintained still the remnants of the former credit, built surely vpon the vndoubted grounds of long experience; and so it continued till the daies of *Pompey* the Great, at what time *Asclepiades* a great Oratour and professor of Rhetoricke went in hand to peruert and reiect the same: for seeing that he gained not by the said Art sufficiently, & was not like to arise by pleading causes at the bar, to that wealth which

A he desired (as he was a man otherwise of a prompt wit and quick spirit) he resolved to giue ouer the law, and suddenly applied himselfe to a new course of Physick. This man hauing no skill at all, and as little practise, considering he neither was well studied in the Theoricke part of this science, nor furnished with knowledge of remedies which required continuall inspection & vse of simples, wrought so with his smooth and flowing tongue, and by his daily premeditated orations gained so much, that he withdrew mens mindes from the opinion they had of former practise, and ouerthrew all. In which discourses of his, reducing all Physick to the first and primitive causes, he made it a meere coniecturall Art; bearing men in hand, that there were but five principall remedies which serued indifferently for all diseases; to wit, in Diet, Abstinence in meat, Forbearing wine otherwhiles, Rubbing of the body, Walking, and the * Exercise of gestations. In sum, so far he preuailed with his eloquent speech, that euery man was willing to giue care & applause to his words: for being ready enough to beleue those things for true, which were most easie; and seeing withall, that whatsoeuer he commended to them, was in each mans power to perform, he had the general voice of them: so as by this new doctrine of his, he drew all the world into a singular admiration of him, as of a man sent & descended from heauen aboue, to cure their griefs and maladies. Moreouer, a wonderfull dexterity and artificiall grace he had to follow mens humors, and content their appetites, in promising and allowing the sick to drink wine, in giuing them effsoons cold water when he saw his time, and all to gratifie his patients. Now for that *Herophylus* before him had the honor of being the first Physitian who leached into the causes of maladies; and because *Cleophantus* had the name among the Antients, for bringing wine into request and setting out the vertues thereof: this man for his part also, desirous to grow into credit & reputation by some new inuention of his own, brought vp first the allowing of cold water before said, to sick persons; & (as *M. Varro* doth report) took pleasure to be called the Cold-water Physitian. He had besides other pretty deuises to flatter & please his patients, one while causing them to haue hanging litters or beds like cradles, by the mouing & rocking whereof too and fro, he might either bring them asleep, or ease the pains of their sickness; otherwhiles ordaining the vse of bains, a thing that he knew folk were most desirous of: besides many other fine conceits very plausible in hearing, and agreeable to mans nature. And to the end that no man might think this so great alteration and change in the practise of Physick, to haue bin a blind course and a matter of smal consequence, one thing aboue the rest that wooed himselfe a great fame, and gaue no lesse credit and authority to his profession, was this, that meeting vpon a time by chance with one he knew not, carried forth as a dead corse in a bier for to be burned, he caused the body to be carried home from the funerall fire, and restored the man to health again. Certes, this one thing, wee that are Romanes may be well ashamed of and take in great indignation, That such an old fellow as he, comming out of Greece (the vaine nation vnder the sun) & beginning as he did of nothing, should only (for to enrich himself) lead the whole world in a string, and on a sudden set down rules and orders for the health of mankind, notwithstanding many that came after him, repealed as it were, and annulled those lawes of his. And verily, many helps had *Asclepiades*, which much fauored his opinion and new Physick; namely, the manner of curing diseases in those daies, which was exceeding rude, troublesome, & painful; such adoe there was in lapping and covering the sick with a deale of cloaths, and causing them to sweat by all meanes possible: such a worke they made sometime in chafing and frying their bodies against a good fire, but euery foot in bringing them abroad into the hot Sunne, which hardly could be found within a shade and close citie as Rome was. In lieu whereof, not onely there, but throughout all Italy (which now commanded the whole World, and might haue what it list) hee followed mens humours in approouing the artificiall baines and vaulted stoues and hot houses, which then were newly come vp and vsed exceedingly in euery place by his approbation. Moreouer, he found means to alter the painefull curing of some maladies, and namely of the Squinancie; in the healing whereof other Physitians before him went to worke with a certain instrument which they thrust down into the throat. He condemned also (& worthily) that dog-physick which was in those daies so ordinar, that if one ailed neuer so little, by and by he must cast and vomit. He blamed also the vse of purgatiue potions, as contrary and offensive to the stomack, wherein he had great reason and truth on his side: for to speake truly, such drinks are by most Physitians forbidden, considering our chiefe care and drift is in all the course of our physick, to vse those means which be comfortable and wholsom for the stomack.

* Some thinke it was an inflammation resembling our Carbuncle or Anthrax.

* Riding on ho sebacks, carrying in a coach, litter, barge, &c.

CHAP. III.

¶ The foolish superstition of Art-Magicke, which here is derided. Of the tetter called Lichen : remedies proper for it, and the diseases of the throat.

ABoue all other things, the superstitious vanities of Magitians made much to the establishing of *Aclepiades* his new Phyticke; for they in the heighth of their vanity, attributed so strange and incredible operations to some simples, that it was enough to discredit the virtues of them all. First, they vaunted much of *Aethyopus*, an hearbe which (by their saying) if it were but cast into any great riuer or poole, it would draw the same dry; and was of power (by touching onely) to open lockes, or vnbolt any dore whatsoeuer. Of *Achoemenis* also another herb, they made this boast. That beeing throwne against an armie of enemies ranged in battell array, it would driue the troupes and squadrons into feare, disorder their ranks, and put them to flight. Semblably, they gaue out and said, that when the king of Persia dispatched his Embassadors to any forein states and Princes, he was wont to giue them an herb called *Latace*, which so long as they had about them (come where they would) they should want nothing, but haue plenty of all that they desired: besides a number of such fooleries wherewith their bookes be pestered. But where, I beseech you, were these herbs when the *Cimbrians* and *Teutons* were defeated in a most cruell and terrible battell, so as they cried and yelled again? What became of these Magitians and their powerfull herbs, when *Lucullus* with a small army consisting of some few legions, ouerthrew and vanquished their owne kings? If herbs were so mighty, what is the reason (I pray you) that our *Romane* capitaines provided euermore aboue all things how to be furnished with victuals for their camp, and to haue al the waies and passages open for their puruerours? In the expedition of *Pharfalia*, how came it to passe that the souldiers were at the point to be famished for want of victuals, if *Cesar* by the happy hauing of one hearbe in his campe, might haue inioined the abundance of all things? Had it not bin better think ye, for *Scipio Aemilianus* to haue caused the gates of Carthage to flie open with the help of one herbe, than to lie so many yerres as he did in leaguer before the city, & with his engins & ordirance to shake their wals, & batter their gates. Were there such vertue in *Ethiopi*us aforesaid, why dowe not at this day dry vp the *Pontine* lakes, and recouer so much good ground vnto the territory about *Rome*? Moreover, if that composition which *Democritus* hath set downe and his bookes maketh prayse of, to be so effectual, as to procure men to haue faire, vertuous, and fortunat children, how happeneth it that the kings of Persia themselves could neuer attaine to that felicity? And verily wee might maruell well enough at the credulity of our Ancestors in doting so much vpon these inuentions (how soeuer at the first they were deuised and brought in, to right good purpose) in case the mind and wit of man knew how to stay and keepe a meane in any thing els besides: or if I could not proue (as I suppose to doe in due place) that euen this new leech-craft brought in by *Aclepiades* which checketh those vanities, is growne to farther abuses and absurdities than are broched by the very Magitians themselves. But this hath beene alwaies and euer will bee, the nature of mans mind, To exceed in the end and go beyond all measure in euery thing which at the beginning arose vpon good respects and necessary occasions.

But to leaue this discourse: let vs proceed to the effects and properties remaining behind of those herbs which were described in the former booke; with a supplement also and addition of some others, as by occasion shall be offered and presented vnto vs. Howbeit, to begin first with the remedies of the said Tettars (so foule and vnseemly diseases) I mean to gather a heape of as many medicines as I know appropriat for that malady, notwithstanding I haue shewed already of that kind not a few. Well then, in this case, *Plantaine* stamped is very commendable: so is *Cinquefoile* and the root of the white *Daffodill*, punned and applied with vineger. The young shoots or tender branches of the fig-tree boiled in vineger: likewise the root of the * *Marsh-Mallow* sodden with glow in a strong and sharpe vineger to the consumption of a fourth part. Moreover, it is singular good to rub tettars thoroughly with a pumish stone first, to the end that the root of *Sorrell* stamped and reduced into a liniment with vineger, might be applied afterwards therupon with better successe; as also the floure of * *Miseto* tempred & incorporat with quick-lime: the decoction likewise of *Tithymale* together with rosin, is much praised for this cure: but the herb *Liuertwort* excelleth all the rest, which therupon tooke the name *Lichen*: it groweth

* *Hibiscus*, some take it for the Hollyhock.

* *Hibiscus*, some read *Hibiscus*.

A groweth vpon stony grounds, with broad leaues beneath about the root, hauing one stalke and the same small, at which there hang downe long leaues: and surely this is a proper herb also to wipe away all marks and cicatrices in the skin, if it be bruised and laid vpon them with hony. Another kind of * *Lichen* or *Liuertwort* there is, cleauing wholly fast vpon rockes and stones in manner of mosses, which also is singular for those tettars, being reduced into a liniment. This herb likewise stancheth the flux of blood in green wounds, if the juice be dropped into them: and in a liniment, it serueth well to be applied vnto apostumat places: the jaundise it healeth, in case the mouth and tongue be rubbed and annointed with it and hony together: but in this cure the Patients must haue in charge, To bathe in salt water, to anoint themselves with oile of almonds, and in any case to abstain from all salads and rothearbs of the garden. For to heale tettars, the root of *Thapsia* stamped with hony is much vsed.

B As for the *Squintie*, * *Argemonia* is a soueraigne remedy if it be drunk in wine: *Hyssop* also boiled in wine and so gargarized: likewise *Harstrang* with the rennet of a Seale or Sea-calf, taken both of them in equall portion: moreover, Knot-grasse stamped with the pickle made of Cackrebs and oile, and so gargled, or els but held only vnder the tongue: Semblaoy, the juice of *Cinquefoile*, being taken in drink to the quantity of three cyaths: this juice besides, in a gargarine, cureth all other infirmities of the throat. And to conclude with *Mullen*; if it be drunk in water, it hath a speciall vertue to cure the inflammation of the amygdals or almond kernels of the throat.

* *Onocoma*, some call it *Onocoma*.

* *White* some take to be wild Poppy, call it *Rouelle*.

CHAP. V.

¶ Receipts for the scrophulous ar wens called the Kings euill: for the paines and griefes of the fingers: for the diseases of the breast, and namely for the Cough.

Plantaine is a soueraigne herb to cure the Kings euill: also *Celendine* applied with hony and hogs lard: so is *Cinquefoile*. The root of the great *Clor-bur* serueth for the same purpose, if it be incorporat with hogs greafe, so that the place after it is annointed therewith, be couered with a leafe of the said bur laid fast vpon it: in like manner *Artemisia* or *Mugwort*: also a *Mandrage* root applied with water, is good for that purpose. The broad leaved *Sideritis* or *Stone-sauge*, being digged round about with a spike of yron and taken vp with the left hand, and so applied vnto the place, cureth the kings euill; provided alwaies, that the Patients when they be healed, keepe the same herbe still by them, for feare least it being replanted againe by these Herbarists (such is the malicious force of some of them as I haue already shewed) the malady returne and be as bad as it was before: the like caueat I find giuen vnto them, who are cured of this disease either by *Mugwort* or *Plantaine*. The herb *Damaconium*, called likewise * *Alisma*, if it be gathered about the Summer solstead, applied vnto the foresaid wens with rain water, is singular good for them; for which purpose, the leaues are to be stamped, or the root bruised and incorporat with hogs greafe, and so applied in a liniment; with charge, That the place be couered with a leafe of the same: in which manner prepared and vsed, it serueth to allay all pains in the nape of the neck, and to keepe downe or dissipat the swelling in any part of the body. There is an herb growing commonly in meadows, called the *Quise*, with a white floure. & partly inclining to a red, which if it be ioined with *Mugwort* in an ointment, is thought to make the medicine far more effectual for the kings euill. *Condurdum* is an herb of smal continuance, for about the Summer solstice it sheweth a red floure and soon sheddeth the same: which (as they say) if it be hanged about the neck, represseth and keepeth vnder the foresaid disease: the like doth *Vertuaine* together with *Plantaine*, vsed and worne in the same manner.

Touching all the accidents happening to the fingers, and namely the excrescences & risings of the skin about the roots of the nailes, called in Greeke *Prerygia*, *Cinquefoile* is a singular good herb for them.

F Amongst all the infirmities of the breast, the cough is most troublesome and grievous, for which, the root of *Panaces* in sweet wine is a soueraigne remedie. The juice of *Henbane* is excellent for them also that reach vp blood out of the breast: and the very smoke thereof as it burneth, is as proper for them that cough. In like manner, *Scordotis* beeing dried and made into powder, afterwards mingled with cresses and rosin, and so reduced into a liquid confection or

* *Alisma* in some readings.

lochoch, cureth the cough. The said herb taken simply by it self alone, raiseth tough flegme out of the brest, and causeth it to break from the Patient with ease. The like effect hath Centaury the greater, yea though a man did bring vp blood: for which infirmity, the juice of Plantain also is thought to be singular. Betony taken in water to the weight of three oboli, is of great force against the spitting of blood, and raising vp of filthy matter out of the chest. The root of the great bur hath the like vertue, if it be eaten to the weight of one dram with 11 Pine-nuts. The juice of Harstrang, as also Galangale, is good for the pain in the brest, and therefore they go both of them into preseruatues and antidotes which serue for counterpoisons. The Carot likewise helpeth those that cough, like as the herb Scythica (which is the wild Caraway;) for beeing drunk to the weight of 3 cyaths in sweet wine cuit, it is generally good for all diseases of the brest, for the cough, and helpeth such as fetch vp filthy and rotten matter.

CHAP. VI.

¶ Of Mullen or Lungwort: of Calalia: of Folefoot called Tussilago or Bechium, and of Sange: herbs all appropriate for the cough.

Mullen or Lungwort with the yellow golden floure, being in like maner taken to the same quantity, eases the foresaid infirmities. Certes this herb is of that efficacy in these cases, that if a drench thereof be giuen to horses, which not onely haue the cough, but also be broken winded, it wil help them: the same effects I find attributed to Gentian. The root of Calalia foked in wine and chewed, is good not onely for the cough but also for the infirmities in the throat. Take 5 branches or slips of hyssop, and two sprigs of rue, with 3 figs, seeth these together, it is an excellent drink for to discharge the brest of flegme that stuffeth it. Folefoot, called in Greek Bechion, that is to say in Latin *Tussilago, doth appease the violence of the cough. Two kinds there be of this herb: the wild, which wherefoeuer it is seene to grow, sheweth that there is water vnder it: a thing that they know well enough who seek for springs, for they take it to be an assured sign and direction to water: it beareth leaues like to Iuy, but somewhat bigger, either 5 or 7 in number, which vnderneath or toward the ground be somewhat whitish, but aboue in the vpper side, of a pale colour, without floure, stem, or seed, and the root is but small. Some would haue it and Chamfeuce both, to be one and the same herb called by diuers names: take this herb, leafe and root together, when they be dried, set all on fire and receiue the smoke by a pipe, as if you would suck or drinke it downe, it is (they say) a notable medicine to cure an old cough, but between every pipe you must sip a pretty draught of sweet wine. The second Bechion some would haue to be called Saluia, an herb like vnto Mullen: stampe the same, and let the juice run through a streiner, which being made hot, drinke it for the cough and pain in the sides. This herb likewise is very effectual against scorpions & sea dragons. Also an inunction made therewith and oile together, is commended much for the sting of serpents. A bunch of hyssop sodden with three ounces of hony, is a fine medicine for the cough.

CHAP. VII.

¶ For the paine of the sides and breast: for those that cannot draw their wind but sitting vpright: for the paine of the liver: the heart ach: for the lights: difficulty of vrine: the cough: the breast: vlcers: for the eyes: for the flux of the belly, occasioned by a feeble liver: against immoderat vomits: for the yex, the pleurisie, and all griefes of the side.

Lungwort or Mullen drunke in water with Rue, is very good for the pain of the sides and the brest: for which purpose also, they say, that powder of Betony is as good, if it be taken in water wel warmed. The juice of Scordotis is holden to be a great corroboratiue of the stomack: so is Centaury also & Gentian, drunk in a draught of water. Plantain either eaten alone by it selfe, or with a gruell & broth of Lentils, or els with a frumenty potage made with wheat, is comfortable to the stomack. Betony, although otherwife it lie heauy in the stomack; yet if one either chew the leaues, or drinke them in some broth, it helpeth much the defects & infirmities thereof. In like case Aristolochia if it be taken in drinke. Also Agaricke chewed drie, so as betwixt whiles the patient sup a little of pure wine of the grape, hath like vertue: as for Nympha

A phrea or Nemphar synnamed Heraclia, it strengtheneth the stomacke, applied outwardly in a liniment: euen so doth the juice of Harstrang. For the hot distemper of the stomacke, it is good to lay vnto it the herbe Flea-wort or Coryledon, otherwise called Vmbilicus veneris, stamped with fried Barly meale into a cataplasme: or els to take Iubarb, *i. Sengreen*, to the same effect. The herbe Molon hath a stem * chamfered or channelled along: soft leaues, & those small: a root foure fingers long, in the * end whereof it beareth an head like vnto Garlick. Some call it Syron. Taken in wine, it helpeth the stomack and difficulty of drawing breath: In which cases the greater Centaury is singular, if it be reduced into a lochoch or liquid electuary. Plantain also eaten any way, either in a green-sauce or sallad. This composition is reputed a soueraign medicine, Take of Betony stamped the weight of one pound, of Atticke hony as much, incorporate them together, and hereof drinke euery day the quantity of halfe an ounce in some conuenient liquor, or in water warm. Aristolochia or Agarick are soueraigne meanes to be vsed in these infirmities, if one drinke the weight of three oboli thereof, either in warme water or asses milke. The herb Cissanthemos is good to be drunk for those that be streight winded, and must sit vpright when they draw their breath. In the like case Hyssop is commended: as also for pursuenesse and shortnesse of wind. The juice of Harstrang is an ordinary medicine for the griefe of the liuer, the pains also of brests and sides, in case the Patient be cleare of the ague. As for Agarick, it helpeth all such as spit blood, if the powder thereof, to the weight of one Victoriat, be giuen in five cyaths of honied wine. Of the same operation is Amomum. But particularly for the liuer, the herb Teueria is thought to be soueraign, if it be taken fresh & green to the weight of foure drams in one hemine of water and vinegar mixed together. One dram of Betony giuen in three cyaths of warm water, or in twain of cold, is thought to be a singular cordiall. The iuice of Cinquefoile helpeth all the imperfections of the liuer and lights, it cureth them that voyd or reach vp blood, and generally it serueth for al inward corruptions and distemperatures of the whole masse of blood. Both Pimpernels be wonderfull medicinable for the liuer. Fumiterre the herb whosoever do eat, shal purge choler by vrine. Galangale is helpfull likewise to the liuer, to the chest also, and the midriffe or precordial parts. The herb Caucon, named also * Ephedra, and by some Anabasis, groweth ordinarily in open tracts exposed to the wind: it wil clime vpon trees, and hang down from their boughs and branches. Lease it hath none, but is garnished with a number of haire which are no other but rushes indeed full of ioints and knots: the root is of a pale colour. Let this herb be beaten to poudre, and giuen in red wine that is greene and hard, it is good for the cough, for the shortnesse of wind, and the wrings of the belly: it may be taken also in some other supping, whereto it were conuenient to put wine. In like sort the infusion of one dram of Gentian which hath lien steeped the day before, may be very wel taken in three cyaths of wine for those purposes. Herb Benet or Auens hath a small root of a blackish colour, which hath a good sent: this herb not onely cureth the pains of the brest and side, but also discusserth all crudities proceeding of vnperfect digestion, by reason of the pleasant saour that it hath. As for Veruaine, it is medicinable vnto all the principall and noble parts within the body: good for the sides, the lungs, the liuer, and the breast: but most properly it respecteth the lungs; and namely, when the patient is in a phthisick or consumption, by the means of their vicer. The root of Bearfoot, an herb which I said was but lately found out, is a present remedie for swine, sheep, goats, & all such cattel, in case they be diseased in the lights, if it be but drawn crosse through any of their eares. The same ought to be drunke in water, and a peece thereof continually held vnder the tongue. As for any other part of this hearbe aboue ground, be it leafe, stalke, floure or seed, it is not yet certainly knowne, whether it be good or no for any purpose in Physicke. As for the kidneies, the hearbe Plantaine is good to be eaten; Betonie to be drunke; Agaricke also to be taken in drinke, like as for the cough. * Tripolium groweth vpon the rocks by the sea side, on which the sea-water beateth: so as a man cannot say, that it is either in the sea or the drie land: in lease it resembleth woad, but that it is thicker: the stemme is a span or hand-breadth high, forked, and diuided at the point: the root white, odoriferous, grosse, and hot in taste: when it is sodden in a frumenty pottage of wheat, they giue it with good successe to those that be diseased in the liuer: this is thought of some to be all one with Polium, whereof I haue spoken in due place. Symphonia or Gromphena, an herbe hauing leaues, some red, others greene, growing to the stem in order, one red and another greene, is a soueraigne medicine for such as reach and void vp blood, if it be taken in oxycrat, or vinegar & water mingled together.

* Striato haply for stristo, i. slender, as Orissus describes it. * Discorides describes his Moly with such a head vpon the top of the stem.

* B: these names hecal-leth also Horst-tale.

* A kind of Turbit.

* i. Cough-wort.

ouer, the herb Lauer, which loueth to grow in brooks and riuers, being either condite and preserved, or els sodden, allaieth the wrings of the belly. Water-specke or Pondweed, called in Greek Potamogeton, is singular good for the dysentery or bloody flux; for the flux also which proceedeth from a weak stomach. This herb beareth leaues like to Beets, but that they be lesse only and more hairy, or furred with a downe. A little it beareth about the water, and hath a peculiar property, which is refrigeratiue and astringent: the leaues alone be medicinable, & those that are good for the morralls in the legs: for cankerous and corroding vlcers, if they be applied in a cataplasme with hony or vineger. *As for the Phytician describeth this herb* * Potamogeton after another fort, namely with a small slender long leafe like vnto horse-haires, putting forth a long stem likewise, and the same smooth, growing also in waters. He vsed with the root of this herb to cure the Kings euill, and heale all hard tumors. This Potamogeton hath an aduerfatiue nature to Crocodiles also, and therefore they who hunt after them, carry this herbe ordinarily about them. In like maner Achillea stoppeth a lask. And the same effects worketh Statice, an herb running vp commonly in feuen stems, in the top bearing buttons or heads resembling Roses. * Ceratia beareth but one leafe, and hath a knotty and great root, which is good to be eaten for to cure the lask, occasioned by the feeble stomacke, and the bloody flux, proceeding from the vlcer of the guts. Lions-paw, commonly called * Leontopodium, by some Leucocoron, by others Dorypetron, and Thorybetron, hath a root which bindeth the belly, and yet notwithstanding purgeth choler: if it be taken to the weight of two denarij Roman, in mead or honied water. This herbe groweth in light and lean champion grounds. It is said, that if the seed thereof be taken in drinke, it causeth strange visions and fantasticall dreames. Harefoot, which the Greekes name Lagopus, drunke in wine, bindeth the belly: but if the Patient be in an ague, it would be taken with water: being applied and bound vnto the shere, it representeth the tumors and risings in those parts: an herbe this is growing vsually among corne. Many there be, who for the dangerous bloudie fluxe that is thought incurable, commend highly aboue all other herbes, Cinquefoile, in case the Patient drinke the roots thereof boiled in milke: and the like opinion they haue of Aristolochia, in case there be taken of the root to the weight of one vnguldr in three cyaths of wine. Now this would be noted by the way, that in these cases of a toriat in three cyaths of wine. Now this would be noted by the way, that in these cases of a toriat in three cyaths of wine. Now this would be noted by the way, that in these cases of a toriat in three cyaths of wine.

* Myriophyll. aquaticum. Dodon.

* Dodon. Ophio. Ruff. a. or. Ad. ders. to. rug. * Our. la. des. Manile.

* Dact. ch. m. p. i. us. maru. el. l. e. th. how. this. may. stand. and. yet. we. see. it. ordi. nary. in. the. cure. of. dysen. teries. and. out. ragious. Diar. rhies. to. purge. choler. with. Rubarbe. My. rabolanes. &c. and. with. them. also. to. bind.

* Which some take for ground Iuic.

* Here Pliny is deceived: for it is a kind of lace winding about Thyme, as Dodon. about Flax.

A Nempur taken in some hard astringent or wine, * gently purgeth the belly. Also, Pycnocomon is laxatiue: an herb this is like vnto Rocket, but that the leaues be thicker in substance, and * grow more thin: it hath a round root, and the same yellowish, and sending much of the earth: the stem is foure cornered, of a mean height, small and slender, and the floure much like to that of Basill. Found it is ordinarily in stony grounds. The root of this herbe drunke in mead, to the weight of 2 deniers, doth euacuat downward by the belly, both cholericke and also flegmatick humors. The seed causeth troublesome and vnquiet dreams, if one drinke a dram thereof in wine. Fumiterre also * consumeth and dispatcheth the kings euill. Polypodium (which we call in Latine Filicula) because it is like vnto Fearn, purgeth choler. The root, which is only medicinable and in vse, is full of hairs, of a greenish colour within, as big commonly as a mans little finger: full of hollow concavities it is, representing those holes that the fishes called Polyopi haue about their feet or clees: sweetish it is in tast, and groweth either vpon rocks, or * else at the foot of old trees. After that this root hath bin wel soaked in water, they vse to presse the iuice forth of it; or the same may be shred & minced smal, strewed among porbeards either of Beets or Mallows; yea, and put into the pot with them: or els tempered in some salt sauce, or sodden in broth: a fine medicine and a safe, gently loosing the belly, though the patient were in an ague: it doth euacuat choler and flegme both: but somewhat offensive it is to the stomach. The powder of it dried, conueighed vp into the nostrils, consumeth the ill-fauoured sore within, called Polypus or Noli-me-tangere. It * floureth, but seedeth not. Moreover, Scammonie also ouerturns and hurtheth the stomach, vnlesse two drams of Aloe be put vnto as many oboli of it: for then it purgeth choler, and sendeth it down by the belly. Now this Scammonie is the iuice of a certain herb (called likewise Scammonea) which brancheth and tufteth immediatly from the root: the leaues be fat, white, and made triangle wise: the root thick, moist, and in handling wil make ones stomach to rise, and be ready to heaue. It loueth to grow in battle grounds, and those of a white leere. About the rising of the great Dog-star they vse to make an hollow trough in the root as it groweth; to the end, that all the moisture thereof may fall and gather into it: which liquor being dried in the Sun, is wrought and made into bals or trochisks. The root it selfe also is commonly dried, or at leastwise the rind thereof. In regard of the country where it groweth, that is commended most which cometh from Colophon, Mysia, and Priene: but if you respect the form, and look of it, chuse that which is neat and clean, resembling as neare as possibly may be, strong Oxe glue, spongeous or fitulous, full of holes or passing small pipes. If you go by other qualities, take that which wil soon dissolve or melt: which also hath a strong and stinking smel, clammy and gummy, turning into a whitish liquor like milk, if you taste it at the tongues end, exceeding light in the hand, and when it is resolved, growing to a whitish colour. And yet this property you shall see in that Scammonie which is sophisticated: and that yv is may soone be done, for do but take the meale or floure of Eruille and the iuice of the sea Tithymal (& such is that commonly which cometh from Iudaea) it wil counterfeit the right Scammony: but such stuffe as this offendeth the throat, and is ready to choke or strangle as many as vse it. Howbeit this may be soon found by the very tast only: for the Tithymal setteth the tongue in a heat as if it were a bulb root: and is not good to purge, whether a man take it fasting or full. As for the true and sincere Scammony, they were wont to exhibit it for a purgation euen simply by it self alone in a draught of mead with some salt, and the dose was four oboli. But it was found to do the deed best, and most effectually taken with Aloe: so that the patient, when it began once to worke, took a pretie draught of sweet honied wine. Furthermore, the root if it be boiled in vineger to the consistence of hony, maketh a singular liniment for to annoint the leprosie; yea, and in case of head-ach it is found good to annoint the head with it & oile together. As for the Tithymal aforesaid, our countrymen here in Italy, some call it Laetaria, as one would say, the Milke herb; other Lactu caprina, i. Goats Lactuce. It is commonly said, that with the milke or iuice of these Tithymals, a man may write vpon the skinn of the body: for draw any letters therewith and strew ashes or dust thereupon, when they be drie, they will appeare very legible.

* Crinis contra-rium vultu. r. s. for it is a binder. * how is it then called Pycnocomon?

* I see not how this should stand here.

* Yea & in the head of old dodder Oke.

* I beareth neither floure nor seed.

* or Spurred. * Ramia, rather esulibus, stems, out of Dio. cor. * Ruge. Dis. f. hath succ. f. atly. i. full of sap.

Nem.

atly from the root, which hang downward inclining to the earth: but in the top it hath an hairy **G** tuft or head in manner of ruines. This groweth in rough places and rocks by the seas side. The seed together with the hairy bush that it hath, they vse commonly to gather in Autumn: which after it be dried in the Sun, they stamp and then lay vp against their need. As for the iuice, men draw it about the time that Quinces begin to ripen and gather a downe about them: for then they breake the sprigges and tender crops of the plant, out of which there issueth the iuice or milk, which they receiue either in Erule floure, or els vpon figs, that it may dry with them together. Now it is sufficient to let fise drops fall vpon euery such fig: for this opinion they haue, that looke how many drops light vpon a fig, so many stools shall hee haue who taketh that fig in a droppe, to purge waterish humors. But in the gathering of this iuice or liquor, great heed must be taken, that no drop of it touch the eyes. There is a iuice also pressed out of the leaues being bruised and stamped, but not so effectuall as the former. The decoction of the branches also is vsed to the same purpose. And the seed being sodden, serueth to the making of certaine pills confectioned with hony, which are highly commended for purgatiues: the same seed * enclosed within wax, is good to be put into hollow teeth when they ake: in which case also, a collutium made of the root boiled in wine or oile, is singular good, if they be washed therewith: With the iuice of this herb there is a liniment made for tetter and ringworms: and some there be who drink the same for to purge both vpward and downward, for otherwise an enemy it is to the stomach: in which portion if there be put some salt, it doth euacuat fleagme, but with salt perre it voideth cholerick humors. If the patient haue a mind to purge by seage, he shal do wel to drink the iuice of Tithymall in water and vineger mingled together: but if he be disposed to vomit, it is better to drink it in cuit or mead. The ordinarie dose is three oboles thereof in a portion. But the better way is to take the figs prepared as is before said, after meat: and euen so taken, in some sort the iuice doth sting the throat and set it on fire. For to say a truth, of so hot a nature it is, that alone of it selfe, being applied outwardly vnto any part of the body, it raiseth pimples and blisters no lesse than fire, in which regard, it is vsed for a caustick or potentiall cauterie: the second kind of the Tithymall, is knowne by the name Myrsinites, which others call Caryites: The reason of the one name is this, for that it beareth sharp pointed and prickie leaues in manner of the Myrtle, but that they be somewhat more tender: and the same groweth in rough places like as the former. The bushy heads or tufts of this Tithymall, would be gathered when Barly beginneth to swell in the eare: & so they be let to take their drying in the shade 9 daies **K** together: for in the Sun they wil be withered in that space. The fruit which this plant beareth doth not ripen all together in one season, but some part thereof remaineth against the next yere: and the said fruit is called the Tithymal nut, which is the cause, that the Greeks haue imposed vpon it that second name Caryites. The proper time to gather and cut down this herb, is when corn is ripe in the field, and ready to be reaped or mowed. Which beeing washed, must afterwards be laied forth a drying: & so they vse to giue it with two parts or twice as much of black Poppie, yet so as the whole dose may not exceed one acetable. This Tithymall is nothing so strong a vomitory as the former, no more be the rest, whereof I will speak anone. Some there be who giue the leaues also with black poppy after the foresaid proportion: & the very nut or fruit it selfe alone in mead or cuit, or els if they put any thing thereto, it must be Sefama: and truly in this manner it fendeth flegmatick & cholerick humors away by seage. This Tithymal is singular for the sores in the mouth. But for cankerous and corrosiue vlcers indeed which corrode deep into the mouth, it is good to chew and eat the same with honey. The third kind of Tithymall is called Paraluis or Tithymalis. This herb puts forth round leaues: riseth vp with a stalk a span or handfull high: the branches be red and the seed white, which ought to be gathered when the grape beginneth to shew [black] vpon the vine. And being dried and made into powder, is a sufficient purgation, so it be taken inwardly to the measure of one acetable: the fourth, kind is named Helioscopium: the leaues whereof resemble Purcellane, and from the root it puts forth 4 or 5 small vpright branches, which be likewise red and half a foot high: the same also be full of iuice or milk. This herb delighteth to grow about town sides, bearing a white seed, where in Doues & Pigeons take exceeding great pleasure: which also is ordinarily gathered when the grape maketh some shew of ripening. It took this name Helioscopium, for that it turns the heads which it beareth, round about with the Sun. Halfe an acetable thereof taken in Oxymel, purgeth cholier downward. And in other cases vsed it is, like as the former Tithymall named **L** Characias.

* or rather the seed or milk is to be put into the tūty and hollow teeth: and the rest which be found are to be defended with wax, according to Discoideus.

So Theophrast.

A Characias. The fifth, men call Cyparissias, for the resemblance that the leaues haue to those of the Cypresse tree: it riseth vp with a double or threefold stem, and loweth to grow in champion places: of the same operation and vertue it is, that Helioscopium and Characias before named. The sixth Tithymal, is commonly called Platyphyllos, although some name it Corymbites, others Amygdalites, for the resemblance that it hath to the almond tree: there is not a Tithymal hath broader leaues than it, which is the reason of the first and vsuall name Platyphyllos: it is good to * kil fish: it purges the belly, if either the root, leaues, or iuice, be taken in honied wine or in mead, to the weight of foure drams: a speciall vertue it hath to draw water downward from all other humors. The seuenth is called commonly Dendroides, and yet some giue it the name Cobion, others Leptophyllon: ordinarily it is found growing vpon rocks, and of all others carrieth the fairest head: likewise the stems be reddest, and the seed sheweth in most plenty: the effects be all one with those of Characias: as touching the plant called Apios Ischas or Rhabphanos-agria, i. the wild Radish: it putteth forth two or three stalkes like bents or rushes, spreading along the ground, and thoe be red, and the leaues resemble rue: the root is like an onion head, but that it is larger, which is the reason that some haue called it the wild Radish: this root hath a white fleshie substance within, but the skin or rind thereof is blacke: it groweth vsuall vpon rough mountains, and otherwise in faire greens * full of grasse. The right season to dig vp this root, is in the Spring, which being stamped and strained, they vse to put in an earthen pot, where it is permitted to stand, & look what it casteth vp and swimmeth aloft, they scum off and throw away: the rest of the iuice thus clarified, purgeth both waies, if it be taken to the weight of one obolus & a half in mead or honied water: and in that maner prepared, it is giuen to those that be in a droppe, the full measure of one acetable: the powder also of the root dried, is good to spice a cup for a purgation: and (as they say) the vpper part of the root purgeth * cholier vpward by vomit, whereas the nether part doth it by seage downward.

Now for the pains and wrings which oftentimes torment the poore belly: all the kinds of Panaces and Betony are singular to assuage and allay them plain, vnlesse they be such as are occasioned by crudity and indigestion. As for the iuice of Harstrang, it dissolueth ventosities, for it breaketh wind vpward and causeth one to rise: so doth the roots of * Acorus, also carors, if they be eaten in a salad after the maner of * Lettuce. For the infirmities proper to the guts, & namely the worms there breeding, Ladanium of Cypresse is soueraigne to be taken in drinke: in like **D** maner the powder of Gentian drunk in warm water, to the quantity of a bean: Plantain likewise hath the same effect, if there be taken of it first in a morning to the quantity of 2 spoonfulls, and of Poppy one spoonfull, in 4 cyaths of wine not very old: the same medicine may be giuen also last at a night to bedward, with some addition of sal-nitre or fried barley meale, if it be long after meat: and one hemine of the iuice thereof is singular for the cholique, if it be ministred in a clyste, though the patient were in an ague. In cases of the spleene, it is good to drink 3 oboles weight of Agarick in one cyath of old wine, for it cureth the spleen: and of the same operation is the root of all sorts of Panaces, taken in honied wine: but for the accidents of the spleen, Teucrion hath no fellow, if it be taken either dry in powder, or boiled, to the quantity of one handfull in 3 hemines of vineger: and the same herb maketh a soueraigne salue for green wounds to **E** be applied with vineger; or if the patient cannot indure it, with a fig or water in stead of vineger. Polermonia likewise is a good herb for the spleen, to be drunk in wine: so is Betony, taken to the poise of one dram in 3 cyaths of oxymell: and Aristolochia is likewise respectiue to this part, in case it be giuen vnto the patient as against the poison of serpents. If the Patient continue the eating of Argemonia seuen daies together with his meat, it will (as they say) in that time consume and wast the swelling spleen: & Agarick taken to the weight of 2 oboli in oxymell, is effectuall that way. The root of Nymphaea Heraclia or Nenuphar drunk in wine, is able of it selfe to consume the same. Cissanthemos is an excellent herb for the spleene or milt: if a man take a dram of it twice a day in two cyaths of white wine, and hold on that course for fortie daies together, it wil (by report) rid away the diseased spleen by vrine, to which purpose, the decoction of hyssop with figs serueth very well: euen so doth the decoction of Lonchitis, if it be taken before it spindles and run vp to seed: also the root of Harstrang boiled, is good for spleene and kidneys. Acorum, if it be taken in drinke, consumeth the milt.

For the Midriffe and Hypochondriall parts, or the small guts liuing in the flanke vnder the short ribs, * Radish roots be singular. The seed of water Betony, if it be drunke thirty daies together, **Z**

* If it be pūned into powder & shewed on the water, as saith Discoideus.

* Herbas: Theophrastus hath many names: this is to say, cragg coral: it is the same that Plinius called Teucrium: it is called also, Acorus, and is the same, as saith Discoideus.

* Which some take for Galangal, or for our Calamur. * With vinegre and oile.

Radices.

gether, the weight of one denarius at once in white wine, is singular in that case: the powder of Betsy taken in drink with hony and vinegar of Squilla, is commended for that purpose: as also the root of Lonchitis drunk in water; and Iucium applied as a liniment.

Scordum incorporat with wax, and Agarick with the powder or floure of Fenigreek, help the infirmities of the bladder, and namely, the intollerable pains of the stone and grauell, as I haue before said. Polemonia drunk in wine; and in like manner Agaricke, is good for that purpose: the root or leaues of Plantaine taken in sweet wine cuit; also Betonie, prepared in that manner as it was appointed for the disease of the liuer, be remedies for the infirmities of that part. Betonie also giuen in drink and applied in a liniment, healeth a rupture; and the same is most effectually in curing the strangury: some prescribe and giue counsell to drink Betsy, Veruaine, Yarrow, or Millefoile, of each a like portion in water, as an excellent remedy for the stone and grauel. And well knowne it is, that for to ease the strangury and remove the cause thereof, Dictamnus is an approued medicine: so is the decoction of Cinquefoile, if it be boiled in wine to the consumption of a third part, found by experience to be an vndoubted remedy in that infirmity: the same also is singular good to be applied in that rupture where the guts be false downe. The vpper root of Glader or Flagg, causeth young infants to make water, if it be laid to the bottom of the belly: the same giuen inwardly with water, cureth those that are burst and haue their guts slipped downe; and helpeth the infirmities of the bladder in an outward liniment. The iuice of Harstrang healeth little children who are bursten; and of Fleawort there is made a good ointment to annoynt their Nauell, when it beareth out ouermuch. Both the Pimpernels do prouoke vrine: so doth the decoction of Acorus root: the very root it selfe also beaten into powder, and taken in drink, worketh the like effect; and besides, healeth all the accidents of the bladder. Cotedon or Vmbellicus Veneris, both herb and root, breaketh the stone, and expelleth it by grauell; being otherwise singular good for all inflammations of the genitall parts or members of generation, if the stalks and seed be taken with Myrrhe, of each a like quantity: Walwort stamped together with the tender leaues thereof, and so drunk in wine, driueth out the stone: the same applied outwardly cureth the * accidents befalling to the cods. Groundswell, with the powder of Frankincense and sweet wine reduced into an ointment cureth the inflammation of the sayd cods. The root of Camfrey brought into a liniment, staierh the rupture whereby the guts come downe: and white Hypocistis, representh the cancerous sores in those parts. Semblably Mugwort is singular to be giuen in sweet wine, for the stone and strangury. The root of Nenuphar or Nymphaea Heraclia taken in wine, assuageth the paine and grieue of the bladder: of the same power is * Sampier, so highly commended by H. pprocates: now is this one of the wild woorts which are vsually eaten in salads: and certes, this is that very herbe which the good country wife Hecale forgot not to set vpon her boord in a feast that she * made (as we may read in Callimachus the Poet:) And what is it but a kind of garden Baris? It groweth vpon with one stem halfe a foot high, or a span at most: the seed is exceeding hot, round, and odoriferous like vnto Rosemary: if it be dried, it bursteth, and hath within a white kernell, which some call Cachrys. The leaues be fatty, and of a grayish white in manner of the oliue leafe, but that they be thicker, and saltish in tast: roots it hath three or foure, of a finger thickness: it groweth vpon the sea coast among rocks and cliffs. This herbe may be eaten, raw or boiled, it skilleth not how, with Beets, Coles, and other such woorts; and in tast likewise it is aromaticall and pleasant: it is vsually preferred and kept condite in a kinde of pickle: and the principall vse that it hath, is to cure the strangury, if either leafe, stalk, or root, be drunk in wine: also, being thus taken, it maketh folke look with a more lovely, & cheerful colour: but if ore be too bold with it, & vse it not with moderation, it breedeth ventosities. The decoction of Sampier maketh the body soluble, and is diureticall, for it mightily draweth water from the kidneys. In like manner, the powder of dried Althaea or Marsh-Mallow, drunk in wine, cureth the strangury, and casteth them that pisse drop-male, which it wil do more effectually, if the Carot be ioined withall: the same is wholesome for the spleen; and a counterpoison against serpents, if it be taken in drink. If the powder thereof be strewed and mingled among the barley which is giuen in Prouander vnto cart horses and such like, it helpeth them when they run at nose with the glanders, and stale drop by drop. Touching the herb Anthyllion, it is as like as may be to Lentils, which if it be drunk in wine, cureth all the infirmities of the bladder; and namely, when there issueth forth bloud with vrine: there is another hearbe comming neare to it in name; to wit, Anthyllis, like vnto Iva Muscata, or Chamapitys,

* To wit, when they be hard or swollen.

* Or Crestmarine.

* To prince Thibet.

A mæpitys, carrying purple flours, senting strong, and hath a root like to Cichory, which is good in these cases. But it seemeth that * Brooklime, called otherwise Cepæa (an herbe resembling Purcellane, but that the root is blacker, and good for nothing in Physick, growing vpon the sandy shore, and hauing a bitter taste) is better for the said infirmities than the former named Anthyllis; for if it be taken in wine with the root of Sperage, it is excellent for the diseases of the bladder: of the same operation is * Hypericon, which some call Chamapitys, others Corion. This herb * shooteth forth many branches, which be small and slender, of a cubit in length, and red withall: in leafe it resembleth rue; the smel is quick, hot, and piercing: the seed which it beareth within certain cods, is black, and the same ripeneth together with barley. The nature of the seed is astringent: it doth increaseth and thicken humors, and stoppeth a lask: vrin it prouoketh; and being drunk in wine, scoureth away the stone and grauell in the bladder. A second Hypericon there is, which some call Coris, in leafe it resembleth * Tamarix, vnder which it gladly groweth, but that the leaues be more fat, and not so red: it groweth not about a * span high: odoriferous to smell vnto, and of a mild sweet tast, and yet * sharp withall. The seed is hot, and therefore causeth ventosities, and * inflation in ruptures: howbeit, vnto the stomack it is not hurtful: and singular good for the strangury, in case the bladder be not exulcerat: drunk in wine, it cureth the pleurisie. Moreover, for the bladder and the diseases thereof, Maiden-haire made into powder together with Cumin, and giuen in white wine, is a soueraigne remedy; also Veruaine, sodden leaues and all, vntill the third part of the liquor be consumed, or the very root only thereof taken in honied wine hot, expelleth the stones and grauel in the bladder. In like maner the herb C Perpressa, which groweth at Aretium and in Sclauonia, being boiled in water from 3 hemines to one, and so taken inwardly as a drink, is an appropriate medicine for the bladder. Clauer or three leaved grassie taken in wine; Camomile likewise * drunk, is good for the same. Moreover, Anthemum expelleth the stone; an herb this is, which putteth forth immediatly from the root five small leaues, and two long stems, with a red rose colour floure: the roots stamped alone, are as effectual in this case as green * Lauer. As for Silaus, it groweth along those riuers which run continually and be neuer dry, especially such as glide vpon sand & grauel: it riseth to the height of a cubit, and resembleth garden Parsley: they vse to seeth it after the maner of * Soure-docke, and so prepared, it doth much good to the bladder, which, if it be excoriat and scabbed, the root of Panaces will heale it; for otherwise it is hurtful to that part. The herb called * Malum Erraticum [i. as one would say, the wandring poison, or apple] it expelleth the stone, if one pound of the root be thoroughly sodden in a congius or gallon of wine, vnto the consumption of the half, so that the patient take thereof for three daies together one hemine at a time; and that which remaineth of the decoction, in wine, with Lauer & sea-nettles. Also Carots and Plantaine feed taken in wine, driueth down stone and grauell. The nettle called Fulviana (an herb well knowne to them especially that handle it, and which took that name of him who first found out the vertue thereof) if it be stamped and drunk in wine, prouoketh vrine.

Scordium is singular for the swelling of the genetours or cods. Henbane is good for the diseases of the members seruing to generation. The iuice of Peucedanum [i. Harstrang] incorporate with hony, like as the seed also taken inwardly, helpeth those who are pained with the strangurie; likewise Agaricke, if three oboli thereof be drunk in one cyath of old wine: the root of Trifoile or Clauer giuen to the poise of two drams in sweet wine: and one dram of Daucum, id est, Carot [either the herb, root, or seed, haue the like effect].

Such as be troubled with the Sciatica or gout in the huckle-bone, finde remedy by a plaster or cataplasm, made with the seed and leaues both, of Madder; also with a drink of Panaces: likewise if the place be well rubbed with Polemonia, and bathed with the decoction of the leaues of Aristolochia, it finds much ease thereby. The broad sinew or cord at the end of the muscles which is called in Greek Platys, likewise the shoulders if they be pained, feeble sensible alleviation, by Agaricke, if the weight of three oboli be drunk in one cyath of old wine. Cinquefoile both taken in drinke, and also applied as a plaster, allaieth the paine of the Sciatica: so doth the herb Scammony boiled with barley meale. The seed of both the Hypericons drunk in wine, is proper for that malady.

The accidents of the seat or fundament, especially when that part is fretted or galled, a salue of Plantaine healeth most speedily.

The swellings or blind piles appearing like bigs or knuckles within the fundament, are cured with

* Becabungo.

* S. Tobus wort
* Surculace
frutice.

* Tamarix:
but Diof. farch
Erica, H. arch.
* Palma non al-
tis, ex Diof.
* Acutium.
* Inflationem
facit: caliter
ad inflationem
facit.

* Porum.

* Water cres-
ses.

* Otus acidum,
or rather, Otus
arum, i. Ali-
fanders.

* Some take it
for Aristolochia
the round,
(which in the
8 chap. of the
25 booke hee
named veneni-
terre Jothers
for wildings
or crabs.

with five-leave grasse: & if the said part be turned the insight outward, or displaced, there is not a better thing to settle and reduce it to the former state, than a fomentation with the Cyclamin or Sowbread root and vineger together. Pimpernell with the blew floure, restoreth the tiwill or fundament into the right place, if it be false downe and hang out of the body: and contrariwise, that with the red floure drieth it downe. Vmbilicus Veneris is of wonderful operation in the cure both of the blind piles, and the running hæmorrhoids. The root of *Acorus*, [*i. Galengale*] foddin in wine, stamped and brought into a liniment, assuageth the tumors or swellings of the cods. And *Cato* affirmeth. That whosoever haue the Ponticke wormwood about them, shall not be galled betweene their legs.

CHAP. IX.

¶ Of Penyrroiall and Argemone.

Others adde moreouer Penyroiall to the foresaid wormwood, & say, that if a man gather Peniroyall fasting and bind it fast to the reins and smal of the back, he shal feel no griefe in the share, or if he were pained already in that part, shall find ease thereby. * Inguinaria, which some name Argemony, is an herb growing euery where amongst bushes, briars, and brambles, which if it be but held in the hand, is thought to be excellent good for the accidents that befall the groin. Panaces made into a cataplasme with hony, healeth the flat biles and botches that arise in the emunctories of the share : and the like effect hath Plantaine, applied with salt, sue, leafe, & the root of the great clor-bur, like as in case of the kings euill : euen so is * Damasonium to be vsed. As for Taperwort or Mullen, if leafe root and all be stamped, with some sprinkling of wine among, and be afterwards lapped within a leafe of the own, and so heat vnder the embers & laid to the grieved place hot, it is very good for the same purpose : & some asfirm vpon their own knowledge, by the experience that they haue seen, that this cataplasme wil work much more effectually, if a yong maiden all naked haue the applying of it to the said bile ; prouided alwaies, that both she and he the patient be fasting; also that she touch the sore or impostume with the back-side of her hand, & in so doing say these words following, *Necat Apollo pestem posse crescere quam nuda virgo refingnat : (i.)* Apollo wil neuer suffer, that a botch which a naked virgin thus cureth shall possibly grow farther : which charm she must pronounce thrice, after the bath withdrawn her hand backe, and withall, both he and she are to spit as often vpon the floore, that is to say, euery time that she repeateth the foresaid spell. Furthermore, the root of Mandragoras being applied with water, healeth these botches : so doth the decoction of the Scanmionium root, reduced into a pulstiffe with hony. Also the herb Sideritis laid too, with old hoggs grease : last of all, Chryssipea, incorporat with fat sigs : where, by the way note, that this herb retaineth the name of him who first brought it to light.

CHAP. X.

¶ *Of the water-Rose, otherwise called Nenuphar. Of such herbs as either heat or coole the ap-
petite to lust and venery. Of Satyrion or Ragwort, * with the red
roots of Crategis and Sideritis.*

Nymphæa, which also is named *Heraclea*, if it be but once taken in drinke, disableth a man altogether for the act of generation (as I haue said before) 40 daies after: the same if a man drink fasting, or eat with his meat, freeth him from the dreams of imaginary *Venus*, which cause pollution. The root applied in a liniment to the genitals, doth not onely coole lust, but also keep down and repress the abundance of natural seed: in which regard, it is thought good to nourish the body and maintain a cleare voice. On the contrary side, the vpper root of *Glader* giuen to drink in wine, kindleth the heat of lust: like as the herbe which they call *Sampier* *Sauage*: as also wild *Clarie*, being stamped and incorporat with parched barley meale. But in this case wonderfull is the herb *Orchis* both male and female, and few be like vnto it, for two kinds there be of it: the one beareth leaues like vnto the oliue, but that they are longer, riseth vp with a stem foure fingers high, carrying purple floures, a double bulbous root formed like to a mans genitals, whereof the one swelleth and the other falleth by turns ech other yeare; and ordinarily it groweth neere the Sea side. The other is knowne by the name of *Orchis Scirapias*, and

* Some call it
Shadewort or
Godwort, o-
thers take it
to be wild
Tansie, and
some for
Rhuzis.
* Some take
it for *Fistula
pastoris*.

* Pestem, haply
by an aneth
but anem pesti-
lentialcm, a
plague forc.

εὐφραΐει.

...and

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A is taken to be the female: the leaves resemble lecke blades, the stalk is a span or hand-breadth high, and the flours be purple; the root likewise is bulbous & twofold, fashioned like to a mans stones or cullions; of which, the bigger, or (as some say) the harder, drunk in water, prouoketh the desire to venery: the lesser or the softer taken in goats milk, represseth the foresaid appetite. Some say it is leafed after the manner of Squilla or lea-onion, saue that the leaues be smother and smaller, and it putteth vp a stalk full of prickles or thorns: the roots wherof, do heale the fores in the mouth, and discharge the chest of fleame; but drunk in wine, do stop a laske. A power it hath also to stir vp fleshly lust, like as Satyrion; but this herb differeth from the other, in that it is diuided by joints or knots, and besides burtheth more, and is fuller of branches: the root is thought to be good for forcery and witchcraft: the same also, either by it selfe alone reduced into powder, or els stamped & incorporat with fried barley groats into a liniment, is singular good for the tumors and other risings and impostumes in the said priuie parts or members of generation. The root of the former Orchis giuen to drinke in the milke of an ewe bred vp at home of a cade lambe, causeth a mans member to rise and stand; but the same taken in water, maketh it to go down againe and lie. As for the Greekes, they describe Satyrion with leaues like vnto the red Lilly, but that they be smaller, & no more in number than three, which spring directly from the root: the stem smooth, a cubit high, naked and bare without leaues, and it hath withall two bulbous roots; of which the nethermore, which also is the bigger, serueth to get boies; the vpper (and that is the lesse) is as good to engender girles. They haue likewise another kinde of Satyrion, which they name Erythraicon, and it beareth certain grains or seeds resembling that of C * Chast-tree, or Agnus Castus, but that they be bigger and smooth: the root is hard and white within, the rind wherof is red, and in tast is somewhat sweetish: an herb ordinarily found (as they say) vpon mountains: and by their saying, the root is of that vertue, that if it be held onely in a mans hand, it wil cause the flesh to rise & incite him to the company of women; but much more will it set him in a heat if he drinke it in some hard and green wine: in regard of which propertie, the manner is to giue it in drinke to goats and rams, if they be vn lusty and nothing forward to leape the females. The Sarmatians likewise ministred a drench made with this herb vnto their stone-horses or stallions, when by reason that they are ouertrauelled and tired out of heart by continuall labour, they perceiue them to be slow and vnapt to couer mares, which defect the Greekes call by a proper and fit term Prosedamon. But say that one by taking of this root is ouer lusty and too much prouoked that way, the means to abate and quench the heat & strenght thereof, is to drinke mead or the iuice of lettuce. In sum, the Greeks generally when they would signifie any extraordinary wanton lust or appetite to venery, haue a pretty name for it and call it Satyrion. And euen so they haue giuen a denomination to Cratægonon, which is an herbe diuided by knots or joints, burtheth and spreadeth with a number of branches, the seed wherof is hot, and the root of no validity or vse in Physick: likewise they imposed vpon other the names of Arrhenogonum and Thelygonum; the seeds or graines of which resemble cods or cullions. Moreover, it is said, That whosoever haue about them the marow or pith of the Tithymal branches, shall be very prone and forward to the sports of Venus. *Theophrastus*, a renowned author, and otherwise a graue and modest writer, exceedeth in this point, and telleth vs of strange and incredible wonders; and namely, of a man who was able to company with women seuentie times together, by touching or handling one only herb; but he hath not put downe either the name or portraiture of that herb.

Sideritis the herb, if it be bound to the swelling and painfull veins called Varices in Latine, doth not only diminish their tumor, but also appease and take away their colour.

Touching the gout, the time hath bin when it was not so common a disease as now it is; and not only in our fathers and grandfathers daies, but euen in our age and within my remembrance it was no ordinary sicknesse here in Italy, as being a forraign malady and come out of strange countries hither to vs: for certainly if it had bin known to the Italians in old time, I doubt not but it would haue found a Latine name to be called by. Neither is the gout a disease incurable, as some haue beleued, for known it hath bin in some to haue worne away of it selfe without any medicines; but in many more, to haue been cured by the meanes of Physicke. Among the appropriate remedies for this malady, are to be ranged the roots of Panaces, applied in a cataplasme with raisins; the juice of Henbane or the seed, with the floure or powder of Selsama; Scordium laid too in a pulstesse with vineger; and the hearbe Iberis, as hath bene said before.

Howsoever
Dalecampius
and others
have laboured
to restore this
place after
this manner,
yet there re-
maineth some
confusion : by
intermingling
O chis and *Sa-
tyrian* toge-
ther, both in
their descrip-
tions and pro-
perties,

Vitis, Diosc.
hath wine, i. e. s^t,
Line or Flax;
not a² v.

Podagra (vsed
ordinarily in
Latine for the
gout, is a
Greeke name,
and signifieth
the griefe or
maladie of the
feet.

* Glader or
Flage.
* A. Fleawort.

* Angellidi,
Diole & such
as, Cuck-
le, &c.
* A. o.
* A. o.

Veruaine stamped and incorporat with hogs greafe, is good for the gout: so is the root of Sow-bread, the decoction wherof healeth kided heels, if they be bathed therein: the root of * Xiphion cooleth the hot gout; the seed of * Psyllium doth the same: Hemlock also, incorporat with Licharge or hogs greafe: but about all other, Housleek or Sengreen is right fouveraigne to be applied at the first assault or fit of the red gout (i. when it is occasioned by a flux of hot humors: and whether it be hot or cold gout, Groundswell tempered into a liniment with swines greafe, and so applied, is a very fit and convenient medicine: as also Plantain leaues stamped, with a little salt mixed among: and Argemontia punned in a mortar & applied with hony: moreover, Veruaine reduced into an vnguent, is singular in that case; yea and if the goutie feet be well foked in the decoction therof, much ease wil infue thereupon: also Lappago, an herb resembling * Pimpernell, but that it is fuller of branches, and tufted more with leaues, which also be rough, rugged, and wrinkled, yeelding a juice in taste more harsh, and in smell strong and vnpleasant: as for that of this kind which is * soft, they call Mollugo: like vnto which (but for the leaues that be more rough in handling) is Asperugo, wherupon it took the name. Now for the gout, let the Patient take every day 11 deniers weight of the juice pressed forth of the former Lappago in two cyaths of wine: but for this disease the most excellent remedy and that which rids it quite, is the sea-weed, which in Greeke they call Phycos Thalassion, and in Latine Fucus Marinus; an herb like vnto Lettuce, & commonly Murets & other shel-fishes lye bedded vpon these weeds, which being applied before they are dried, do cure not the gout of the feet onely, but also any disease of all other joints. Now of this Sea-grasse so named, there be found three kinds: the first is broad and large; the second longer, and somewhat red; the third hath curled and frizled leaues, which in Candy they do vse in dying of their clothes; but all are of one and the same operation in Physick. *Nicander* was wont to giue them in wine, as a counterpoison against the venome of serpents. Moreover, the seed of that herb which I named Psyllium, is singular good for the gout, if the same be well steeped in water; so that in every hemine of the seed there be mingled the quantity of two spoonfulls of Colophonian rosin, and one of frankincense. Finally, the leaues of Mandragoras be highly commended in this case, if they be stamped and incorporat with fried Barly groats into a cataplasme.

CHAP. XI.

¶ *Generall medicines and receipts for all the infirmities incident to the Feet, the Ankles, Joints, and Sinews: Item, the remedies for those diseases which possesse and trouble the whole body. Of the herbe Mirtbrida. Medicines for those that cannot sleep: and for the Palsie. Of cold fevers: and the ague that is incident to horses: of the Phrensie. Of the herbe Walwort and Housleek. Last of all of the Shingles or S. Anthonies fire.*

IF the feet be swoln about the ankles, the mud that is found in the bottom of waters, wrought and conccorporat together with oile, is of wonderful operation to allay the same. For the pain in the joints, or griefe of sinews, the juice drawn out of Centaury is passing good: in like manner, the herb Centaury. As for Betony, it is comfortable vnto the nerues, which run and spread behind ouer the shoulder-blades, the shoulders, the back-bone, the loins and hanches, if it be taken in * drink, after the manner as it was ordained for the liuer. Cinquefoile, is fouveraigne for the pain of the joints, if it be applied outwardly: likewise the leaues of Mandragoras made into a pulstesse with parched barley meale, or the root it selfe newly drawn out of the ground & stamped with the wild Cucumber, or els boiled in water, for the chaps that appeare in the feet or vpon the elbows, the root of Polypodie is singular good; for the griefe of the joints, the juice of Henbane reduced into an ointment with swines greafe, is a proper remedy: likewise the iuice of the herb * Amomum, together with the decoction: also Cotton-weed or Cudwort, boiled in water: or fresh gathered mosse foked in water and bound to the grieced place, and there kept salt without remouing, vntill it be drie: as also the root of the Bur called Lappa Boaria, drunke in wine. Sow-bread sodden in water, cureth the cluishi & angry kibes beginning to rise vpon the heels, and all other chilblanes and bloody fols occasioned by cold. Semblably, Vmbilicus Veneris applied with hogs greafe, healeth the foresaid kided heels: so do Crowfoot leaues; and the juice of Epithymum. Ladanum made into a salve with Castoreum, and so applied, fetcheth out the core of agnells or corns by the roots: the like effect hath Vervaine, if it be laied too with wine.

A wine. And now that I haue run through those maladies which are offensive to euery particular member, I purpose to write in the next place of such as occupy the whole body; and of the remedies common to them all, which I find to be these ensuing.

And first there presenteth it selfe vnto me the noble herb * Dodecatheos, wherof I haue spoken before as a fouveraigne remedy for those vniuersal diseases, if it be taken in drink. Next to it are the roots of all kinds of the Panaces, which are thought to be excellent, and principally for long and languishing maladies: like as their seed for the obstructions of the bowels and the inward accidents of the guts: for the pains generally of the whole body, the iuice of Scordium is right commendable, and so is that of Betony: which herb taken in drink, hath a peculiar property to mend the wan and leaden hew of body, reducing it to a more fresh and pleasant color. The herb * Geranium, which some call Myrrhis, others Merthrays, is like vnto Hemlocke, save that it hath smaller leaues, and a shorter stem, which also is round, of a sweet sent to the nose, and good fauor in the mouth, for so we Latines doe describe it: but according to the description of the Greeks, the leaues rather resemble the Mallow, but that they are whiter somewhat, the stalks of leaues between: * it brancheth out big at the distance of euery two handbreadths, howbeit, full little buttons or heads like vnto Crane-bills. Another kind there is of them leaved after the manner of passe-floures, or wind-floures, but that they be intailed or indented deeper: and a round root it hath fashioned like an apple, which is sweet in taste, and is an excellent restorative for all such as haue bin weakened and decayed in nature by long sickness, and this I take to be the true Geranium, which is a rare herb. A dram weight thereof drunke twice a day [first and last] in three cyaths of wine, is a singular medicine for the phthisicke. And in that order it is good for ventosities: and hath the same effect though it be taken raw. The iuice of the root is fouveraigne for the infirmities of the ears. The seed giuen in drink to the quantitie of 4 drams with pepper and Myrrh, cureth the cramp which pulleth the head and body all backward. The iuice of Plantain if it be drunke, or the herb it selfe boiled and so eaten, is wholesome for those that be in a Phthisicke. Plantain eaten with salt and oile in a morning, so soon as a man is awakened, is a great cooler. The same is an ordinary medicine for those that mislike, and whose meat is not scene vpon them, if they take it each other day. Of Betony and hony there is a liquid confection or lohoch made, which being licked and let down leisurely, to the quantity at a time of a good big beane, helpeth those that are in a Phthisicke or consumption of the lungs. Also Agarick, if it be drunke to the weight of 2 oboli in wine cuit, is good in the like case: so is Daucum also taken in wine with Rhapontick. For the hungry worms Phagedenae (a name in this place signifying an inordinat * disposition, to be alwaies eating and neuer satisfied, although otherwise I vse it for cankerous and corroding vlcers) the Tithymalls or Spurges taken inwardly with Sefama seed, is counted fouveraigne. Among the maladies which affect & infect the whole body, want of sleep, or an indisposition thereto, is by most Physitians counted one: for which defect, they shew vs these herbs following; to wit, Panaces, water Betony, and Aristolochia, which they prescribe to the patient both for to smel too, and also to annoint his head al ouer withal. Likewise Housleek called Acizoon & also Sedum, giuing direction to wrap it within a blacke cloth, and so to lay it vnder the pillow or bolster of the sick person, but in no wise to let him or her know so much. Likewise Oenothera, otherwise named Onuris, is effectually for this purpose: an herb good also in wine to make the heart merry. It groweth with leaues resembling those of the Almond tree, and beareth floures like vnto Roses. Store of branches it putteth forth, and hath a long root, which being dried, senteth much of wine. Of such vertue is this herb, that if it be giuen in drink to the wildest beast that is, it will tame the same and make it gentle. As for the crudities or raw humors lying in the stomack, which cause loathing and abhorring of meat, Betony is singular to digest them: the same drunke immediately after supper, helps concoction, namely, if one dram weight of the herb be taken in 3 cyaths of oxymel: and so it resolueth and scattereth the fumes arising vp into the head, occasioned by strong wine. Of the same operation is Agaricke, drunke at the end of a meale in hot water. The foresaid Betony hath the name of a speciall remedie for the palsie: so is Iberis also reputed, as I haue shewed once before; the same heareberueth the limbs which are benumbed and in manner dead. And verily, Argemon is of that vertue, that it disfluxeth all those cold humors which mortifie any member, and put them in danger to be cut off or launced. The root of that Panaces which I named Heraclia, drunke with the ren-

So called, for that it receiveth the name of the twelve principal gods and goddesses called *Majorum Gentium Consentes*, whom the Poets imagined to sit in counsell together with Jupiter their President: and these had *Entus* comprised in this Distichon. *Iuno, Venus, Minerva, Ceres, Diana, Venus, Mars, Mercurius, Iovis, Nephtus, Neptunus, Neptunus, Apollo.* *Hercules* Robust, as some thinke, or the first kind by *Dionysus*. *Donesticet* or *Monardica*.

The Carot.
* *Antiquus*.

net of a Seal, so as there be in proportion 3 parts of the said root to one of the rennet, cureth the falling sicknesse. And of the same effect is Plantaine, taken in drink. The said disease is healed by Betony, if a dram thereof be taken in oxymell: by Agarick also, to the quantity of 3 oboli: and by a drinke made with Cinquefoile. Moreover, Brionium called likewise Archezoitis, wariseth this infirmity, but it must be giuen in Ammian wine. Furthermore, the root of Baccharis dried and beaten into powder, taken with Coriander in 3 cyaths of hot water, is a souveraigne mean to help that malady. * Cudweed made into powder, and taken with vineger, hony, or hot water: Vervaine drunk in wine: three beries of Hyssop stamped and drunk in water for 16 daies together: Harstrang, and the rennet in the maw of a Seale, of each a like quantity taken in drink: the leaues of Cinquefoile, if they be stamped and drunk in wine for 31 daies: the powder of Betony to the weight of 3 deniers, incorporat with one cyath of Squillitick vineger, & an ounce of Atticke hony: lastly, two oboles of Scammonie, with foure drams of Castor, be all appropriate medicines for the falling sicknesse.

In all * cold agues, if the Patient drink Agarick in hot water, the fits will be the lighter. And more particularly, the herb Sideritis drunk with oile, thortnerth the cold fit in a tertian: so doth that * Ladanum which groweth among cornes, if it be stamped and so giuen. Likewise, Plantain, if the patient drink the weight of two drams in mead two hours before the fit; or the verie juice of the root either after it hath lien a time infused, or simply stamped without any such preparation; yea, and the substance of the root reduced into powder, and giuen in a draught of water, made hot with a gad of steel quenched in it. Some haue appointed in this kind of ague 3 of those roots, and 3 cyaths of water precisely: and the same Physitians for a Quartaine haue prescribed foure of either: and by their saying, if when Borage beginneth to fade vpon the ground, one take out the pith or marow within the stem, and whiles he is so doing, name withal the sick party, and say hee doth it for to rid him or her from the ague; and withall bestow it in 7 leaues neither more nor lesse of the said herbe, and hang all tied fast about the patient before the time that the fit should come, the feuer wil neuer returne again. Also a dram of Betony or Agaricke taken in three cyaths of mead, drieth away any intermitten ague, especially those that begin with * quiuering and quaking. Some are wont to giue of Cinquefoile three leaues in a tertian, and foure in a quartan, and so rise to more according to the period or type of the * rest: others ordain indifferently for all agues the weight of 3 oboli, with some pepper, in mead or honied water. Vervaine verily giuen in wine as a drench to horses, cureth them of their feauers: but in Tertians it must be cut just about the third joint where it brancheth: but for Quartanes at the fourth. The seed of both kinds of Hypericon is good to be drunk in Quartanes. And the powder of Betony dried, is singular for the quaking fits: and in very deed the herb it selfe represseth all shiuering and whatsoeuer proceeding of cold. In like maner, Panaces is of so hot a nature, that Physitians giue direction to them who are to trauell ouer high mountains couered with snow, for to drink it, & annoint their bodies all ouer with it. Semblably, Aristolochia doth withstand all chilling and through colds. The best cure of those who be in a frensie, is by sleepe: and that may be procured easily by the juice of Peucedanum & vineger together infused vpon the head by way of imbrocation, or by rubbing the same with it: likewise with the juice of both the Pimpernels. Contrariwise, there is more adoe with those that are in a lethargy, to awaken them and keep them from drowiness: and yet may that be affected some say by rubbing their nostrils with the juice of the said * Harstrang in vineger. For those that be out of their right wits or be fraught, Betony is singular good to be giuen in drink. Panaces breaks the Carbuncle: also the powder of Betony in water, healeth it: or the Colewort with Frankincense, if the patient drinke often thereof hot. Some take a burning cole of fire, and when it is extinguished or gon out in the presence of the patient, with their finger gather vp the cindres or light ashes which settle thereupon, and apply them vnder the carbuncle: others stamp Plantain and lay it to the fore: the Tithymall called Characites, cureth the dropsie. Also Panaces and Plantaine taken as a meat in bole, with this regard, That the patient haue eaten some dry bread before, without any drinke at all. In which case Betony likewise is singular, if two drams thereof be giuen in as many cyaths of wine simply, or wine honied. Moreover, Agaricke, or the seed of Lonchitis, drunke to the quantitie of two Ligula or spoones full, in water. Fleawort being vied with wine: the juice of Pimpernels, both the red and the blew: the root of Vmbilicus Veneris in honied wine: the root of Walwoort newly drawne out of the ground, so that the earth bee onely shaken off

* Centunculus.
* Bacca. Some read fusces, i. bunches: but in mine opinion, cymes, tops or spikes, agree best to the sense.

* He meaneth intermitten, such as begin with cold fits more or less.

* Taken for

Ho ba Iudaisa

* Harrore, as Quartanes.
* namely quintans, sextanes, septimanes, & Nonanes, &c.

Harstrang.

or rather with Euphorbium, as some haue corrected the place.

G

H

I

K

L

M

without

A without any washing at all in case as much thereof as two fingers will comprehend, be taken in one hemine of old wine hot: the root of Clauer or Trefoile drunke in wine to the weight of two drams: Tithymall, named Platyphillon: the seed of Hypericon, and namely that which otherwise is called Coris: Chamæactæ, which some think to be Wall-wort, if either the root be beaten to powder and ministred in three cyaths of wine, so the patient haue no feuer hanging vpon him, or the seed giuen in thick red wine, be appropriate remedies euery one, for a dropsie. In like maner Vervaine, if a good handfull thereof be boiled in water vnto the consumption of the one halfe. But principally the juice of Wall-wort is thought to be the meetest medicine for to fit this malady.

B For the bleach or breaking out in wheales, for small pocks, swine pocks, and such like eruptions of flegmatick humors, Plantain is a proper remedy to rid them away: so is the root of fowbread applied with hony. The leaues of Walwort or ground Elder stamped, incorporat in old wine and so laid too, doe heale the meazels, purples, or red blisters, which some call Boa. The juice of Nightshade or pety Morell, vied as a liniment, killeth the itch. The shingles and such hot pimples called S. Antonies fire, are cured by nothing better than by Housleek, by the leaues of Hemlock stamped into an vnquent, or the root of Mandragoras. Now the manner of preparing and ordering it thus: take the said root, drie it abroad in the open aire, like as they do Cucumbers, but principally let it hang first ouer new wine; afterwards in the smoke: this don, stamp it and temper it with wine or vineger. Good it is also in this case to make a fomentation with

C wine of Myrtles, and therewith to bathe the grieved place. Also take of Mints two ounces, of sulphur, vif one ounce, powder them both, and mingle them together with vineger, vfe this mixture for the said S. Antonies fire. And some take soot & vineger tempered together for the same purpose. Now of this disease which we terme * S. Antonies fire, there be many kindes, whereof there is one more dangerous than the rest, which is called * Zoster, for that it couereth to goe round about the middle of a man or woman in manner of a girdle; and in case both ends meet together indeed, it is deadly and incurable. To meet with it therefore by the way & to prevent this extremity, Plantaine is thought to be a souveraigne remedy, if it be incorporat with Fullers earth. Also Vervaine alone by it selfe, and the root of the great Bur. Now for other corrosiue vlcers and tectars, it is very good to vfe the root of Vmbilicus veneris with honied wine: Send green: the juice of Mercurie also with vineger.

i. Bread lested

Erysipelas

i. A girdle, and it is our shingles.

Terra cimolia.

CHAP. XII.

¶ For dislocations or members out of ioint. Against the Jaundise, Felons, hollow sores called Fistula's. Tumors, Burnes, and Scaldings. Against other diseases. For to comfort the sinewes, and stanch blood.

THE root of Polypodium brought into a liniment, is a proper remedy for any dislocation: The seed of Fleawort: the leaues of Plantaine punned with some few cornes of salt put thereto: the seed of Mullen boiled in wine, stamped and reduced into a cataplasme: Hemlocke, incorporat with hogs greafe. All these applied accordingly, do assuage paine and bring down any swelling, occasioned by dislocation. The leaues of Ephemerum brought into a liniment, are good for any bunches or tumors caused by those accidents, if they be taken betimes whiles they may be dissolved and resolved.

As touching the Jaundise, I cannot but wonder at it, especially appearing as it doth in the eies; namely, how the gall should get vnder those fine membranes and tunicles, lying so close couched as they do. Hippocrates hath taught vs a rule, That if the jaundise shew in a feuer * after the seventh day from the beginning thereof, it is a deadly signe. Howbeit, I my self haue known some to haue escaped and liued still, notwithstanding that desperat signe. But this is not alwaies a symptome incident to an ague, but happeneth otherwhiles without a feuer: and then a drinke made of the greater Centaurie, as I haue before shewed, doth withstand & stay the course thereof. Also Betony riddeth away the jaundise, if the patient do drink three oboli therof in one cyath of old wine. The leaues of Vervaine likewise haue the like effect, if the same quantitie be drunke foure daies together in one hemine of wine hot. But the speediest cure of this disease, is by Cinque-foile or five leaved grasse, if three cyaths of the juice be taken with salt and hony in drink. The root of Sowbread is a souveraigne medicine for this infirmity, if the Patient drinke

Some take it for the May billic or billic convally.

* Nay rather before the 7 day for then it is Symptomaticall, and signifies irregular humours: whereas vpon the 7th, 11th, and such Decrees it is as it is criticall, and giveth hope of recovery. As Hippocrates binde fevers. ch. 2. 4. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64.

the weight of three drams: but this care ought to be had, that the room be hot, and so close that no winde may come in, for feare of catching cold: and then it will drie out the jaundise by sweat, lustily. The leaues of Fole-foot taken in water: the seed of Mercurius, both the male & female, if a cup of drinke be spiced therewith, or if it be sodden with Wormewood or cich pease: the * berries of hyssop drunk with water: the herb Liuerwort, so that the patient abstain from all worts or potherbes, so long as he taketh it: Capillus veneris giuen in wine: and the Fullers herb in wine honied, be all of them good medicines for the jaundise.

As for the fores called Fellons or Cats-hairs, they will breed euery where in any part of the body, and put folk to great anguish and trouble who haue them, yea, and otherwhiles indanger their life, especially if they meet with lean and worn bodies. But what remedy? Take the leaues of the herb Pynocomos, let them be stamped and incorporate with fried Barley meale, and so applied, in case the said fellows are not drawne to a pointed or sharpe head. The leaues also of * Ephedros brought into a liniment and laid too, do discusse & dissolue them, if they be taken in the beginning.

Moreouer, you shall not see a part of the body but it is subiect to the Fistulae, which creepe inwardly and hollow as they go: but especially, when by the vnskillfull direction of Physitians, or the lewd hand of chyrurgions there be an incision vtowardly made in the body. The help is to make tents of Centaurie the lesse, with honey boyled, and put them into the concauity. Also to vse an injection of Plantain juice. To apply Cinquefoile with salt and hony. Ladanum also with Castoreum: to lay vnto the fore, Vmbilicus veneris, with deere Marow, especially of Stag or Hind, hor. The string or pith of a Mullen root fashioned slender to the form of a tent put into the vicer, or the root of Aristolochia in that manner vsed, or the juice of Tithymall conueied into it, serue all to cure the Fistula.

All inflammations, biles, & impostumes, are healed by a liniment made of Argemoney leaues. So be all hard and scirrous tumors, occasioned by the gathering of humors, with Venuaine or Cinquefoile sodden in vineger: with the leaues and roots of Mullen: with hyssope applied in wine: with the root of Acorus, so that there be a fomentation withall made of the decoction of the said herb: and finally with Housleek. In like manner, these herbs before rehearsed do heale bruises, hard tumors, or bunches and hollow sores. The leaues of * Illecebra draw forth any arrow heads and whatsoever sticketh within the body: so do the leaues of Folefoot: the Carot also, and the leaues of * Lions paw, stamped and incorporat with fried Barly meale in water. The leaues of Pynocomos punned, or the seed beaten to pouder, & with Barly meale parched, and so reduced into a cataplasim, are good to be applied to biles and impostumes broken & running matter. In like manner the Ragworts are to be vsed.

As touching the accidents that happen in the bones, the root of Satyrion if it be laid outwardly vpon them, are thought to work a most effectual & speedy cure. Al cankerous & eating sores, likewise impostumes growing to suppuration, are healed with the seaweeds, if they be applied before they be dried & withered. Also the root of marsh Mallow, doth dissipate and scatter all gatherings of humors to an impostume, before it be come to an head and to suppuration.

Plantain and the Clot Bur are singular for burns or scalds, healing them vp so clean without a skar, that a man shall not perceiue the place: the maner is to take the leaues, seeth them in water, stamp them into a liniment, and so to apply them. Likewise the roots of Sowbread, together with Housleek: the herb it selfe Hypericon, which I called before * Corion, haue the like effect.

For the infirmities incident to sinews and joints, Plantain is a soueraigne herb, if it be stamped with salt: so is Argemonia punned and incorporat with hony. The juice of Harstrang is singular to annoint those that be sprained, such also as be stretched with an vniuersall cramp as if they were all of a peece. For to mollifie the hardnesse of sinews that be shrunk vp, there is not a better thing than the juice of Agilops: and to assuage their pain, a liniment made with groundswell and vineger, is excellent. For those that be sprained and troubled with that crampe which draweth their necke backward, it is good to rub and annoint them well with Epithymum: with the seed of S. Johns wort, which also is called Coris, and to drinke the same. As for the hearbe Phrynyon, they say it hath vertue to conglutinat and vnite sinews again, if they were cut in sunder, if it be laied too presently, either stamped or chewed in the mouth. For such likewise as be spasmatick, pricked backward with the crampe, or troubled with trembling and shaking of the limbs, it is good to giue them the root of the marsh Mallow to drink in mead: and in that maner taken

A taken, it healeth those that be stiffe and stark for cold. Finally, the red seed of the herbe Pæony stancheth any flux of blood, the root thereof hath the like operation. As for Cyclaminos, that is to say Sowbread, it staies any bleeding, whether it be at the mouth raught vp from out of the body, or at the nostrils, whether it run by the fundament, or gush from the matrice of women. Likewise Lyfimachia stancheth blood either in drink, liniment, or Errhin put vp into the nose. The like effect hath Plantain seed. Cinquefoile also both taken inwardly and applied outwardly. Moreouer, if the nose bleed, take the seed of Hemlocke, beat it into pouder, mixe it with water, and so put it vp handfomly into the nostrils. Also Sengreene and the root of Astragalus. To conclude, wild Hirse called in Greek * Ischæmon and Achillæa, do stay any issue of blood.

* S anch-
blood, a kind
of Yarrow.

CHAP. XIII.

¶ Of the herbe Equisetum: of Nenuphar, Harstrang, Sideritis, and many more effectuell to stanch blood. Of Stephanomelis and Erisibale. Also remedies against wormes and vermine.

Horse-taile, named in Latine Equisetum, and by the Greeks Hippuris, an herb which heretofore I disallowed to grow in any medows (and it is esteemed the very haire, proceeding out of the earth, like for all the world to the haire of an Horse-taile) if it bee boyled in a new earthen pot neuer occupied before, so as the pot be brim full when it is set on the fire and so to continue seething, untill a third part be consumed, doth wast the spleen of lackies & footmen, it for 3 daies together they drinke one hemine of the decoction at a time: and besides, this charge they ought to haue in any wise, to forbear all fat and oily meats for 24 houres before they begin this diet drinke. In describing of this herb, the Greeks do not agree, but are of diuers opinions: some giue that name to a certain herb with blackish leaues resembling those of the Pine tree: and they report a wonderfull vertue thereof; and namely, that if it doe but touch a man, it wil stanch any issue of blood. And as some name it Hippuris, so others called it * Ephedros, and there be again who giue it the name Anabasis: because forsooth, as they say, it climes vpon trees, and hangerth down from thence, with many blackish slender haire in manner of rushes, resembling horse tailes. Small branches it hath full of joints, and few leaues, which be also fine and small. The * seed that it beareth is round, like vnto Coriander; and the root of a woody substance: this kind, say they, groweth principally in thickets and groues. An astringent and binding power it hath. The juice if it be conueighed vp into the nostrils, stenteth bleeding at nose, though it gusheth out from thence: it knitteth also the belly, and stoppeth a lask. Taken in * sweet wine to the quantity of 3 evaths, it helpeth the bloody flux. Urine it prouoketh, the cough it staith, and cureth straintesse of winde when the patient is forced to sit vpright for to draw his breath. It healeth ruptures, and represseth those sores that loue to spread and run ouer the body. The leaues are good to be drunk for the infirmities that offend guts & bladder: a speciall vertue it hath to cure those that be bursten belied and haue their guts slipping downe in the bag of their cods. The said Greek writers describe also another Horse-taile, by the name of Hippuris, with shorter, softer, and whiter haire than the former, and they commend it as a soueraigne herb for the sciatica and for wounds, to be applied vnto the place with vineger, & namely for to stanch blood: in which case the root of Nenuphar serueth very well, if it be stamped and laid vpon a green wound. If a man or woman void blood at the mouth, which doth rise from the parts below, there is not a better thing than Harstrang taken in drinke with the seed or berries of the Cypress tree. And as for Sideritis the herb, it is so powerfull that way, that it stancheth blood out of hand, if it be applied & kept fast to the wounds of these sword-fencers that fight at sharp, bleed they neuer so fresh: the which effect we may see in the ashes and coles of Fennell-geant: but the toad stoles or Mushrooms growing about the root of the said plant, doth the feat more surely: in case the nose gush out with blood, Hemlock seed also beaten to pouder, tempered with water and so put vp, is counted very effectuell to stay the bleeding: in like maner * Stephanomelis, if it be applied with water. The powder of Betonic dried and drunk in Goats milk, stancheth blood issuing out of womens breasts by the nepples. The same doth Plantaine bruised and laid too in a pulsette. The juice of Plantaine is good to be giuen them that vomite blood. For a blood that runneth vp and downe, breaking out one while here and another while there, a liniment made of a Burre root and a little swines greafe, is commended to be excellent.

For

Which some
tak to be Ar-
gentine, i.
white Tansey.

Bacce, rather
syme, i. the
tops, as before.

Hippuris, Hor-
tail.

A kind of
Houslecke.
Our Ladies
Mantle.

* Or Coris.

Darnell, as
some thinke.

Or rather
Ephedros.

Ande' at is
just none.

* Dulcis: i. rather
sweeter, i. hard
or green wine.

For such as be bursten or haue any rupture within, be plucked with convulsions, or haue faim from on high; Centaury the greater, the root of Gentian being stamped into pouder or boiled, the iuice of Betonie, be counted singular means to recouer: and more than that, if a vein be broken by ouermuch straining the voice, or the sides. Likewise, Panaces, Scordium, and Aristolochia taken in drinke, serue well for the same purpose. Moreouer, if any be bruised within the body, or haue bin ouerturned backward and throwne downe, it is good for them to drinke the weight of two oboli of Agarick in three cyaths of honied wine, or in case an ague follow them withall, in honied water: for which purpose serueth also that kind of Verbascum or Mullen, the floure whereof resembleth gold: the root also of Acorus. All the kindes of Housleeke, to wit, Prick-madam, Horfe-taile, or Stone-crop: but indeede the iuice of the biggest is most effectual. In like manner the decoction of Comfrey root and Carot taken raw. There is an herbe called Eristhales, with a yellow floure, and leaues much after the manner of Brankvrsine: the same ought to be drunk in wine, as also Chamerops in the same case. As for Irio, it would be giuen in some supping: and Plantain may be vsed any way, it matters not how: which herb hath this good property ouer and besides, to cure the lowfie disease, whereof Scylla the Dictatour died, who was eaten with lice. A wonderfull thing, that in the very masse of blood there should be ingendered such creatures to consume mans body. But the iuice of the wild vine called * Vva Taminia, as also of Ellebore, is soueraigne against this foule and filthy maladie, in case the body be annoi- nted all ouer with a liniment made of it and oile together. As for the said Taminia, if it boyled in vineger, it killeth such vermine breeding in clothes or apparell, so they be washed or rubbed therewith.

* He meaneth
Staphisagria, al-
though he at-
tribute vnto it
this wrong
name.

CHAP. XIII.

¶ For vlcers and wounds. To take away werts. Of the herbe Polycnemom.

Vlcers as they be of many sorts, so they are cured after diuers manners. If they be such as run and yeeld filthy matter, a liniment or salue made of the root of all kinds of Panaces, & wine together, are thought to be a soueraigne means to heale them. But that Panaces, which they call Chironia, hath a singular property aboue the rest to drie vp such sores: the same root beaten to pouder and incorporat with honey, breaketh and openeth any swelling impostumes. This herb tempered with wine, it makes no matter whither you take floure, seed, or root so it be applied with Verdegrease or the rust of brasse, healeth any sores, be they neuer so desperat, and principally such vlcers as be corrosiue and eat as they go. The same if it be mingled with fried Barly meal, is good for old festered vlcers. Also Heraction, Siderion, Henbane, Fleawort, Tragacanth, and Scordotis, incorporat accordingly with hony, cleanse the said sores. As for this last named, the very pouder of it alone strewed vpon vlcers, eateth away the excrescence of proud flesh. * Polemonia healeth those malignant sores which be called morimals, and are hard to be cured. Centaury the greater reduced either into a pouder, and so cast vpon the sore, or brought into a liniment and applied accordingly: the tops also of the lesse Centaury either sodden or beaten to pouder, do mundifie and heale vp all inueterate and cankered vlcers. The * tender crops or husks of * Clymenos, are good to be laid vnto fresh & green wounds. Moreouer, the root of Gentian either stamped or boiled in water to the consistence of hony, or the very iuice thereof, serueth very well to be applied vnto corrosiue and eating vlcers: like as a kind of Lycium made of it is as appropriat for wounds. Lysimachia is an excellent wound herb, and healeth wounds speedily, if they be taken whiles they be new. Plantain is a great healer of any fore whatsoeuer, but principally of such vlcers as be in the bodies of women, children, and old folk. If it be * made soft & tender at the fire first, it doth the cure so much the better: and being incorporat in some ordinary cerot, it mundifieth and cleanseth the thicke edges and swollen brims of any sore, and staith the canker of corroding vlcers. But when Plantaine is thus reduced into a pouder & strewed vpon the sore, you must not forget to couer the same with the oile of leaues. Moreouer, Celendine is singular for all impostumes and botches, whether they be broken or no, yea, it mundifieth and drieth vp hollow vlcers called Fistulae: and for wounds is such a singular defecatiue, that Chirurgions vse it in stead of Spodium. The same being incorporat with hogs grease, is excellent to be applied vnto them when they be in manner past cure, and giuen ouer by the Chirurgion. The herbe Dictamnus taken in drinke, thrusteth out arrow- heads:

* Saue de bois.

* Coliculi.
Some take it
for water Be-
tony.

* Mollia, Why
not Mollia,
(the ground to
pouder against
the fire) since
that the vlcers
saris so com-
monly for the
pouder of drie
herbs?

A heads: and in a liniment outwardly, draweth forth the ends of darts, and any spils whatsoeuer sticking within the body: for which effect, the leafe would be taken to the weight of one obolus in one cyath of water. Next to this in operation, is the other bastard kind thereof, called Pseudodictamnus: and there is neither of them both, but is good for to draw all biles & impostumes that are broken & do run matter. Moreouer, Aristolochia is an excellent herb to eat and confume putrified vlcers full of dead flesh: it mundifieth also those that be foule and filthy, if it be applied with honey, yea and draweth out the vermin bred of the corruption within them: the callosities likewise and hard excrescences arising in sores, it fetcheth away: also it drawes forth any thing sticking in the flesh, especially arrows and the spils of broken and scaled bones, if it be laid too with rosin. Of it selfe alone without any thing els, it is a good incarnatiue and filleth vp hollow vlcers with good flesh: but mixed with the pouder of the Flour-de-lis root, and so incorporat with vineger, it is singular for to heale vp green wounds. Moreouer, for old sores, Veruaine and Cinquefoile medled together with salt and hony, do make a soueraign salue. The roots of the great Clot bur are good to be laid vnto fresh wounds, made by the sword or any edged tooles: but the leaues are better for old wounds, if the same be tempered with hogs grease: howbeit this charge ought to be giuen, That as well the one as the other, haue a leafe of the oile prepared in that manner as it is ordained for the Kings euill. And the leaues of Mullen serueth wel for the same purpose, if they be applied with vineger or wine. Veruaine is a good herbe for all sorts of wounds and sores, were they ouergrowne with callosities and full of putrefaction: the root of Nymphaea Heraclea, healeth perfectly all running and filthy vlcers. In like manner, the root of Cyclamin [i. Sowbread] either alone of it selfe, or incorporat with vineger or hony: The same is singular good for those wens or impostumes that ingender within them a certaine matter like vnto * fat or tallow. Like as Hyssop is an appropriat herb for running vlcers. Semblably * Peucedanum, which is of that efficacy for the healing of green wounds, that it will draw corruption from the very bone. The same effects haue both the Pimpernels: and besides, they doe repress those cancerous sores that eat deepe: they stay also the flux of a rheume to any sore, which hindereth the healing thereof: they be good also for green wounds, but especially in old bodies. The fresh leaues of Mandragoras newly gathered, incorporate with the masse of some cerot, are singular for impostumes and maligne vlcers: like as the root healeth wounds beeing made into a plaster with honey or oile. Likewise Hemlocke tempered with the floure of fine white wheat, and wrought into a paste with wine. Housleeke cureth shingles, ringwormes, and such like wild-fires, yea if they grow to be woules, and begin to putrifie: like as Groudwel healeth those vlcers which be giuen to ingender vermin: but the roots of the mountaine Cich, or pease earth-nut, are soueraign for green wounds: and both kinds of Hypocisthis, do mundifie inueterat vlcers. The seed of Pied-de-Iron, stamped with water, and reduced into a liniment with parched Barley groats congregate all together, draweth forth arrow heads: so doth the seed of Pycnocomon, in the same sort vsed and applied. The iuice of the Spurge called Tithymalus Characias, healeth gangrens, cankers, and putrified sores tending to mortification. The decoction also of the branches sodden in oyle, with fried barley meale. As for * Ragworts, they cure morimals also, either drie or greene, so they be applied with vineger and honey: and Oenothera by it selfe, healeth those vntoward and fretting vlcers, which are the worse and more angry for the handling. The Scythians are wont to heale wounds with their hearbe Scythica. And for cancerous sores, the herb Argemone incorporat with honey, is knowne to be most effectual. When any wound or sore is * ouer healed, an Asphodill root boiled, as I said before, then stamped together with parched barley, and so applied, is singular good to rectifie that default: but for any sore or wound whatsoeuer, Henbane leaues be singular. The root of Astragalus beaten into pouder, are soueraigne for such vlcers as do water much, and be alwaies moist: likewise the common * Maidenhaire boiled in water: but more particularly, if the skin be newly fretted off by wearing some vnease shoes, there is not a better thing to heale and skin the place, than a salue made with Veruain also with herb willow stamped, or Nenuphardried, made into pouder, and so strewed vpon the gall. As for the other Maidenhaire, it is counted better to heale the same raw excoriations, if they haue continued some time, and are growne to be exulcerat. There is as an herb named Polycnemom, like vnto wild Origan, howsoeuer the seed resemble that of Peniroyall: it shooteth forth many branches, and those knotted and jointed in di-

* Fistule passio-
ris, or water
Plantaine.

* Seat-mate.
* Hatstrang.

* Orbi.

* Scutell, that
is to say, when
the skar riseth
above the flesh
& is not enu-
with the rest
of the skinn,
if you cease
treatment,
the skar too
soon & healed
only in shew
and apparenc-
e outwardly.
* Galliard.
which is Tri-
choman, or
Capillus Vener-
is.

uers places: it beareth in the head certain berries as it were in bunches and clusters, odoriferous, and as they sent somewhat strong and hot, so the smell is not vnpleasant: take this herbe, chew it with your teeth, and then lay it to any wounds made by the edge of the sword or such like weapon, and so let it lie and remoue it not vntill the fifth day, you shall see it to heale excellent well. Camfrey applied vnto a green wound, skinneth it most speedily: so doth Sideritis; as for this herb, it should be applied with honey. The seed and leaues of Mullen, sodden in wine, & stamped to the form of a cataplasme, draweth forth all thorns, spils, and arrow heads, which sticke within the body. The like effect work the leaues of Mandragoras, incorporat with parched barley meale, and Sowbread roots stamped and mixed with honey. The leaues of Germander punned with oile, are excellent to be applied vnto those vlcers which doe corrode the flesh vnder them and eat forward, like as the Reiks or sea-weeds. Betonie is a soueraigne herbe for cancerous vlcers: also for the blacke sploches that haue continued a long time vpon the skin, if there be salt put thereto. Argemonia tempered with vineger, taketh away warts: so doth the root of Crowfoot, which also is singular good to fetch off with ease, the ragged and fretted nailes that be offensive. The leaues of Mercurie, the male and female both, or the iuice thereof brought into a liniment, haue the like operation. All the sorts of the Tithymals take away any warts whatsoever: so do they rid the troublesome risings and impostumations like whiffawes about the naile roots, and all flecks, spots, wheelks, and specks whatsoever. Ladanum reduceth any scars to look faire and fresh coloured againe.

CHAP. XV.

¶ Many experiments and approved receipts, for the prouoking or staying of womens monethly tearmes: for curing the diseases of their matrice: for sending out the birth, or retaining the same within the bodie the full time. Also sundry deuises for to amend the faults that blemish the skin of the face: to colour the haire of the head, or to fetch it off. Last of all, diuers medicines for the farcines or scabs in foure-footed beasts.

It is said, That if a trauelier or wayfaring man weare fast tied about him, Mugwort or Sauge, he shall neuer be weary nor thinke his journey long. But to come now vnto the infirmities of women: the black feed of the herb Pæony, is generally good for all their *maladies, if it bee taken in mead: the root also is of the same operation, and besides prouoketh the ordinary course of their months. The seed of Panaces drunk with wormwood, moues their fleurs, & prouoketh them to sweat: the like effect hath Scordotis either in drink or liniment. A dram of Betony giuen to women in 3 cyaths of wine, helps all the maladies incident to their natural parts, *but especially those that insue vpon their deliury of childbirth. Achillea being applied accordingly, staeth the excessiue flux of their monthly termes: for which purpose also, it is good for them to sit in a bath made with the decoction of the said herb: & in this case, to their breasts or paps, *there would be laid a plaster of Henbane seed tempered with wine: the root also applied in manner of a cataplasme to their secret parts, is counted soueraigne for that infirmity: like as Celendine the greater laid vnto the foresaid breasts. If the after birth, when the childe is borne, be loth to come away, or if the infant be dead within the mothers womb, the roots of Panaces applied accordingly to the priuy parts, fetch forth both the one and the other. The very herb it self Panaces drunk in wine, or outwardly vsed to the region of the matrice, *clenseth the same. Sauge de bois taken with wine, expelleth the after-birth, and by a suffumigation, mundefieth the matrice. The iuice of Centaury the lesse, bringeth women to their desired sicknesse, if they drink it, or foment the parts beneath, therewith. Likewise the root of the bigger Centaury vsed after the same manner, appeaseth the pains of the mother. If the same be scraped smooth, & put vpon into the right place as a pessary, it draweth away the dead child within her body: for the griefe and anguish which women fee in their womb, there is no better thing than to apply the iuice of Plantaine in a locke of wooll: and in danger of suffocation by rising of the mother, to giue it in drinke. But Dictamnus is soueraigne and hath no peere: it prouoketh monthly fleurs: it sendeth out the dead childe, yea though it lay ouerthwart and stucke crosse in the birth: for which purpose, the woman must drink to the weight of one obolus, in water: and verily of such power is this herb in such cases, that so long as women go with child, it must not come within the chamber where they are, for feare it put them to trauell before their time. And not onely in

* In their matrice, as namely, the rising of the mother, &c.

* To wit, the stay of the after burden, after throwes, suppression of their purgation, or immoderate shifts, &c. * Swelled and hard.

* Turgat, some read better (in mine opinon) corrigis, i. rediect it into the right place being vnswelled and peruerced.

A drink is it thus effectual, but also in a liniment; yea and the very perfume and smoke thereof received in the body, will do the deed. Next to it, there is not a more soueraigne herb than the bastard Dictamnus, called Pseudodictamnus: but it must be boiled to the weight of one denier, with pure wine and strong of the grape, and then taken in drinke, it prouoketh womens desired sicknesse. And yet Aristolochia is many waies good for the infirmities of women: for if there be myrrh and pepper put thereto, and then either taken in drinke or put in a pessary, it draws downe their fleurs, bringeth forth the after-birth, and fetcheth away the dead infant: it keepeth vpon and staeth the matrice ready to fall and slip out of the body, either in fomentation, perfume, or pessary, especially the *small kind thereof. But in case a woman be in danger of suffocation by the ascent of the mother, or otherwise diseased for want of her monethly purgation, let her drinke Agaricke to the weight of three oboli in one cyath of old wine: make a pessary of Veruain incorporat with fresh hogs lard, and apply Calues snout, otherwise called Snap-dragon with oile of rose and hony, she shall haue ease, and be cured speedily. Semblably the root of Nenuphar, especially that which groweth in *Fhesalie, applied vnto the naturall parts of women, ease the paines thereof: and if it be drunke in grosse red wine, it staeth their shifts or immoderate flux of the months. Contrariwise, the Sow-bread root, both taken in drinke and also outwardly vsed, prouoketh the same, if they do stay vpon a woman. Also a decoction thereof, if a woman do sit therein, helpeth the accidents of the bladder. Cissanthemos taken in drinke, sendeth out the after-birth, and healeth the maladies of the matrice. The vpper root of the Flag or Glaier, drunke in vineger to the weight of one dramme, bringeth women to the ordinary course of their fleures. The fume of Harthtrag burnt, fetcheth women againe when they lie as it were strangled and dead in a fit of the mother. Flea-wort taken to the weight of a dram in three cyaths of honied water, prouoketh their monthly termes, but especially it maketh them soluble if they were costiuie. The seed of Mandragoras cleanseth the matrice, if a woman take it in her drinke: the iuice whereof applied to the naturall parts, prouoketh her months and fetcheth away the dead child within her body. Again, the seed taken with wine and brimstone, staeth the immoderate flux of the monthly termes. Crowfoot either drunk or eaten with meat, knitteth the belly and stoppeth a lask: an herb otherwise (as I haue said) of a causticke and burning nature, if it be vsed raw, but certainly, being boyled with salt, oyle, and cumine, a commendable meat. Yellow Carrots taken in drinke, doe exclude the after birth, and prouoke womens fleurs with exceeding great facilitie. A perfume of Ladanum, setteth streight the matrice when it is out of the right place, and turned to a side: and for the paine and exulceration thereof, it is of great force either applied outwardly or injected inwardly. Scammonie, either in drink or cataplasme, sendeth forth of the body the dead fruit of the wombe. Both kinds of S. Johns wort, stirreth the issue of womens fleurs, onely by an outward application. But aboue all (in the iudgement of Hippocrates) *Crithmos passeth for that, if either the seed or the root be taken in wine. As for the pill or rind thereof, it fetcheth away the after birth also: and drunk in water, it helpeth the suffocation occasioned by the rising of the mother. The root of *Geranium likewise more particularly, is a very conuenient remedy for to bring away the after-birth, and to cure the inflammation of the matrice. Horsetaile hath a secret vertue to mundefie the naturall parts of women, either drunke, or applied outwardly. Knot-grasse giuen in drinke, *staeth the inordinate and excessiue voidance of the fleurs: so doth the root of Marsh Mallow. The leaues of Plantaine, *drunke downe the same: so likewise Agaricke in honied water. Mugwort stamped and incorporat with oile of Ireos, Figges, and Myrhe, hath the same effect, if it be applied accordingly: The root of which hearbe, if a woman take in drinke, is so purgatiue and will bring her to such a lask, that shee shall withall exclude the dead infant within her bodie. A decoction made with the branches of Mugwort, bringeth downe womens monethly sicknesse, and fetcheth away the after-birth, if they fit therein: a dramme weight of the leaues taken in drinke, is of the like vertue and operation: if they be but laied vnto the belly in manner of a cataplasme, especially with barley meale, they will doe as much. Moreover, Acoron, both the kindes of Conyza, as also *Sampier, are singular good for all the inward griefes and maladies whatsoever of women. Also both kinds of Anthyllis drunke in wine, are soueraigne for the accidents of the matrice, namely to assuage the throws and wrings thereof, and to bring away the after-birth when it staeth behind. A fomentation made with Maidenhaire, is comfortable to the naturall parts of women: like as it hath vertue to cleanse the scurfe and dandruffe, to rid away the white patches appearing

* Clematis.

* With yellow fl.

* Sarni.

* Cribn.

* Hubb.

* Sibir.

* I mame.

* how the

* the li

* consid.

* re y

* geat

* com

* pr p

* to fo

* cret vertue.

in the skin or haire, and to color the same black, if it be brought into pouder, & with oile made into a liniment. Herb Robert drunk in white wine, and Hyocisthis in red, do stay the flux of reds or whites. Hyssop is a soueraign herb to open and relax the obstructions of the matrice causing suffocation. The root of Veruaine taken inwardly with water, is the best thing in the world for all the maladies incident to women, either in their trauell or after their deliuerance. To which effect, some there be, who together with Harstrang mix the grains of the Cypresse tree beaten to pouder, and giue it to drink in grosse red wine. For the seed of Fleawort, boiled in water, and laid too warme, doth moderate and qualifie all the violent fluxes of the matrice. Camfrey stamped and giuen in grosse wine or allegant, bringeth down the sicknesse of women when it staith vpon them. The iuice of Scordotis taken to the quantity of one dram in foure cyaths of honied water, giueth women speedy deliuerance in childbirth: and for that purpose, the leaues of Dictamnus are excellent, if they be taken in water: and knowe it is for certain, that the weight of one obolus of those leaues giuen to a woman in hard trauell, wil presently cause her to be deliuered with ease, yea though the infant were dead in the belly. The like operation hath the bastard Dictamnus, but that it worketh more slowly: and in this case, they vse to tie the root of Cyclamin about the woman in labour; to cause her also to drinke Cissanthemos; yea and the powder of Betony in honied water. As for Arsenogonon and Thelygonon, they be two herbes, bearing certain grapes or berries like to oliue blossomes, but that they be more pale; and white seeds or kernels within, resembling those of white Poppy. If a woman drink Thelygonum, some say, she will therupon conceiue a maid child. Arsenogonon differeth from the other in nothing but in the seed, which commeth nere vnto that of the oliue: and (forsooth) if she take this herb in drink, she shall haue a man-child; beleue it who that list. Others there be, who say, that both the one and the other be like vnto Basil; and that Arsenogonon carrieth a double seed knit together like as they were two genitors.

That kind of Housleek which I called Digitellus, is singular for the diseases incident to womens Breests. Groundswell bringeth abundance of milke into womens paps, if they drinke it in wine cuit: so doth Sowthistle sodden in frumenty. The grape called Bumastos, taketh away the haire about the nipples of nourses breasts, which spring sometime after they haue once borne children: which also otherwise is very good to cleanse the skales and scurfe in the face, and to scoure away other spots and pimples arising vpon the skin. Gentian, and Nymphaea called Heraclaea, the root also of Cyclamin, riddeth all such cutaneous specks and blemishes. The graines of wild Carawaies, called Cacalia, incorporate in wax melted and made liquid, lay the skin of the face plain and even, and smoothe all wrinkles. The root of Acorum, serueth likewise to purifie the skin from all outward deformities. Herb Willow giueth the hair of the head a yellow colour. Hypericon, which also is named Corion, dieth it black: likewise doth Ophrys, an herbe growing with two leaues and no more, like vnto jagged Beers or Colewoorts. Also Polemonia setteth a black colour vpon haire, if it be boiled in oile. As for depilatorie medicines, which are to take away the haire from any part, the proper place to treat of them is indeed among those that pertain especially to women: but now adaies men also are come to it, and vse such deuises as well as women. The most effectfull of all others be they accepted, that are made of the herbe Archezotis. The iuice of Tithymall is likewise very good to fetch off haire: and yet there be some, who pluck them out first with pinfers, and then with the said iuice incorporat with oile, rub the place often in the hot sun. Finally, Hyssop tempered with oile into a liniment, is excellent to heale the mange or scab in four-footed beasts: and Sideritis hath a peculiar vertue for to cure swine of their squinies or strangles. Now is it time to pursue all other kindes of hearbes which remaine behind.

* Some think this is meant of hairs which in the paps, which should be swallowed down by a cup of dinke, and so ranke in the paps, & a diuise called by Aristotle Trichia. And Rhetorica is an opinion, that one u h thing of m bling an hanc may be ed within the breast, spatri- fied humours or corrupt like B r it scemeth by that whi h fol loweth, hat Plu e meant no such nar- re, out rather to countward eye fore.

THE

A



THE TWENTY SEVENTH BOOK OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIUS SECVNDVS.

The Proeme.

CHAP. I.

C



Ertes, the farther that I proceed in this discourse & history of mine, the more am I forced to admire our forefathers and men of old time: for, considering as I do, what a number of simples there yet remain behind to be written of, I cannot sufficiently adore either their carefull industry, in searching and finding them out; or their liberal bounty, in imparting them so friendly to posterity. And verily, if this knowledge of Herbes had proceeded from mans inuention, doubtlesse I must needs haue thought, that the munificence of those our ancestors had surpassed the goodnesse of Nature her selfe. But now apparent and well knowne it is, That the gods were authors of that skil and cunning, or at leastwise there was some diuinitie and heavenly instinct therein, euen when it seemed to come from the braine and head of man: and to say a truth, confesse we must, That Nature (the mother and nource of all things) both in bringing forth those simples, and also in reuealing them with their vertues to mankind, hath shewed her admirable power as much as in any other work of hers whatsoeuer. The herbe Scythica is brought hither at this day out of the great fens & meers of Mæotis, where it groweth. Euphorbia commeth from the mountain Atlas, far beyond Hercules pillars & the straits of Gibraltar, and those are the very vtmost bounds of the earth: from another coast also, the herbe Britannica we haue, transported vnto vs out of Britaine, and the Islands lying without the continent, and diuided from the rest of the world; like as Æthiopia out as far as Æthiopia, a climat directly vnder the Sun, and burnt with continuall heat thereof: besides other plants and drugs necessary for the life and health of man, for which merchants passe from all parts too and fro, and by reciprocall commerce, impart them to the whole world; and all by the meanes of that happy peace which (through the infinite maiesty of the Roman Empire) the earth inioieth: in such sort, as not only people of sundry lands and nations haue recourse one vnto another in their traffick & mutual trade, but high mountains also & the cliffes surpassing the very clouds, meet as it were together, & haue means to communicat the commodities, euen the very herbes which they yeeld, one to the benefit of another: long may this blessing hold, I pray the gods, yea and continue world without end: for surely it is their heavenly gifts, that the Romans as a second Sun should giue light and shine to the whole world.

D

E

CHAP. II.

F

¶ Of the poison Aconite, and the Panther which is killed thereby.

Aconite alone, if there were nothing els, is sufficient to induce any man to an endlesse admiration and reuerence of that infinit care and diligence which our antients employed in searching out the secrets of Nature; considering how by their means we know there is no poison in the world so quicke in operation as it, in so much as if the shap or nature of any living creature

Aa 3

creature

creature of female sex be but touched therewith, it will not liue after it one day to an end. This was that poison wherewith *Calphurnius Bestia* killed two of his wiues lying asleep by his side, as appeareth by that challenge and declaration which *M. Caelius* his accuser framed against him. And hereupon it was, that in the end of his accusatory inuētiue, he concluded with this bitter speech, That his wiues died vpon his finger. The Poets haue feined a tale, That this herb should be ingendered first, of the fume that the dog *Cerberus* let fall vpon the ground, frothing so as he did at the mouth for anger when *Hercules* pluckt him out of hell: and therefore it is sorlooth, that about *Heraclea* in *Pontus* (where is to be seen that hole which leadeth into hel) there groweth *Aconit* in great plenty: howbeit, as deadly a bane as it is, our forefathers haue deuised means to vse it for good, and euen to saue the life of man: found they haue by experience, that being giuen in hot wine, it is a counterpoison against the sting of scorpions: for of this nature it is, that if it meet not with some poison or other in mens bodies for to kill, it presently sets vpon them and soon brings them to their end: but if it incounter any such, it wrestleth with it alone, as hauing found within, a fit match: to deale with: neither entrench it into this fight, vnlesse it find this enemy possessed already of some noble and principall part of the body, and then beginneth the combat: a wonderfull thing to obserue, that two poisons, both of them deadly of themselves and their own nature, should die one vpon another within the body, and the man by that mean only escape with life. Our ancestors in times past staid not thus, but found out and deliuered vnto vs proper remedies also for wilde beasts; and not so contented, haue shewed meanes how those creatures should be healed which are venomous to other: for who knoweth not, that scorpions if they be but touched with *Aconite*, presently become pale, benumbed, astoned, and bound, confessing (as it were) themselves to be vanquished and prisoners: contrariwise, let them but touch the white *Elleboe*, they are vnbound and at liberty again; they recouer (I say) their former vigor and vertue: whereby we may see, that the *Aconite* also giueth the bucklers to enemies twaine, pernicious poisons both, the one to it selfe, and the other to all the world. Now if happily any man should say, That the wit and head alone of man could possibly compasse the knowledge of these things; surely he should shew therein his ingratitude and impiety vnto the gods, in not acknowledging their beneficence. The people about *Heraclea*, to kill the Panthers which breed in those parts, vse to rub with *Aconite* certain gobbets of flesh, which they doe lay about the mountains as a bait and bane for them: and vnlesse by this meanes they did destroy them, no doubt they would fill the whole countrie; which is the cause that some call it *Pardalanches*, / *Libard-bane*: but they again on the other side, presently haue recourse to the excrements of a man, as I haue before declared, the only counterpoison whereby they saue themselves: who doubteth now, but the knowledge of this secret came first to them by meere chance? and considering that it is not possible to render a reason of the nature and vsage of such wild beasts (and whensoever we see the like to fall out, we count it still a new & strange accident) we must needs attribute the finding thereof to Fortune.

CHAPTER: III.

¶ *That of all Creatures and Inventions in this life, the author is a god.*

THis Chance and Fortune then, by means wherof we attaine to so many inuentions that we haue, is a diuine power, and no lesse indeed than a God: by which name also we vnderstand and call that great mother and mistresse of all things, dame Nature: and surely considering that conjecturall it is and doubtfull, Whether these wild beasts come by this knowledge day by day at adventure, or were indued naturally at the first with that perceiuaunce? we haue as great reason to attribute a diuinity and godhead to the one, as the other. Well, be it Chance, or be it Nature, that hath thus ordered the matter, certes a great shame it had bin, that all other creatures should haue knowne thus (as they do) what is good and profitable for them, and man only remain ignorant. But such was the industrie and goodnesse of those ancestours of ours in times past, that they not only deuised means, but also deliuered to posterity, how this venomous herbe Aconitum might be most safely and commodiously mingled in those collyries and medicines which be ordained for the eies: an euident argument and plaine prooffe, I assure you, that there is nothing so bad but it hath some goodnesse in it, and may be vsed wel. And therefore dispensed withall I looke to be, if I who hitherto haue written of no poisons, put downe the description

A scription thereof; to the end that a man may know it, and by knowing, take heed and beware. This herb hath leaues, resembling Cyclamin or the Cucumber, in number no more than foure, and those toward the root in some sort rough and hairy. The root but small, and the same like vnto a sea crabfish: and therefore some haue named it Cammaron, whereas others, for the reason before shewed, call it * Theliphonon. And for that the root doth turn and crook inward in manner of a scorpions taile, there be that giue it the name Scorpion. There wanted not others who chose rather to call it * Myo. Tonon, because with the very fent it is able to kill mice and rats a great way off. It groweth naturally vpon bare and naked rocks, which the Greeks call * Aconas: which is the reason (as some haue said) why it was named Aconitum. And for that in the place
B where it groweth or neare vnto it, there is no mould, nor so much as any dust found for to giue it nourishment, some haue thought it took the name therupon. Yet there be others who assigne another cause of that denomination, to wit, for that it is as forcible and as speedy in working the death of those whom it toucheth, as the hard stone or rag in turning or wearing the edge of any yron tooke; for no sooner cometh it neere vnto the body and is applied vnto it, but the quick operation is sensibly found.

С H A P. III.

¶ Of *Ethiopsis, Ageraton, Aloe, Alcca, Alypon, Alsina, Androsace, Androsamon, Ambrosia, Anonis, Anagryon, and Anonymon.*

C The leanes of Æthiopis are great and many in number, hairy also neere vnto the root, and otherwise correspondent to those of Mullen. It riseth vp with a four cornered stem, rough in handling, and after the maner of the main item of the Clot-bur, hauing many concauities or holes like arm-pits in the grafting of the branches to the said stem. It beareth seeds like vnto Eruille, which ordinarily grow double two by two, and are white. The roots be many, and those long, full and well nourished, soft, and clammy in tast: being dried, they wax black & grow hard withal; in such sort, as a man would take them for horns. They grow ordinarily in Æthiopia, also vpon the mountain Ida in the region of Troas, and in Messenia. The right season to gather these roots, is in Autumne; and then they ought to be laid a drying in the Sun for certain daies together, to keep them from moulding. Being taken in white wine, they help the infirmities of the matrice; and the decoction thereof drunk, is good for the Sciatica, the pleurisie, & the hoarseness in the throat. But that which commeth out of Æthiopia is counted best and hath no fellow, for it worketh presently.

As for Ageraton, it is an herb of the Ferula kind, growing vp to the height of 2 spans like to Origanum, but that the floures refemble buttons or brooches of gold. The tume of this herbe when it burneth, prouoketh vrin and mundefieth the matrice, especially if a woman sit in a bath thereof, and do foment the natural parts therewith. The reason of the name Ageraton, is this, because the floures continue very long before they seem to fade and wither.

Aloe is an herbe which hath the resemblance of the sea-onion, but that it is bigger and the leaues be more grosse and fat, chamfered or channelled bials all along: the stem that it beareth, is tender, red in the midst, not vnlike to Anthericon: one root it hath and no more, which runneth directly deep into the ground in manner of a big stake: strong it is to smell vnto, and bitter in tast. The best Aloe is brought out of India: but there groweth good store thereof in Asia, howbeit of no vse, but that they lay the leaues fresh vnto green wounds; for they do incarnate and heale wonderfully, like as their iuice also. And for that it is such an excellent wound-herbe, folk vse to set and sow it in barrels or pipes pointed beneath, and broad aboue, like as they do the greater Housleek. Some there be who for to draw a iuice or liquor out of it, stay not vntill the seed be ripe, but cut the stem for that purpose: others make incision also in the leaues: moreover there is other while found in Aloe a certain liquid gum issuing out of it self, and sticking fast to the stem thereof: and therefore they hold it good to paue or ram the ground hard all about the place where Aloe groweth, that the earth should not drink vp the liquor which distilleth from it. * Some haue written that in Iury aboue Ierusalem, higher into the country, there is a certain minnerall Aloe to be found, growing in manner of a merral within the ground: but there is none worse than it, neither is there any blacker or moister. If you would know the * best, chuse that which is fat and cleare, of a red colour, brittle and apt to crumble, close compa& in manner of a liuer,

* i. Femalbanc

*or *Myoporum*
*Ab a. *privati-*
*v. *partialis*, &
*xine, dust :
where upō bare
stones with-
out any mould
vpon them, be
also called in
Greek *ἄνιστος*
to be whet-
stones like-
wise: Yet *The-*
ophrastus is of
opinion, That
it took e the
name *Aconitū*
of *Aconæ*, a
certain towne,
neer to which
it groweth a-
bundantly.

Ab a, fteretica,
 & *γῆρας*, old
 age.

Petronius Ni-
er, as Dioſco-
rides ſaith in
his preface.
It ſeemeth
that he means
here the con-
verted iui e
heretof, which
we alſo do call
loc.

fant is born: or if a woman desire to see her monthly sicknes, it is good to drink a dram weight of the leaues in wine cuit. And in that maner they are giuen to those who be short winded: but in old wine against the sting of the venomous spiders Phalangia. The root is singular to be put to those plasters which either do resoleue or maturat any impositumed place. The seed chewed, staeth immoderat vomits.

* Anonymos, finding no name to be called by, got therupon the name * Anonymos. a Plant this is brought out of Scythia to vs; highly commended by *Hiesius* a Physitian of great name and authority, also by *Aristogiton*, for an excellent vulnerary, if it be bruised or stamped in water, and so applied; but taken inwardly in drinke, it is good for womens breasts and the precordiall parts about the heart, if they haue gotten a stripe, or be bruised: also for such as reach vp blood. Some haue ordained a vulnerary drinke to be made therof for those that be wounded. But what is said moreover as touching this herb, I hold meere fabulous: and namely, that if two pieces of yron or brasse be put into the fire and burn together with this herbe, fresh and new gathered, they will foudre and joine againe.

CHAP. V.

¶ Of *Erith* or *Goose grasse*. Of the *Clot-bur*. Of * *Ceterach*: of *Asclepias* and *Aster* or *Bubonium*. Of *Ascyron* or *Ascyroides*. Of *Aphace*, *Alcibium*, and *Alectorolophus*.

ERith is by some called in Greeke *Aparine*, by others *Omphalocarpus* and *Philanthropus*. An herb giuen to be full of branches, rough and prickly, carrying fise or six leaues growing round together about the said branches in order like a star, and a pretty distance there is between euery of these roundles. The seed is round, hard, hollow, and sweetish. It groweth in corn fields, in gardens and meadows: rough it is, that it is ready to * catch hold of folkes clothes as they passe by, and to stick vnto them. An effectuell herb against serpents, if a dram of the seed be drunk in wine: also for them who are pricked with the spiders Phalangia. The leaues haue a singular vertue to repress the abundant flux of blood out of wounds, if they be outwardly applied: like as the iuice hath a speciall property to help the infirmities of the ears, being dropped or poured into them.

Arction, which some rather name *Arcturus*, is like in lease to the great Mullen or Taperwort, but that it is more rough: the stem tall and soft, and the seed resembling Cumin. It grows ordinarily in stony grounds, with a root tender, soft, & sweet. Being sodden in wine, it easeth the tooth-ach, so that the patient hold the decoction in his mouth. For the *Sciatica* and stranguerie it is good to be taken at the mouth in wine; and outwardly applied, it healeth burns and cureth kibed heeles: in which cases the root is much commended, if together with the seed it be stamped with wine, and a fomentation madewith the decoction thereof.

As touching *Asplenium*, some there be who call it *Hemionion*: an herbe putting forth many leaues * foure inches long: the root is giuen to haue cranks and holes, and those full of mud or durt: much what do the leaues grow like to Fearn: the root is white and rough. It beareth neither stalk, stem, nor seed. It delighteth to grow among rocks and stones, vpon walls standing in the shade, and in moist grounds. The best is that which we haue out of Candy. It is commonly said, that if the decoction of the leaues boiled in vineger be drunke forty daies together, it wasteth the swelled spleen. The same may be applied in a liniment for that purpose, & so also they do stay the exceffive yex or hocket. This herb would not be giuen to women, for it causeth them to be barren.

Asclepias beareth leaues resembling *Iuic*, long branches, many small roots, and those odoriferous; howbeit the flours haue a strong and rank stinking smell with them, the seed much like to the *Axvitch*. It loveth to grow vpon mountains. The roots of this herbe not only taken inwardly in drinke, but also applied outwardly in a liniment, do ease the wrings of the belly, and resist the sting of serpents. After, is by some named *Bubonium*, for that it is a present remedy for the tumours arising in the thare. This herbe putteth vp a small stemme, with two or three leaues so newhat long. In the top thereof it beareth certaine little heads inuironed with spokie leaues, and those disposed round in manner of a starre. Taken in drinke, it is thought to be a preseruatiue against the venom of serpents. But to make a medicine for the share before named, it

A it must (they say) be gathered with the left hand: and then kept fast bound neere vnto the middle or girding place of the patient. And surely it helpeth the *Sciatica*, in case it be tied sure to the affected place.

Ascyron and *Ascyroides*, be herbes resembling one another, and both like vnto *Hypericon*: howbeit that which is named *Ascyroides*, hath the bigger branches, and those streight and direct, much after the manner of *Fenell* and such like, red throughout: and in the top thereof appeare little heads or knobs, of a yellow color. The seed contained in certain pretty cups, is smal, black, and gummie: bruise the said tops or knobs between your fingers, they seem to stain them with blood, which is the cause that some call this herb * *Androsæmon*. The seed is singular for the *Sciatica*, namely if the patient drinke two drams weight thereof in a sextar of *Hydromel*, that is to say, mead or honied water: for it looseth the belly and purgeth choler. A liniment made therewith, is much commended for a burne.

Apæce is an herb which hath very fine and small leaues: and a little taller it is than the *Lentill*; but larger cods it beareth, wherein lie three or foure seeds, blacker, moister, and smaller than the grains of the said *Lentill*. It groweth vpon corn lands. More astringent it is by nature than the *Lentill*, and bindeth stronger; for all other matters it worketh the same effects. The seed boiled, staeth vomits and lasks.

Touching * *Alcibion*, what manner of herb it should be, I neuer could yet finde in any writer. But they giue direction to stamp the roots and leaues thereof, and so in a cataplasme to apply them vnto any place stung with serpents, and to drinke them also. Now they prescribe for the drink, to take of the leaues one good handfull, and to stamp them, and so to giue them in three cyaths of meere wine full of the grape: or of the root three drams weight, with the like measure of wine.

Alectorolophus in Greek, called by vs in Latine *Crista Galli*, i. Cocks-comb, hath leaues for all the world resembling the crest or comb of a cock and those in number many: a slender stem and black seed, inclosed within certain cods. A soueraign herb it is for them that cough, if it be boiled with bruised beans, and taken in maner of an electuary with hony. It scattereth the cloudy films that trouble the eie-sight; & the maner is to take the seed whole and sound as it is, and to put it into the eie: it is nothing offensive nor troubleth that part one whit, but gathereth to it selfe all those grosse humors which impeached the sight. And in very truth, this seed whiles it is within the eie changeth colour, and being black before, beginneth to wax white, it swelleth withall, and in the end commeth out of the eie by the owne accord.

CHAP. VI.

¶ Of *Alum*.

The herb which we name in Latine *Alum*, the Greeks call *Symphytum Petraeum*, as if one would say, *Comfrey* of the rock: and verily like it is to wild *Origan*. The leaues be small, and three or foure branches spring immediatly from the root: the tops whereof resemble those of *Thyme*. Much branched it is otherwise, odoriferous in smel, and sweet in tast: it draws down water into the mouth and causeth spitting. The root which it putteth forth is long & red. This herb taketh pleasure to grow in stony places among rocks: in which regard it took the addition of the name *Petraeum*. Singular good it is for the sides and flanks, the spleen, reines, and wrings of the belly: for the breast, the lights, for such as reject or cast vp blood, and are troubled with the asperity and hoarseness in the throat: for which infirmities, the root is to be stamped, boiled in wine, and so drunke; yea, and otherwhiles to be reduced into a liniment, and so applied. Moreover, the chewing of it only, quencheth thirst, and hath a principal vertue to coole the lungs. Being applied outwardly in the form of a cataplasme, it knitteth dislocations, helpeth convulsions, is comfortable to the spleen, & the bowels or guts, if they be fallen by any rupture. The same root roasted or baked vnder the ashes, staeth a lask, in case it be first shrugged from the hairy strings thereof and pilled; and then after it is beaten into powder, be drunke in water with nine Pepper corns. And for healing of wounds, so soueraigne it is, that if it be put into the pot and sodden with pieces of flesh, it will foudre and reioine them, whereupon the Greeks imposed vpon it the name *Symphytum*, i. Confound: finally, it serueth to vnite again broken bones.

CHAP.

* Pliny hath forgotten himselfe, considering that in the 22 booke, & 21 chapter, he describes it (according to *Diocorides*) to be like in root and lease to *Orchaner*, &c. and there hee nameth it *Arcibion*.

* Some take it for Bugle or Scilicet heale. * Namelesse.

* or *Scolopendrium*.

* Whereupon they call it *Philanthropus*, i. a louer of man.

* *Trientalibus*.

CHAP. VII.

¶ Of Reits or sea-grasse, and Wallwort, Of the wild vine, and Wormewood.

THe sea-weed that looketh red, named in Latine *Alga*, is very proper for the prick and sting of Scorpions.

Touching Wallwort, it hath leaues carrying a strong and stinking smell with them: the stems be rough and parted into ioints: the seed black like to that of the luy, saue that the berries containing the same be soft. This herb delighteth in shady, cool, rough, and watery places. Beeing giuen to the full quantity of one Accetabulum, it is singular for the inward maladies which be proper to women.

The wild Vine, called by the Greeks *Ampelos-Agria*, is an herbe (as I haue sufficiently described already in my Treatise of Vines planted and wel ordered by mans hand) which putterth forth hard leaues of Ash-colour, long branches and winding rods clad with a thicke skin, and the same be red, resembling the floure *Phlox*, which in the chapter and discourse of Violets, I called *Iouis Flamma*; and a seed it beareth much like vnto the graines within a *Pomegranate*. The root boiled in three cyaths of water and two cyaths of the wine comming out of the Island *Coos*, is a gentle emollitiue of the belly, and maketh the body soluble, in which regard it is giuen with good successe to such as be in a drop sicke. A very good herb for women, as well to rectifie the infirmities of the matrice, as also to scoure and beautifie the skin of their face. Moreover, for the sciatica it is good to stamp it leafe and all, and to annoint the grieved place with the iuice thereof.

As for Wormewood, there be many kindes thereof. One is named *Santonicum* of a city in France called *Saints*: another, to wit *Ponticum*, taketh that name of the kingdome *Pontus*; where the sheep feed fat with it, which is the cause that they be found without gall: neither is there a better Wormewood than it: much bitterer than that of Italy, and yet the marow or pith within of that *Ponticke* Wormewood, is sweet to ours. Meet and requisite it is that I should set down the vertues and properties thereof, an herb (I must needs say) as common as any, and most ready at hand, howbeit, few or none so good and wholesome: to say nothing of the especiall account which the people of Rome make of it about their holy sacrifices and solemnities: for in those festiuall holydaies named *Latina*, at what time as there is held a great running with chariots for the best game, he that first attaineth to the goale and winneth the prize, hath a draught of VVormewood presented vnto him. And I beleue verily, that our forefathers and ancestors deuised this honourable reward, for the good health of that victorious chariotier, as judging him worthy to liue still. And in truth, a right comfortable herb it is for the stomach, and doth mightily strengthen it: In which regard, there is an artificiall wine that carrieth the strength and tast thereof, named *Abinthites*, according as I haue shewed heretofore: moreover, there is an ordinary drinke made of the decoction of VVormewood boiled in water: for the liquor ought to stand a day and a night afterwards to coole in the open aire, and then is it to be vsed: Certes, there is not a decoction of any herbe of * so great antiquitie as it, and knowne to haue bene vsed so long. Moreover, the infusion of VVormewood is in great request, and a common drinke: for so we vse to call the liquor wherein it lay steeped a certain time. Now this would be considered, that be the proportion of water what it will, the said infusion ought to stand close couered for three daies together. Seldome or neuer is there any vse of wormewood beaten to powder, ne yet of the iuice drawn by way of expression. And yet those that presse forth a iuice, take the VVormewood when the seed vpon it beginneth to swell and wax full, and being newly gathered, let it lie foking in water three daies together: but if it were drie before, to steep it a whole feuen night: which done, they set it ouer the fire in a brassen pan, with this proportion, namely, ten hemines of the herbe, to five and fortie sextars of water, and suffer it to boyle vntill a third part of the liquor be consumed: after this the decoction must run through a strainer, with hearbe and all well pressed: then ought it to be set vpon the fire againe, and suffered to seeth gently and leisurely to the height or consistence of honey, much after the order of the syrup made of *Centaurie* the lesse. But when all is done, this iuleb or syrup of VVormewood

* *Vetustissime in usu est.* Some read *Vetus sine usu est*, that is, It this drinke be stale, and not vsed presently, it is good for nothing.

A wood, is offensive to the stomach and head both; whereas that decoction first aboue-named, is most wholesome: for astringent though it be, and binding the mouth of the stomach aloft, yet it doth euacuat choler downward, it prouoketh vrine, keepeth the body soluble, and the belly in good temper, yea and if it be pained, giueth great ease: the worms ingendered therein, it expelleth: and being taken with *Seseli*, and *Celticke nard*, so there be a little vinegar put thereto, it dispatcheth all ventosities in the stomacke, and cureth women with child of that inordinat desire and strange longing of theirs: it clenseth the stomach of those humors which cause loathing of meat, bringeth the appetite againe and helpeth concoction: if it be drunke with Rue, Pepper, and salt, it purgeth it of raw humors & crudities occasioned by want of digestion. In old time, Physicians gaue wormwood for a purgatiue; but then they tooke a sextar of sea water that had bin kept long, six drams of the seed, with three drams of salt, and one cyath of hony: and the better will this purgation worke, in case the poise of salt be doubled; but it would be puluerized as fine as possibly may be, to the end that it might passe away the sooner, and worke more easily. Some vse to giue the weight before said in a gruell of Barley groats, with an addition of *Peniroyall*: others against the *Palsie*; and others againe had a deuise to put the leaues of wormwood in figs, and make little children to eat them so, that they might not tast their bitternes. Wormwood being taken with the root of *Floure-de-lis*, dischargeth the brest of rough fleagme, and clenseth the pipes. For the iauundise, it would be giuen in drinke raw, with * *Parley* or *Maidenhair*. Supped hot by little and little in water, it breaketh wind and resolueth ventosities: and together with *French Spikenard*, it cureth the infirmities of the liuer: and taken with vinegar, or some gruel, or els in figs, it helpeth the spleen: giuen in vinegar, it helpeth those that haue eaten venomous Mushrooms, or be poisoned with the gum of *Chamaelon* called *Ixia*. In wine if it be taken, it saueh those who haue drunk *Hemlock*: it resisteth the poison inflicted by the sting of the hardishrow, the sea dragon, and scorpions. It is holden to be singular for the clarifying of the sight: if the eies be giuen to watering, it represseth the rheum or flux of humors thither, so it be applied with wine cut: and laid vnto contusions, and the skin blacke and blew vnder the eies, with hony, it reduceth the place to the natie colour againe. The vapour or fume of the decoction of wormwood receiued into the eares, assuageth their paine: or if they run with corrupt matter, it is good to apply the same, reduced into powder and incorporat in hony. Take three or foure sprigs of wormwood, one root of *Nardus Gallicus*, boile them in six cyaths of water, it is a soueraigne medicine to drinke for to prouoke vrine, and bring downe the desired sicknesse of women: or being taken simply alone with hony, and withall put vp in a pessarie made with a locke of wooll, it is of speciall operation to procure their monthly terms: with honey and salnitre, it is singular for the *Squinancie*: it healeth chill-blanes, if they be bathed with the decoction thereof in water: applied vnto fresh or green wounds in a cataplasme, before any cold water come vnto them, it healeth them: and besides, in that manner, it cureth the scabs in the head: being incorporat with * *Cyprian wax* or figges, and so applied to the flanks or hypochondriall parts, it hath a particular vertue by it selfe to helpe their griefes. Moreover, it killeth any itch. Howbeit, this would be noted, that wormewood in no case must be giuen to those that haue an ague. Let a man or woman vse to drinke wormewood, they shall not be sea-sicke nor giuen to heauing, as commonly they be that are at sea. If wormewood be worne in a trusse to the bottom of the bellie, it allayeth the swelling in the sharc. The smell of wormewood procureth sleepe; or if it be laid vnder the pillow or bolster, provided alwaies that the patient be not ware of it. Either basted within cloaths, or strewed vpon them, it keepeth away the moth. If one rub his body therewith and oile together, it driueth gnats away so doth the smoke thereof also when it burneth. If writing inke be tempered with the infusion of wormewood, it preferueth letters and bookes written therewith, from being gnawne by mice. The ashes of wormewood burnt, and incorporate with oile *Rosat* to an ointment, coloureth the haire of the head black. There is yet another kinde of Sea-wormewood, which some call *Seriphium*: and excellent good is that which groweth about the city * *Taphositis* in *Aegypt*. Of this wormewood it is, that the priests of *Isis* in their solemn marches and processions, vse to beare branches before them. The leaves be somewhat narrower than those of the former, and the bitternesse not altogether so much. An enemy it is to the stomache: howbeit, the belly it loosneth, and chafeth worms out of the gurs; for which purpose, it is good to drinke it with oile and salt: or else the infusion thereof in a * *supping* or gruell made with the floure of the three moneth corne. To make the decoction

* *Cum apio, not opio.*

* *Or the ceros; Cyprie, arice Dioscurides.*

* *So called, because Oxyris was entred and his sepulchre renewed there.*

* *Or rather, a kind of sweet cut called *Hyppoma*, by *Diof.* which signifies also a wa-*

coction of wormwood well, there would be taken a good handfull of wormwood, and foddren in G
a sextar of water to the consumption of the one halfe.

CHAP. VIII.

¶ Of stinking Horehound: of *Mille-graine*, or *Oke of Ierusalem*: of *Brabyla*, *Bryon*, *Bupleuros*, *Caranance*: of *Calla*, *Circaea*, and *Cerium*: of *Crataegonon* and *Thelygonum*: of *Crocodilium* and *Cynoforchis*: of *Chrysolachanon*, *Cucubalon*, and *Conserua*.

Stinking Horehound, which some Greeks call *Ballote*, others *Melampyrion*, *i. Black Horehound*, is an herbe tufted full of branches: the stems be black and cornered; the leaues wherewith they be clad and garnished, are somewhat hairy, resembling those of sweet or white Horehound, but that they be bigger, blacker, and of a stinking sauer: but the leaues stamped and applied with salt, be very effectually against the biting of a mad dog: also, if they be wrapped in a Colewort or Beet leafe, and so roasted vnder the embers, they are commended for the swelling piles in the fundament. This Horehound made into a salve with honey, clenseth filthie vlcers.

* *Perri*: but it should be *Marrubij*, according to the Greeke word *megri*: not *megre*.

Bortrys is an herb full of branches, and those of a yellowish colour, and beset round with seed: the leaues resemble *Cichorie*. Found it is commonly growing about the banks of brookes and riuers. Good it is for them that be streight-winded and cannot draw their breath but sitting vpright. The Cappadocians call it *Ambrosia*, others *Artemisia*.

As for * *Brabyla*, they be astringent in manner of *Quinees*. More than so, I find not any Author to write thereof.

* Some take them for *Dama-scen plums*, or rather for *Bullois*, *Skogs*, or such like wilde *Plums*.

Bryon no doubt is a Sea-herbe, like in leaues to *Lettuce*, but that they be riuelled and wrinkled as if they were drawne together in a purse: no stem it hath, and the leaues come forth at the bottom from the root: it groweth ordinarily vpon rockes bearing out of the sea: and ye shall find it also sticking to the shells of certaine fishes, especially such as haue gathered any mud or earth about them. The herbe is exceeding astringent and desiccative, by vertue whereof it is a singular repercussive in all impostumes and inflammations of the gout especially, & such as require to be repressed or cooled.

Touching *Bupleuros*, I read that the seed thereof is given against the sting of serpents: and that the wounds inflicted by them, are to be washed or fomented with the decoction of the herb, putting thereto the leaues of the *Mulberrie tree*, or *Origan*.

Caranance is a meere *Theffalian* herb, and growing nowhere els but in *Theffalie*; and forasmuch as it is vsed only in amorous matters, and for to spice loue drinks withall, I meane not to busie my selfe in the description thereof: howbeit, thus much it would not be amisse to note, for to detect and lay open the folly and vanities of *Magitians*; namely, that they went by this conjecture onely, that it should be of power to win the loue of women, because forsooth when it is withered, it draweth it selfe inward * like a dead *Kites foot*. For the same reason also, I will hold my tongue and say neuer a word of the herb * *Cemos*.

* As if it would catch women and hold them fast perforce.

* *magis* or *magis* in Greeke signifieth a bridle or bit: and it is thought to be *Leontopodium*, *Disfor*, though others take it for *Doder*. * Or rather *Calix*. * Rather *Orocleia*, out of *Dioscorides*.

* *Cala* is of two sorts: the one like to *Aron*, which loueth to grow in toiled and ploughed grounds: the time to gather this herb is before it begin to wither: the same operation it hath that *Aron*, and is vsed to the like purposes: the root thereof is commended to be giuen in drink for a purgation of the belly, and to prouoke the monethly termes of women: the stalkes boyled leafe and all together with some pulse or other into a pottage, and so taken, cure the inordinate prouocations to the stoole, and streinings therupon without doing any thing. The second kind some call *Anchusa*, others, * *Rhinochisia*: the leaues resemble *Lettuce*, but that they be longer, full of plume or down; the root red, which being applied with the floure of barley groats, healeth shingles, or any other kind of *S. Anthonies fire*: but drunke in white wine, cureth the infirmities of the liuer.

Circaea is an herb like to winter *Cherry* or *Alkakengi*, but for the flours which are black: the seed small, as the graine of *Millet*, and the same groweth in huskes or bladders resembling little hornes: the root is halfe a foot long, forked for the most part into three or foure grains or branches: the same is white, odoriferous and hot in the mouth: it loueth to grow vpon rockes and stonie grounds lying pleasantly vpon the Sun. The infusion of this root in wine, is good to be

A be drunke for the paine and other diseases of the matrice: but of the said root there ought to be taken three ounces stamped, and the same to steepe a day and night in 3 sextars of wine, for to make the infusion aboue-named. This portion also serueth to fend down the after-birth, if it stay behind. The seed of this herbe drieth vp milke, if it be drunke in wine or mead.

Cirion cometh vp with a slender stalke two cubits high, and seemeth to be made 3 cornered triangle-wise: the same is beset round about with prickie leaues: howbeit, the said prickies are but tender and soft. The leaues in forme resemble an oxe tongue or the herb * *Langue-de-boeuf*, but that they be smaller and somewhat white; in the top whereof there put forth purple buttons or little heads, which in the end turne to a plume like thistle down. Some writers hold, that this herb or the root onely, bound vnto the swelling veins called *Varices*, doth allay the paine thereof.

* Or *Borage*, called in Greeke *Buglosson*.

Crataegonos spindlet in the head like vnto the eare of wheat, and out of one single root ye shall haue many shoots to spring and rise vp into blade and straw, and those also full of ioints. It gladly groweth in coole and shadowie places: the seed resembleth the grain of the *Millet*, which is very sharp and biting at the tongues end if a man & his wife before they company together carnally, drink before supper for 40 daies together the weight of three oboli of this seed, either in wine, or as many cyaths of water, they shall haue a man childe betwene them, as some say. There is another * *Crataegonos*, called also *Thelygonos*; & the difference from the other may soon be known by the mildnesse in taste. Some authors affirme, that if women vse to drinke the floures of *Crataegonos*, they shall within 40 daies conceiue with child. But as well the one as

* Some take this for our *Perficaria*, or *Art-emet*.

C the other applied with honey, do heale old vlcers: they incarnate and fill vp the hollow concavities of fistulous fores: and such parts as do mislike and want nourishment, they cause to gather flesh and fill the skin again: foule and filthy vlcers they mundifie, the flat biles and risings called *Pani* they rarifie and disscusse: gouts of the feet they mitigate; & generally all impostumations, in womens breasts specially, they resolute and assuage. *Theophrastus* would haue a kind of tree to be called *Crataegonos* or *Crataegon*, which here in Italy they call * *Aquifolia*.

* *i. Holly* or *Huluer*: nay rather, *Aquifolia* is *Agria* in Greeke; and the *Crataegus* of *Theophrastus*, which he meaneth here, is a kinde of *Ceanoth* tree now called *Terminalis*.

Crocodilion doth in shape resemble the thistle herbe or *Artichoke* called the blacke *Chamaeleon*: the root is long and thicke in all parts alike, of an hard and vnpleasant smell: it groweth ordinarily in sandy or grauelly grounds. If one drinke of it (they say) it will set the nose a bleeding, and send out a deale of thicke and grosse blood, that the spleene will diminish and weare away by that means.

As touching *Testiculus Canis* or *Dogs-stones*, which the Greeks call *Cynoforchis*, & others simply *Orchis*, it hath leaues like vnto those of the oliue; soft & tender they are, and about halfe a foot long, and therefore no maruell if they lie spread vpon the ground: the root is bulbous and growing long-wise, in a double ranke, or two together: the one aboue, which is the harder, the other vnder it, and that is the softer: when they be foddren, folke vse to eat them after the manner of other bulbs: and lightly a man shall find them growing in vineyards. Of these two roots, if a man eat the bigger, it is said, that he shall beget boies; and if the woman eat the smaller, she shall conceiue a maiden childe. In *Theffalie*, men vse for to drinke in goats milke, the softer of these roots, to make themselves lustie for the act of generation; but the harder, when they would coole the heat of lust: whereby we may see, that they be contrarie, and one hindereth the operation of the other.

Chrysolachanon cometh vp like a *Lettuce*, and commonly groweth in plots of ground set with *Pines*: the vertue of this herbe is to heale wounds of the sinewes though they were cut quite asunder, if it be presently laied too. There is another kinde of * *Chrysolachanon*, bearing floures of a golden colour, and leaved like vnto the *Beet*: when it is boiled, folke vse to eat it instead of meat, and it loosneth the belly as well as *Beets*, *Coleworts*, and such like: and if it be true that is reported, whosoever beare this hearbe tied fast about any place of their bodies which is euil in their eie, so as they may see the same continually, it wil cure them of the jaundise. Touching this hearbe *Chrysolachanon*, well I wot that I haue not written sufficiently, that men might know it by this description, and yet could I neuer meet with any author who hath said more, or described it better. This verily hath been the fault and oversight euen of our moderne *Herbarists* of late daies, To write sleightly of those herbes and simples which they themselves knew and were acquainted with, as if forsooth they had been knowne to euery man; setting downe onely their names and no more: which is euens much as to tell vs a tale and say,

* I thinke he meaneth *O-rach*.

* *Coccullo terra*
son etinke
in place vn-
perfected; but I
passe rather
that *Ung. her-*
alan ch at
the olefentia
their wil-
ness in these
of sim-
the put
that
any
which
can
m. ceary sente
v. more
* *Ung. (Coccul-*
lo terra.
the f. u-
m. an. lu.

that with the * rennet or rundles of the earth, one might stay a laske, or giue free passage to the vrine in the strangury, so it be drunke in wine or water.

As for Cucubalum, they write of it, That if the leaues bee stamped with vineger, they heale the stings of serpents and scorpions. Some of them call this herb by another name, Strumus, and others giue it the Greeke name Strychnos: and black berries (they say) it hath. The iuice thereof taken to the quantity of one cyath, with twice as much honied wine, is soueraigne for the loins or small of the back: likewise it caeth the head-ache, if together with oile of roses it bee distilled vpon the head by way of embrochation. The herb it selfe in substance made into a liniment, healeth the wens called the kings cuill.

Concerning the fresh water Sponge (for so I may more truly terme it, than either mosse or herbe, so thicke of slag haire it is and fistulous withal) it groweth ordinarily within the riuers that issue from the root of the Alpes, and is named in Latine * *Conserua*, for that it is good to conglutinat, in manner of a soulder. Certes, I my selfe know a poore labourer, who as he was lopping a tall tree, fell from the top down to the ground, and was so pitiously bruised thereby, that vnneth he had any found bone in all his body that was vnbroken: and in very truth, lapped he was all ouer with this mosse or sponge (call it whether you will) and the same was kept euermore moist and wet with sprinkling his owne water vpon it, whensoever it began to drie vpon him with the heat of his body: seldome was it vndone or remooued, and neuer but when of necessity for verie change fresh was laied too for default of the other: and by this manner of cure and no other, the poore wretch recovered perfectly, in so smal a time, that it was wonderful and almost incredible.

CHAP. IX.

¶ Of the berrie called *Coccullo Gnidium*. Of the *Tazill*, and *Oke ferne*. Of *Dryophanon*, and *Ela-tine*. Of *Empetrum*, otherwise named *Calcifraga*. Of *Epipactis*, or *Elleborine*. Of *Epimedium*, *Enneaphyllon*, and *Ferne*. Of the herbe named *Oxe-thigh*. Of *Galeops*, otherwise *Calcobdolon*. Of *Glaux*, or *Engalatum*.

The berrie *Coccullo Gnidium*, in colour resembleth the Scarlet graine; in quantity a pepper corne, but that it is bigger: of an ardent and caustick quality it is, and therefore they vse to lap it in the soft crum or pith of a loaf of bread, and to swallow it, for feare it should burn the throat as it passeth down. A present remedy this is for those who are impoisoned with Hemlocke; and it hath a good propertie to stop a laske.

The *Tazill*, called in Greeke * *Dipfacos*, hath leaues much resembling Lettuce, sauing that in the mids of the back-part, there are to be seen certain bubbles as it were, or ridings, and those be prickly: the main stem which it beareth, is two cubits high, and the same armed with prickles: at euery ioint and knot whereof, it putteth forth two leaues which do compasse and inclose the same round about in maner of wings, making thereby a certaine * concauitie or hollow receptacle, wherein alwaies there standeth a * saltish dew or water. In the top of this maine stem and other branches proceeding from it, it beareth certaine burry heads, beset all ouer with sharpe prickles, like those of an *Vrchin*: and it loneth to grow in waterie places. This herb closeth vp and skinneth the fissures or chaps in the fundament: also the root boiled in wine, healeth fistuloes; but the same ought to be so tender sodden, as it may be wrought like wax, that a colyric or tent made of it may be put into the concauitie of the sore. Moreover, it cureth werts of all sorts: and some there be, who to rake away werts, wash them with the liquor found in the hollow pith of the foresaid wings. The *Oke fern* named in Greeke *Dryopteris*, is like to other fern, & groweth vpon trees, hauing leaues finely slit, and those somewhat sweet in tast: the root is rough and hairy: of a caustick and fiery nature is this herb; and therefore the root being punned, is a depilatory and fetcheth off haire: for which purpose, the manner is to apply it in manner of a liniment, vntill it procure sweat: which course would be re-iterated twice or thrice, during which time the sweat must not be wiped away.

Dryophanon is an herb much like to *Dryopteris*: the stems whereof be small, yet growing to the length of a cubit, & those be inuironed on both sides with leaues an inch broad: in shape much like to *Bruscus* or butchers-broom, called in Greeke *Oxymyr sine*, but they be whiter and softer,

A softer, bearing a white floure likewise in manner of the Elder. The young crops and tendrils of this herb, may be eaten when they are sodden: and the seed is commonly vsed in stead of pepper.

Running Buckwheat or Bindweed, named in Greeke *Elatine*, putteth forth smal leaues, round and hairy, much like to those of *Parietary* of the wal; and immediatly from the root there spring fine or six pretty branches halfe a foot long, furnished well with leaues. This herb grows among corn: sower it is and harsh in tast, whereupon it is taken to be very effectuall to repress the fluxe of humors which cause watering eyes, if the leaues be stamped with barley groats, and applied with a fine linnen cloath vnderneath. The same boiled together with *Linefeed*, cureth the bloudy flux, in case the patient drinke the broth or decoction thereof.

B As for *Empetron*, which our countrymen in Latine name *Calcifraga*, it groweth vpon mountains regarding the sea, and commonly vpon rocks and stony cliffes: the nearer it is to the sea, the saltier tast it hath, by which means if it be taken in drinke, it purgeth choler & fleam: the farther off that it groweth from the sea, and the more terrene and earthly substance that it hath, the bitterer it is found to be, and this doth euacuat waterish humors: but the manner of taking it, is in some potage, or els in mead. Being long kept, it loseth the force: if it be fresh and new gathered, and then either sodden or stamped, it is diureticall and breaketh the stone. And verily they that promise thus much in the behalfe of *Empetron*, and would seem to iustifie and make good their word, do affirme for the better credit thereof, That if stones doe boile with it in the same pan, they will burst in pieces.

Epipactis, named by some *Elleborine*, is a little herb bearing small leaues: soueraign for the diseases of the liuer, and against all poisons, if it be taken in drinke.

Epimenidion putteth forth no great stem, bearing ten or twelue leaues resembling the *Iuie*, but it neuer sheweth floure: the root is smal, black, and of a strong and stinking smell: it groweth vpon moist grounds: of an astringent nature it is, and cooleth mightily: an hearbe that women * must beware of. The leaues stamped and applied to the paps of maides, keep them down that that they shall not grow.

Enneaphyllon hath long leaues, in number nine, neither fewer nor more, and those be of a burning or causticke nature: a singular hearbe for the paines of loines, and the *Sciatica*, but it ought to be applied enwrapped well in wooil, for feare least it burne the flanks, for presently it raiseth blisters.

D Of *Ferne* be two kinds, and they beare neither floure nor seed. Some of the Greekes call the one *Pteris*, others *Blechnon*: from one root whereof there spring many branches representing wings, and those exceed two cubits in length, yeelding * no vnpleasant sauor; and this they suppose to be the male. The second kind, the said Greekes some call *Thelypteris*, others *Nymphæa* *Pteris*: this groweth single, and brancheth not into many stems; shorter it is than the former, softer also, and thicker of leaues, and those toward the root guttered and somewhat hollow: there is neither of them both, but their roots will feed swine fat: and the leaues of the one as well as the other, are disposed on both sides so, as they do represent birds wings, whereupon the Greeks gaue them the name * *Pteris*. The roots of both *Fernes* be long, and those growing bias: in colour blacke, especially when they be drie: and dried they ought to be in the Sunne. Fern groweth euery where, but their most delight is in a cold soile. The due time of digging them vp, is about the setting of the star *Virgilia*. There is no vse in Physicke of their roots, but when they be iust two yeres old; for both before & after the time, they serue for no purpose. Taken in this their season, they do expell all kind of vermin out of the guts, with honey, if they be broad and flat wormes, but in some sweet wine, for all the rest, whether they be round or small, so that the Patient continue this drinke three daies together. Neither of them both, but are very contrarie and offensiu to the stomack: howbeit, they purge the belly, and first euacuat choler, then soon after, waterish humors: but the better do they chase the foresaid flat wormes out of the body in case they be quickened with the like quantitie of *Scammonie*. The root of *Ferne* taken to the weight of two oboli in water, cureth all rheums; but the Patient ought to fast one whole day before, and likewise eat a little bony somewhat before that he take the said drinke. As for women, neither the male nor the female Fern would be giuen vnto them, for if they be with child, it will driue them to trauell before their time, and slip an vntimely birth; and if they be cleare, it hindereth conception and causeth them to be barren. The powder of *Ferne* roots, is singular to be strewed or cast vpon maligne vlcers, yea, and the farcins and sores in horse necks. The leaues of

* This *Empetron* is thought to be our *Saxifraga*.

* For it hindereth conception.

* Non grani odore: *Dioscorid* saith, *Sub graues odore*, somewhat vnpleasant in smell.

* And in *Columella*, *Felix* is called *Ania*.

* *Virga pastoris*

* Thereupon it is called *Labrum Veneris*, *Venus lauer*.
* This water is not saltish: but because the name *Dipfacos* in Greeke alludeth to thirst, & salt things cause thirst: it is called *Urine* in this humour to be saltish.

Ferne kill punaises or wallice, and a serpent they will not harlor; and therefore it is good for those who are to lie in suspected places, to make them pallets of Ferne leaues, or at leastwise to lay them vnder their beds: the very smoke also of them when they be burned, do chafe away ferpents. Moreover, Physitians haue made some difference and choise euen in this herbe also; for the best is counted that of Macedony: and the next to it in goodnesse, cometh from Cassiope.

As touching the herb called in Latine Femurbubulum (i.e.) Ox-thigh, it is very good for the sinews, if being new gathered, it be stamped and incorporat in vineger and salt.

* Many take it for Archangel.

* Galeopsis, otherwise called by some Galeobdolon or Galion, hath a stem and leaues like to the nettle, but that they are more smooth and mild in hand; which being bruised or stamped, yeeld a stinking smell; and it beareth a purple floure, it groweth euery where about hedges and path-waies. The leaues and stalks both, stamped and applied with vineger, heal all hard tumors and cancerous sores: likewise the wens called the kings euill: they resolute flat impostumes, and the swellings behind the ears: now the manner is to foment the said infirmities with their decoction. Being laid too with salt, they heale vlcers tending to putrifaction, and gangrens.

As touching Glaux, in old time called Euglauston, it is an herb in leafe resembling Treetri-folie, and the Lentill, but that the back part of the leafe in Glaux is whiter. The branches, that be in number five or six, and those springing directly from the root, very small, doe creepe along the ground: the flours which it putteth forth be of a purple colour: and this herb is found growing ordinarily neare the sea-side. Being boiled in a gruell made of fine wheat floure, it cauterh nourses that drinke it, to haue plenty of milke in their breasts; but then they must presently goe to a baine or hot house.

CHAP. X.

¶ Of Glaucion. Of Paconie, and Cudweed or Cottonwort, called also Chamaæleon. Of Galedragon, Holcus, Hyofris, Helosteon, and Hippophaeton.

Glaucion grows naturally in Syria and Parthia: a low herb, tufted thick with leaues, much like vnto Poppie, but that they be smaller and looke more foule and greasie; of an vnpleasant and stinking smell; bitter also in tast, styptick, and astrigent: graines it beareth of a Safron colour, wherout is drawne the juice Memithra, called by the Greeks Glaucium also, as well as the herb. Now for to get this juice, they vse to couer the graines in mud or clay, and put them in an earthen pot which they set in an ouen; where, after they are well heat, they vse to presse out of it the foresaid juice. And not onely it, but the leaues also if they be stamped, are much vsed for the flux of humors to the eies, especially such as fall together all at once in great violence. And of this herb or juice there is a certaine collyrie compounded, which the Physitians call Diaglaucion: a good medicine also for nourses to drinke in water, if they haue lost their milke and would recouer it againe.

Paconie, which some in Greeke call Glycyfide, others Paconia, or Pentorobos, hath one main stem two cubits high, & the same accompanied with two or three more lesse stalks of a reddish colour, and the rind resembleth that of a Bay tree: the leaues be very like vnto Wood, were they not fatter, rounder, and smaller: seed it beareth in certaine husks like grains, and those be partly red and partly blacke. Of Paconie there be two kinds; the female it is thought to be, to the root whereof there sticketh eight long bulbies commonly, or six at least: the male hath more of them hanging to it, by reason it standeth not vpon one single and entire root onely, but of many, and those run downe a span deep, and be white withall. These roots are found to be astrigent and stypticke at the tongues end. As for the female, the leaues thereof do sent of Myrrhe, and grow somewhat thicker than those of the male. They loue both to grow in woods. It is commonly said, That the roots must be digged vp in the night season, for feare that the Wood-speight or Hickway should see them: for in the day time the said bird would flie in their faces that carry it away, and be readie to job out their eies. In the very drawing also of those roots out of the ground, there is some danger, lest their fundament or tiwill fall out of their bodies who are imployed about that businesse. But I suppose all this to be but a fabulous and vaine inuention, deuyed onely to make folke beleue it is an herbe of wonderful operation. Moreover, the grains are diuersly vsed: for the red, beeing taken to the number of fiftene or thereabout, in some grosse or hard VVine, doe stay the monethly fluxe of the reds in women: whereas the blacke

dranke

A dranke to the same number in sweet wine cuit or simple wine, cure the passions of the matrice, [and namely the rising of the mother.] The root giuen in wine, appeaseth all the paines of the belly, cleneth the gurs, cureth the convulsion or cramp which plucketh the neck & body backward, and the jaundise: it pacifieth also the griefes of the reins and bladder. As for the wrings of the matrice and stomack, the same boiled in wine, doth assuage them; the lask it staeth: and being eaten with meat, it is good for those that be troubled in their braines, or otherwise giuen to melancholy. But in these cases foure drams is counted a sufficient dose. The black grains taken to the number aboute said in wine, help those that be ridden with the night-mare, and in danger thereby to haue their breath stopped. For the gnawing in the stomack, the same being either eaten or applied in a liniment, are singular good: impostumations likewise growing to suppuration, if they be taken betimes, may be resolute with a plaster made of the black berries, and say they were of long continuance, the red will do the deed. But as well the black as the red, are soueraigne for those who be stung with serpents: as also for young children who haue the stone, and be entering into the strangury, and pisse drop-meale.

Cudwort or Cottonweed, some there be who call Gnaphalion, others, Chamaæleon. The white, soft, and delicate down of the leaues, many vse in stead of flocks, and surely it is not much vnlike. This herb is good to be giuen in some austere and styptick wine, for the bloody fluxe. It staeth lasks, and restraineth the immoderat flux of womens fleurs. Being clysterized, it is singular for the Time-me, that is to say, the continual prouocations to the sege without any voidance of excrements. Last of all, in a liniment it serueth well to be applied in vlcers tending to putrifaction.

C As touching Galedragon (an herb so called by *Xenocrates*) it resembleth the Thistle named Leucacanthus [*S. Mary thistle*] and groweth full of sharp pricks in moory grounds. The stem riseth vp tall, in manner of Ferula or Fennell geant, in the very head and top whereof it beareth a thing resembling an egge, in which there breed (they say) in proesse of time certain grubs or little worms, which are excellent for to ease the tooth-ach, if they be kept in a box with bread, and as need requireth, tied fast vnto the arm of the patient on that side where they ake; for it is wonderfull how soon the paine wil by this means cease. Mary they ought to be changed euery yere, for after one yere they be of no vertue in this case: and in any wise they must at no time touch the ground.

D As for Holcus, it groweth vpon stony grounds and those that be dry. It riseth vp with a stem like vnto the straw of that Barly which springeth euery yere without sowing: in the top whereof it beareth slender spikes or cares. This herb bound about the head, or the arme, draweth forth of the body any spils whatsoeuer: whereupon some name it *Aristida*.

* *Hyofris* resembleth Cichory or Endive, but that it is lesse, and in handling more rough: a soueraigne vulnerary herb, so it be stamped and laid to a wound.

Helosteon, which the Greeks so call by the * contrary, is an herbe without any hardnesse at all, as if we should terme * [Gall] by the name of [Sweet.] So small and slender it groweth, that a man would take it to be all hairs; foure fingers long, in manner of quich-grasse or stitchwort. The leaues be narrow, and haue an astrigent tast. It cometh vp ordinarily vpon banks & hillocks, which be all earth and nothing stony. Being drinke in wine, there is great vse thereof for convulsions, spreins, and ruptures. It is a great healer besides, and skinneth greene wounds: and experience hereof may be soone seene: for if it be put among pieces of flesh in the pot whilest they boile, it will cause them to grow together and vnite.

Hippophaeton is a certain prickly bush growing by the sea-side, wherewith * Fullers and Diers fill their leads & coppers, without stem, without floure: it bringeth forth certain little knobs or buttons only, & those hollow: leaues also it hath smal, and many in number, of a grasse green colour: the roots be white and tender; out of which there is a juice drawne by way of expression in Summer time, which is singular good for to purge the belly, if it be taken to the weight of three oboli; and principally helpeth those that be subject to the falling sicknesse, trembling of the members, and the dropsie: it cureth also those that be giuen to the swimming and dizziness of the braine, to straitnesse of winde, and who cannot breath but vpright; and last of all, to such as be entering into a palse.

CHAP.

CHAP. XI.

¶ Of Hypoglossa and Hypecoon, Idea, Ispopyron, Lathyrus, Leontopetalon, Lycopsis, Lithospermon. The vulgar stone. Of Limeum, Leuce, and Leucographis.

Bistlingua.
Horse-tongue,
or Double-
tongue.

Hypoglossa hath leaues fashioned like vnto Butchers broome, and those turning hollow, and pricky: within which concauities there come forth certaine little leaues resembling tongues. A garland or chaplet made of these leaues, and set vpon the head, easeth the pain thereof.

Hypecoon groweth amongst corne, and is leaef like vnto Rue. It hath the same nature and properties that Opium or the juice of Poppie.

As for the herb Idea, the leaues therof resemble those of ground-Myrtle or Butchers broom: vnto which there grow close certaine tendrils, and those carry floures. It stopperth a lask, staierth the immoderat flux of womens moneths, and stancheth all vnmeasurable bleeding: for by nature astringent it is and repercussive.

Ispopyron, some there be who call it Phasiolum, because the leaf (otherwise like vnto Annise) doth turne and writh like vnto the tendrils of Phasils. In the top of the stemme it beareth small heads or buttons full of seed, resembling Nigella Romana. A soueraigne hearbe, taken either in honny or mead, against the cough and other infirmities of the breast: likewise for the accidents of the liuer.

* Lathyrus.
* For the mil-
ky juice chaply.
For Dioscor.
saith amygdala,
is of the Al-
mond tree.
* Purgata faci-
lia. Some
thinke gentle
purgatiues.

* Spurge hath many leaues resembling * Lettuce: besides which, it putteth forth as many other slender and small branches, containing in little tunicles or husks certain seeds in manner of capers: which being dried and taken forth, resemble for bignesse corne of Pepper, white in colour, sweet in tast, & easie * to be clenfed from their husk. Twenty of these seeds drunk either in cleare water or mead, do cure the dropfie: besides waterish humors, they euacuat choler. They that desire to be thoroughly purged & would haue them to work strongly, vse to take them husk and all, but certainly so taken, they hurt the stomack: and therefore there is a deuise of late found out to giue them either with fish, or els in some broth of a cock or capon.

Leontopetalon, which some call Rhaeion, carseth leaues like to Coleworts, and a stalk halfe a foot high, garnished with many branches resembling wings: and seed it beareth in the head contained within cods, after the maner of ciches. The root is made much after the fashion of a rape or turnep, big and black withall. This herb groweth in corne grounds. The root is a singular counterpoison to be giuen in wine against the sting or venome of any serpents; and verily there is nor in the world a more speedy remedy. Very good it is for the Sciatica.

* Some take it
for a kind of
Orchanet,
others for
Hounds-
tongue.

* Lycopsis hath leaues like to Lettuce, but that they be longer and thicker: it riseth vp with a long stem, and the same hairy, with many branches growing thereto of a cubit in length: and beareth little Purple floures. It loueth to grow vpon champion plaines. A liniment made with it and barly meale, is good for the shingles and S. Anthonies fire. In agues it procureth sweat, so that the patient drink the juice thereof mingled with hot water.

But of all herbes that be, there is none more wonderful then Greimile: some call it in Greeke Lithospermon, others Agonychon, some Diospyron, and other Heracleos. It groweth ordinarily * five inches high: and the leaues be twice as big as those of Rue. The foresaid stalks or stems be no thicker than bents or rushes, and the same garnished with small and slender branches. It bringeth forth close ioining to the leaues, certain little beards one by one, & in the top of them little stones white and round in manner of pearls, as big as cich pease, but as hard as very stones. Toward that side where they hang to their steles or tailes, they haue certain holes or * concauities containing seed within. This herb groweth in Italy, but the best in the Island Candy. And verily of all the plants that euer I saw, I neuer wondred at any more: so sightly it groweth, as if some artificiall goldsmith had set in an alternatiue course and order, these prety beads like orient pearls among the leaues: & so rare a thing it is & difficult to be conceiued, that a very hard stone should grow out of an herb. The Herbarists who haue written thereof, do say that it lieth along and creepeth by the ground: for mine owne part, I neuer saw it growing in the plant: but shewed it was vnto me plucked out of the ground. This is for certaine knowne, that these little stones called Greimile seed, drunke to the weight of one dram in white wine, breake the stone, expell

A expell the same by grauell, and dispatch those causes that be occasions of strangurie. Certes, a man no sooner seth this hearb, but he may presently know the vertues thereof, and for what it serueth in Physicke; a thing that he shall not obserue again in any other whatsoeuer: for at the very first sight of these little stones, his eie will tell him what it is good for, without information from any person at all. There be common stones found about riuers, bearing a certain drie hoary mosse vpon them. Rub one of these stones against another, hauing spit first therupon, and then therewith touch the tetter or ringworme in any part of the body, it will kill the same: but the party must as he toucheth it, vtter this charme following:

* *Quod est Ruridideris, non est deus tuus dicitur.*

That is to say,

Cantharides flie apace: for a wilde Wolfe followeth in chase.

The French-men haue a certaine herbe which they call Limeum, out of which they draw a venomous iuice, named by them Stags-poison, wherewith they vse to envenome their Arrow heads when they go to hunt their red Deere: Take of this as much as goeth to the poysoning of one arrow, and put it in three measures or Modij of a mase wherewith they vse to drench cattel: and make sops thereof, and conuey them down the throat of sick oxen or kine, it will recouer them. But presently after the receipt of this medicine, they must be tied vp sure vnto their boufies vntill the medicine haue done purging: for the beasts commonly fare all the while that it is in working, as if they were wood. In case they fall a sweating vpon it, they must be washed all ouer with cold water.

* Leuce is an herbe like vnto Mercury; but it tooke that name by reason of a certaine white strake or line that runneth crosse through the mids of the leafe, for which cause some call it Me-soleucas. The iuice of this herbe healeth fistuloes: and the substance of the herbe it selfe stamped, cureth cancerous sores. It may be peraduenture the same herb which is named Leucas, that is so effectually against all venomous things proceeding from any sea-fishes. The herbarists haue not described this herb otherwise than thus, That the wild kind thereof with the broader leafe, is more effectual in the leaues; and that the seed of the garden kind, hath more acrimony than the other.

* Menib Sa-
vacencia.

D Touching Leucographis, what manner of herbe it should be, I haue not found in any writer: and I wonder thereat the rather, because it is reported to be so good for them that void & reach blood vpwad, namely, if it be taken to the weight of three oboli with Saffron: likewise stamped with water and so applied, it is singular good against those fluxes that proceed from the impetility of the stomacke: soueraigne also for to stay the immoderat flux of womens termes. And it entereth into those medicines which are appropriate for the eies, yea and into incarnatiues, such especially as be fit to incarnat those vlcers which are in the most tender and delicate parts of the body.

CHAP. XII.

¶ Of Medion, Myosota, Myagros, Nigina, Natix, Odontitis, Ottonne, Onosma, Onopordos, Oxyris, Oxy, Batrachion, Polygonon, Pancration, Peplos, Periclymenos, Laucanthemon, Phytocoma, Phyllon, Phellandron, Phalaris, Polyrrhizon, and Prosepinaca: of Rhacomia, Ruscida, and Staechas.

Medion hath leaues like vnto * garden Floure-de-lis. A stem three foot * high, garnished with faire large floures, of purple colour, and round in forme: the seed is small, and the root halfe a foot long: it groweth willingly vpon stony grounds lying in the shade. The root taken in a liquid electuary or lohoch made with honny to the quantity of 2 drams, for cerdaies together, staierth the immoderat flux of womens monethly termes. The seed also reduced into powder and drunke in wine, representh their extraordinary shifts.

* Indisfatue:
others read Se-
ridis & Endime.
* striped stem.
But Dioscor.
saith Tricubi-
stem, a three
cubit high.
* Mouse eate.

* Myosota, otherwise called Myosotis, is a smooth herbe, shooting forth many stems from one single root, and those in some sort of a reddish colour and hollow: garnished with leaues, which toward the root be narrow, long, and blackish, hauing their backe part sharpe and edged: which leaues grow along the stems two by two together: and out of the concauities or armpits be-

between the stalk and them, there put forth other small branches with a blew floure. The root is of the thicknesse of a mans finger, bearded with many small strings resembling hairs. This root is of a corrosiue nature, fretting and exulcerating any place wherunto it is applied: in which regard it healeth vp the fistulous vlcers called *Ægilops*, growing between the nose and angles of the eies. The *Ægyptians* are of opinion, that if vpon the 27 day of that moneth which they call *Thiatis* (and which answereth very neare to our moneth August) a man or woman do annoint themselves with the juice of this herb in a morning before they haue spoken one word, he or she shall not be troubled with bleared eies all that yeare long.

Myagros is an herb growing vp with stems in manner of *Fenell* geant, in leaues resembling *Madder*, and riseth to the height of 3 foot. The seed which it beareth is oleous, & out of it there is an oile drawne, which is good for the sores in the mouth, if they be annointed therewith.

The herbe called *Nigina*, hath three long leaues like vnto those of *Succorie*; wherewith if scars (remaining after vlcers and wounds) be rubbed, it will reduce them to the natural color of the other skin.

There is an herb, which in Latine is named *Natrix*, the root whereof being pulled out of the ground, hath a rank smell like vnto a Goat; with this herbe they vse in the *Picene* country to driue away those hob-goblins which they haue a maruellous opinion to be spirits, called *Fatui*: but for mine own part, I am verily perswaded they be nothing else but fantastickall illusions of such as be troubled in mind and bestraught, the which may be chased and rid away by the vse of this medicinable herbe.

Odontitis may be reckoned among the kinds of hey-grasse, putting forth many small stems growing thicke together from one root, and those knotted and full of ioints, triangled and blackish withall: in euery ioint small leaues it hath, resembling those of knot-grasse, howbeit somewhat longer: in the concavities between the said leaues and the stem there is contained a seed like vnto *Barly* corns: the floure is of a purple colour, and very small. It groweth ordinarily in meadow grounds. The decoction of the branches and tender stalks of this herb, to the quantitie of one handfull, boiled in some astringent wine, cureth the toothach, if the patient hold the same in the mouth.

Othonne groweth plenteously in *Scythia*, like vnto *Rocket*: the leaues be full of holes, and the floure resembleth *Safron*: which is the cause that some haue called it *Anemone*. The juice of this herbe entreteth very well into those medicines which are appropriate to the eies; for it is somewhat mordicatiue, and heateth gently: besides exiccatiue it is, and by that meanes astringent. It cleneth the eies of those films and clouds which darken the sight, and remoueth whatsoever hindereth the same. Some ordain for this purpose that it should be washed first, and after it is dried againe made into certain balls or trofchisks.

Onosma beareth leaues well-neare three fingers long, and those lying flat vpon the ground: three in number, and indented or cut after the manner of *Orchanet*, without stem, without floure, without seed. If a woman with child eat thereof, or do but step ouer it, she shall cast her vntimely birth out of her wombe.

As for *Onopordon*, they say if a fesse eat thereof, they will fall a fizling and farting. Howbeit of vertue it is to prouoke vrine, and the monethly sicknesse of women: to stop a laske, to discusse and resoluë impostumes, and to heale them when they be broken and do run.

* *Osyris* putteth forth small branches of a browne colour, slender, pliable, and easie to wind; the same be garnished with leaues * resembling those of *Line* or *flax*, of a dark & dusky green at first, but afterwards changing colour, and inclining to a red colour, and the seed is contained in those branches. Of these leaues are made certain washing balls, to scoure womens skin, and make them look faire. The decoction of the root being drunk, cureth those that haue the jaundise. The same roots, gathered before the seed be ripe, cut into roundles, and dried in the Sun, do stop the laske: but drawn after that the seed is ripe, they repress all catarrhes and fluxes of the belly, if the patient drink the supping wherein they are boiled. Also stamped simply, and so giuen in rain water, they haue the same effect.

* *Oxys* beareth three leaues and no more. This herb is singular to be giuen for a feeble stomach which hath lost all appetite to meat. They also who haue a rupture, and whose guts be fallen down, eat thereof to very good successe.

Polyanthemum, which some call *Batrachion*, hath a causticke quality, whereby it doth blis-

* *Linaria* or
Toads' flax.
* According
to *Dioscorides*.

* Cuckowes
meat, or
Wood-Sorell.

A fter any vnseemly scars, by means whereof, reduceth them to their fresh and former colour: the same also applied, scoureth away the morpew, and bringeth the skin to the natieue hue, answerable to the rest of the body.

Knot grasse is that herb, which the Greeks name *Polygonon*, and we in Latine, *Sanguinaria*: in leaf it resembleth *Rue*, in seed common quick grasse, & riseth not from the ground but creepeth along: the juice of this herb conueied vp into the nostrils, stancheth bleeding at the nose. They who set down many kinds of *Polygonon*, do hold that this is to be taken for the male, and by reason of the multitude of seed which it beareth is called * *Polygonon*: or for that it groweth so thick in tufts, *Calligonon*. Others name it * *Polygonaton*, for the number of * knots or knees which it carrieth. There be again, who giue it the name *Theuthalis*: some call it *Carcinotron*, others *Clema*, & many *Myrtopetalon*: and yet I meet with some writers, who say this is the female knot-grasse: and that the male is the greater, and not altogether so dark of colour, growing also thicker with knots, & swelling with seed vnder euery leaf: well, how soeuer it is, the property of them both, the one as well as the other, is to bind and coole: and yet their * seed doth loosen the belly, which if taken in any great quantity, is diuretical and represseth any rheums, provided alwaies that the patient be troubled therewith, otherwise it doth no good. The leaues are singular good to be applied vnto the stomach, for to assuage the heat thereof: in a liniment they mitigate the grieve of the bladder, and stop the course of hingles and such like wilde-fires. The juice is soueraine to be dropped alone by it selfe into the eares that run, and into the eyes to abate their pain. It is vsually giuen to the quantity of 2 cyaths in tertian Agues, and Quartans especially, before the fit commeth: likewise for the feeblenesse of the stomach when it will keep nothing: for the bloody flux, and the rage of cholerick humors both vward and downward.

A third kind there is, which they call * *Oreon*, growing vpon the mountains, resembling a tender reed: rising vp in one single stem, but full of little knees or knots, and those * couched & thrust together. Leased it is like the *Pitch* tree: the root needlesse, and of no vse: and generally the whole herb of lesse strength and operation than the former. Howbeit, this singular propertie hath it, to help the sciatica. A fourth *Polygonum* there is, called the wild, and this busheth like a shrub or a prey tree rather: the root is of a woody substance, & the stock or plant of a reddish colour, resembling the *Cedar*: it beareth branches much like to *Spart* or *Spanish* broome, two spans long, iointed into three or four knots, and those of a blackish colour. This also hath an astringent nature, and tasteth in the mouth like to a Quince. The decoction thereof in water, till the third part be consumed, or the powder of it dried, is commended for the sores in the mouth, and for any part that is fretted and galled. And the very substance thereof is good to be chewed in case the gums be sore. It represseth the malignity of eating corrosiue vlcers and cankers: and in one word, staith the malice of all sores that run on end, and be vntoward for to be healed: but a peculiar property it hath by it selfe to cure any vlcere occasioned by the snow. Our Herbarists vse this kind much for the squinancy; and to ease the head-ach, make a garland thereof, appointing it to be set vpon the head: but to repress any violent catarrhs, they prescribe to wear it about the neck. In Tertian agues, some giue direction to pluck it out of the ground with the left hand, and then to tie it to the arm or other part of the patient. And there is not an herb or plant

E that they be more careful to keep dry and to haue alwaies ready at hand, than *Polygonon*, for to stanch any issue or flux of blood whatsoeuer.

Pancration, which some chuse rather to call the little *Squilla* or sea-onion, beareth leaues resembling the white Lilly, but that they be longer and thicker, with a great bulbous root; & the same in color red. The juice of it taken with the floure of *Eruile*, maketh the belly laxatiue: and outwardly applied, mundifieth vlcers. For the dropie and hardnesse of the spleene, it is giuen with hony in manner of a syrrop. Some take the root and boile it in water vntill the liquor be sweet, which they poure forth; and then stamp the said root, and reduce it into bals or trofches, which they lay to dry in the Sun: and vse them afterwards as occasion serueth for the skals or vlcers of the head, and all other sores that require mundification. Semblably, they giue thereof as much as one may take vp with three fingers in wine, for the cough, and in a liquid eleuarie or lohoch for the pleurisie and peripneumonie. They prescribe it likewise to be drunke in wine for the Sciatica: to allay also the gripes and wrings of the belly, and to procure the monethly

* *Peplos*, called by some Syce, by others *Meconion* * *Aphrodes*, from one smal root busheth into

* of many many
and * seeds
* And, * *Seris*
* *bonius* (saith it
is called *Poly-*
* *gonon*, because
it groweth e-
uery where, &
common.
* For * *fig-*
* *nificeth* a knee
or knot.
* *Aluum* ful-
* *uunt*. If the
place be not
corrupt, as I
doubt it is.

* *Oreon*, as *lign-*
* a mountain.
Some reade
* *apion*, * *faire*:
others, * *spis*, for
that it growes
like to an hois-
taile, or the
herbe *Hippu-*
* *ris*.
* In *scartia*.

* A kind of
* *Efula*.
* *i. Frothie*
* *Poppie*.

into many branches; the leaues be like vnto Rue, but that they be somew hat broader: the seed appeareth vnder the leaues round, & (but that they be smaller) not vnlike to the white Poppie. Ordinarily it is found among Vines, and they gather it in haruest time. They hang it forth seed and all together a drying, setting water vnderneath, that the said seed or fruit may fall down in- to it. If it be taken in drinke, it purgeth the belly, and doth euacuat both choler and fleagme. The measure of one acetable is counted an ordinary and indifferent potion to be drunk in three hemines of mead or honied water. With this seed they vse to powder meats and viands, thereby to keep the body soluble.

* Periclymenos is also a bushie plant, and loueth to branch much: it beareth whitish & soft leaues, disposed two by two at certain spaces & distances very orderly. In the top of the branches it beareth hard seeds between the leaues, which hardly may be plucked off. It groweth in tilled corn fields & hedges, winding about euery thing that it can catch hold of, for to support and beare it vp. The seed after it is dried in the shade, folk vse to pun in a mortar, and so to make and it vp into trochisks. In case that the spleen be swollen or hard, they take of these trochisks, and after they be dissolved, giue thereof a sufficient quantity in 3 cyaths of white wine for 30 daies together: which drink is of such operation, that it will waite and spend the spleen, partly by vrine which wil appeare bloudy, and partly also by tege: and this will be perceiued sensibly by the tenth day of the cure. The leaues also be diureticall, and a decoction made with them, prouokes vrine. The same likewise are good for those that cannot draw their wind but sitting with their body vp right. Being drunk in like manner, they help women who are in fore trauell, to speedie deliuerance, and fetch away the after-birth.

As touching * Pelecium, it groweth as I said before among corn, branching thick, and garnished with leaues like vnto the cich pease. It beareth seed in certain cods, which crook in manner of little horns, and those be four or five in number together. The said seed resembleth Gith, so far as euer I could see, and is bitter, but good for the stomach: one of the ingredients that goe into antidotes and preseruatiues against poison.

Polygala reacheth vp with a stem a span high, in the top wherof it beareth leaues resembling the Lentils, of an astringent tast, which being drunk, causeth nources to haue plenty of milk in their breasts.

Poterion, or as some call it, Phrynon or Neurada, brancheth and spreadeth much: armed it is with sharp pricks, and besides, full of a kind of thick down: the leaues be small and round: the branches slender, long, soft, and pliable: the floure in form long, of a grasse green color. The seed is of no vse in Physick, but of a quick and sharp tast, odoriferous also, and pleasant to the smell. It is found growing as well in watery places, as also vpon little hills. Two or three roots it hath, which run down two cubits deep into the ground full of cords or sinews, white, and of a firm and hard substance. About Autumne they vse to dig round about it, hauing before cut the plant it selfe aboue ground, which yeeldeth thereby a iuice like vnto a gum. The root is (by report) of wonderfull operation in healing wounds, and especially of sinews cut in sunder, if it be applied thereto in a liniment. Also the decoction thereof drunke with honey in manner of a syrre, helpeth the feeblenesse and dissolution of the sinewes; and namely, when they bee wounded and cut.

Phalangites by some is called Phalangion, by others Leucanthemon, or, as I find in some copies, Leucacantha. Little branches it putteth forth, neuer fewer than twaine, and those tending directly a contrary way. The floures white, fashioned like the red Lilly: the seed blacke, broad, and flat, shaped after the manner of halfe a Lentill, but much lesse: and the root is of a greenish colour. The leafe, floure, and seed of this herbe is a singular remedie against the venomous sting of scorpions, the spiders Phalangia, and serpents; also for the wringing torments of the belly.

As for Phyteuma, somewhat els I haue to do rather than to describe it, considering there is no vse of it but in amatorious medicines to procure womens loue.

There is an herbe called by the Greekes Phyllon, growing vpon stony mountaines standing much vpon a rocke. The female of this kinde is of a deepe greene colour, the stem is slender, the root small, the seed round, and like vnto that of Poppie. This hearbe serueth for the getting and conceiuing either of boyes or girles, according as the male or the female is vsed: which differ only in seed or fruit, which in the male resembleth an oliue that is new come forth and

A and biginneth only to shew. But both of them are for the said purpose to be drunke in wine.

Phellandrian groweth in moory grounds, and in leafe commeth neere vnto garden Parsley: the seed thereof is good to be drunke for the stone, and the infirmities incident to the bladder.

As for Phalaris, it hath a long slender stem like vnto a reed, in the top wherof it beareth a floure bending downward; and the seed resembleth that of Scfama: and this also breaketh the stone, if it be drunke in wine or vinegar, or otherwise with milk and honey. The same cureth the accidents of the bladder.

Polyrrhizon is leaied like vnto the Myrtle, and hath many roots, which being bruised, are giuen in wine against the poison of serpents, not only if men but also if fourfooted beasts be stung by them.

* Proserpinaca likewise, being otherwise a common herb, is counted a foueraigne remedie against scorpions: the same stamped and incorporat with fish-pickle and oile, is (by report) a singular medicine against the prick of scorpions.ouer and besides, it is said, that if it be but held vnder the tongue, it refresheth those who be ouertruelled or any waies wearied, so as they haue lost their speech with very faintnesse: but in case it be swallowed downe the throat, it procureth vomit, which alwaies is good and wholesome for the Patient.

As touching Rhacoma, it is brought vnto vs out of those countries which are beyond the kingdome of Pontus: a root it is much resembling the black Costus, but that it is smaller and somewhat redder, also without any smell, hot at the tongues end and astringent: being punned, it is of a wine colour inclining to saffron: a liniment made of this root, doth mitigate all impostumes and inflammations; healeth wounds, and appeaseth the violence of any rheums taking a course to the eies, especially if it be applied with cuiral marks remaining after stripes, & other places of the skin black and blew, it taketh away, if they be annointed with it and vinegar together: the powder thereof is good to be cast vpon old morimalls and vlcers vntoward to be healed: & being to the weight of one dran taken in water, it is singular for them that cast vp blood: moreover, in case of the dysentery and the flux proceeding from imbecility of the stomacke, it is an excellent medicine to be taken in wine, if the Patient bee free of the ague; otherwise, it would be giuen in water. For to pun or stamp this root more easily, it had need to lie and soke in water ouernight: the decoction thereof is giuen to drinke in double measure or quantity for those that be plucked with the cramp, bursten, & bruised, or to such as haue tumbled down from some high loft. In pains of the breast, there had need some Pepper and myrrh to be put thereto: in case the stomack be feeble and clean done, it ought to be taken in cold water: and whether it be giuen inwardly or applied outwardly, it helps all those that void vp filthy matter from the parts beneath: likewise it cureth such as haue weak liuers, hard or swelled spleens, and the Sciatica: it healeth the infirmities of the kidnies, shortnesse of wind, & straitnesse of breath, namely, when a man is driuen to sit vp right for it. The hoarsnesse and roughnesse of the throat it cureth, if either the powder be taken to the quantity of 3 oboli in cuir, or the decoction drunk. The filthy tertars called Lichenes it scoureth away, applied vnto them in a liniment with vinegar. In drink, it dissolueth ventosities, riddeth away through-colds, and namely the shiuering and shakings in cold agues: it represseth the yex or hicquet, appeaseth the wrings of the belly, clearereth the windpipes, dispatcheth the pose, the murre, and heauinesse of the head, stilleth the dizzines of the head and turning of the brain occasioned by melancholy humors: and finally assuageth all painfull lassitudes, and is singular good for cramps or convulsions.

About the towne Ariminum there groweth an herb commonly knowne by the name of Reseda: it resolueth and discusseth all impostumes: it reduceth also into temperature any inflammation. But they that vse to cure with this herb, must when they lay it to the place, say with all these words following; *Reseda, morbos Reseda, scisne scisne, quis hic pullos egeris? Radices nec caput nec pedes habeam.* That is to say, *Reseda, cause these maladies to cease: knowest thou, who hath driuen these pullets here? Let the roots haue neither head nor foot.* This charm (I say) they must pronounce three times ouer, and spit vpon the ground as often.

To conclude, Stoechas groweth in those Islands onely which carry that name and be called Stoechades: an odoriferous herb it is, bearing leaues like vnto hyssop, and is bitter in tast: taken in drink, it procureth womens moneths, and doth mitigat the pains of the breast. Also it is one of the species or ingredients entring into the preseruatiue compositions called Antidotes.

C c

CHAP.

* Thought to be the same that Polygon or Knot grass abouenamed.

* Wood-bind.

* Some take it for Securidaca, i. Aitch.

that their seeds be nothing so effectuall, if incision were made in the roots for to draw juice out of them, before the said seed is fully ripe.

Furthermore, this is known & found by experience, that the ordinary vse of all simples doth alter their properties and diminish their strength, in so much, as whoeuer is daily accustomed vnto them, shall not find when need requires, their vertue powerfull at all, either to do good or to work harme, as others shall who seldome or neuer were acquainted with them.

Ouer and besides, all herbs be more forcible in their operations, which grow in cold parts, exposed to the Northeast winds, likewise in dry places, than in the contrary.

Also there is no small difference to be considered betwene nation and nation: for, as I haue heard them say who are of good credit, as touching worms and such like vermin, the people of Egypt, Arabia, Syria, and Cilicia, be troubled & infested with them: whereas contrariwise, some Græcians & Phrygians haue none at all breeding among them. But lesse maruel there is of that considering how among the Thebans and Bœotians (who confine vpon Attica) such vermine is rife and common; and yet the Athenians are not giuen at all to ingender and breed them: the speculation whereof, carrieth me away again vnto a new discourse of liuing creatures, and their natures; and namely, to fetch from thence the medicins which Nature hath imprinted in them, of greater prooffe and certainty than any other for the remedy of all diseases. Certes, this great Mother of all things, entended not that any liuing creature should serue either to feed it selfe only, or to be food for to satisfie others; but her will was and she thought it good, to insert and ingraffe in their inward bowels, whole some medicines for mans health, to counterpoise those medicinable vertues which she had ingrauen and bestowed vpon those furd and sencelesse herbes: may her prouidence was such, that the foueraigne and excellent means for maintenance of our life, should be had from those creatures which are indued with life; the contemplation of which diuine mysterie, surpasseth all others, and is most admirable.



THE TWENTY EIGHTH BOOK OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIVS SECVNDVS.

CHAP. I.

¶ The medicinable vertues of liuing creatures.



Having discovered as well all those things which are ingendred between Heauen and Earth, as also their natures; there remained nothing for me to discourse of, saue only the Minerals digged out of the ground, but that this late Treatise of mine, as touching the medicinable properties of Herbs, Trees, and other plants draweth me quite aside from my purpose, and haleth me back againe, to consider the foresaid liuing creatures themselves (euen the subiect matter of Physicke) in regard of greater meanes found out euen in them, to aduance Physicke and cure diseases. For, to say a truth, since I haue described and pourtraied both Herbes and Floures, since I haue discovered many other things, rare and difficult to be found out; should I conceale such meanes for the health of man, as are to be found in man himselfe? or should I suppress other kind of remedies which are to be had from creatures liuing amongst vs, as wee doe, if they may benefit vs? especially seeing that our very life is no better than torment and miserie, vnlesse we

A we be free from paine and sicknesse: No verily; and far be it from me that I should so do. But on the contrary side, I will do my best indeuor to performe and finish this task also, how long and tedious soeuer it may seem to be: for my full intent and resolution is, so I may benefit posteritie and doe good to the common life of man, the lesse to respect the pleasing of fine eares, or to expect thanks from any person. And to bring this my purpose about, I mean to search into the customes of forreine countries, yea and to lay abroad the rites and fashions of barbarous nations, referring the readers who shall make scruple to beleue my words, vnto those Authors whom I alledge for my warrant. And yet herein, this care I haue euer had, To make choice in my reports of such things as haue bin held and in manner ad iudged true, by a generall consent & approbation of all writers; as coueting to stand more vpon the choice of substance, than the variety and plenty of matter. But before I enter into this argument, I thinke it very necessary to aduertise the Reader thus much, That whatsoeuer I haue heretofore written of liuing creatures, concerneth the instinct of Nature wherewith they be indued, and certain simples whereof they haue giuen vs the knowledge (for surely, as much good haue they done vnto vs by the medicinable herbes by them found out, as possibly they can by the remedies which themselves do afford from their own bodies:) But now it remaineth to shew simply the medicinable & helpful properties in themselves, which notwithstanding in the former treatise were not altogether left out and passed ouer. And therefore this my present discourse of those creatures, howsoeuer it is in nature different, yet it dependeth of the other. Begin then I will at Man himselfe, to see what Physick there may be found in him to help his neighbor. In which first entrance of mine, C there presenteth it selfe vnto mine eie, one object that troubleth and offendeth my mind exceeding much: for now adaeies you shall see them that are subiect to the falling euil, for to drink the very blood of fences and sword-plaies as out of liuing cups: a thing, that when we behold within the same shew-place, euen the tygres, lyons, and other wild beasts to do, we haue it in horreur as a most fearfull and odious spectacle. And these monstrous minded persons are of opinion, That the said blood forsooth is most effectuall for the cure of that disease, if they may sucke it breathing warme out of the man himselfe; if they may set their mouth (I say close to the veine, to draw thereby the very heart blood, life and all: how vnaturall soeuer otherwise it be holden for a man to put his lips so much as to the wounds of wild beasts, for to drinke their blood: nay, there be others that lay for the marrow bones, the very braine also of young infants, and neuer D make strange to find some good meat and medicine therein. Ye shall find moreouer among the Greeke writers not a few, who haue deciphered distinctly the seuerall tastes as well of euery inward part, as outward member of mans body; and so neare they haue gone, that they left not out the paring of the very nailes, but they could pick out of them some fine Physicke: as if health consisted in this, That a man should become as bloudie as a sauage beast; or that be counted a remedy, which indeed is cause of a mischief and malady. And wel deserue such blood-suckers and cruell leeches to be frustrat of their cure, and thereby to worke their owne bane and destruction; for if it be held vnlawfull and abhominable to pricke and look into the entrails and bowels of a mans body, what is it then to chew and eat them? But what monster was hee, who first broched this geare, and deuised such accursed drugs! Ah wicked wretch, the inuenter and artificer E of those monstrosities; thou that hast ouerthrowne all law of humanity; for with thee wil I haue to do, against thee wil I whet my tongue and turne the edge of my stile, who first didst bring vp this brutish leech-craft, for no other purpose but to be spoken of another day, and that the world might neuer forget thy wicked inventions. What direction had he who thus began to deuoure mans body lim by lim: nay, what conjecture or guesse moued him so to do? what might the originall and foundation be, whereupon this diuelish Physicke was grounded? what should he be that bare men in hand, and would persuade the world, That the thing which is vsed as a poison in witchcraft and forcerie, should auaille more to the health of man, than other knowne and approued remedies? Set case that some barbarous people vsed so to do: say that strange nations and far removed from all ciuility, had these manners among them, must the Greekes take vp those fashions also, yea and credit them so much as to reduce them into a method, amongst other their goodly Arts? And yet see what Democritus one of them haue done? there be extant at this day books of his inditing and penning, wherein you shall read, That the scul of a wicked malefactor, is in some cases better than that of an honest person; and in other, That of a friend and guest, preferred before a stranger. As for Apollonius, another of that brood, hee hath written,

ten, That if the gums be scarried with the tooth of a man violently slain, it is a most effectuall and present remedy for the tooth-ach. *Artemon* had no better receipt for the falling sicknesse, than to draw vp water out of a fountaine in the night season, and to giue the same vnto the Patient to drink it in the brain-pan of a man who died some violent death, so he were not burnt. And *Anthous* took the skull of one that had bin hanged, and made pills thereof, which he ministred vnto those who were bitten by a mad dog, for a soueraigne remedy. Moreover, these writers not to those who were bitten by a mad dog, for a soueraigne remedy. Moreover, these writers not to the content to vse these sorceries about men, imploied the medicines also of the parts of man to the cure of foure footed beasts; and namely, if kine or oxen were dew-blowne or otherwise puffed vp, they were wont to bore holes through their horns, & so to inlay or interlard them (as it were) with mens bones: finally, when swine were diseased, they took the fine white wheat Siligo, being permitted to lie one whole night in the very place where some men were killed or burnt, and gaue it them to eat. As for me, and all vs that are Latine writers, God forbid we should defile our papers with such filthinesse: our intention is to put downe in writing, those good and wholesome medicines which man may afford vnto man, and not to set abroad any such detestable and hainous forceries: as for example, to shew what medicinable vertue there may be in breest-milke of women newly deliuered, what healthfull operation there is in our [fasting] spiritle; or what the touching of a man or womans body may auail in the cure of any malady; and of many other semblable things arising from naturall causes. For mine owne part verily, I am of this mind, That we ought not so much to make of our health or life, as to maintain and preserue the same by any indirect course and vnlawful meanes: And thou, whosoeuer thou be, that doest addi& thy selfe to such villanies whiles thou liuest, shalt die in the end a death answerable to thy beastly and execrable life. To conclude therefore, let euery man for to comfort his heart, and to cure the maladies of his mind, set this principle before his eies, That of all those good gifts which Nature hath bestowed vpon man, there is none better than to die in a fit and seasonable time: and in so doing, this is simply the best, * That in his power it is, and the meanes hee hath, to chuse what death he list.

* Look for no better diuinitie in *Plinie* a more Pagan, Epicurean, and professed Atheist.

CHAP. II.

¶ Whether Words, Spels, or Charms, are auailable in Physicke. Also whether wonders and strange prodiges may be either wrought and procured, or put by and auoided by them, or no.

THE first point, concerning the remedies medicinable drawn from out of man, which moueth the greatest question, and the same as yet not decided and resolved, is this, Whether bare Words, Charms and Inchantments, be of any power or no? If it be granted Yea, then no doubt ought we to ascribe that vertue vnto man. But the wisest Philosophers and greatest Doctors, take them one by one, doubt thereof, and giue no credit at all thereto. And yet go by the common voice of the whole world, you shall find it a generall beleefe, and a blinde opinion alwaies receiued, whereof there is no reason or certain experience to ground vpon. For first and formost we see, that if any beast be killed for sacrifice without a sett forme of praier, it is to no purpose, and held vnlawfull: semblably, if these inuocations be omitted, when as men seeke to any Oracles, and would be directed in the wil of gods by beasts bowels or otherwise, all booteth any nor, but the gods seem displeased thereby. Moreover, the words vsed in crauing, to obtaine any thing at their hands, run in one form; and the exorcismes in diuerting their ire, & turning away some imminent plagues, are framed after another sort: also there be proper termes seruing for meditation only and contemplation. Nay, we haue scene and obserued, how men haue come to make suit and tender petitions to the soueraigne and highest magistrats, with a preamble of certain set prayers. Certes, so strict and precise men are in this point about diuine seruice, that for fear least some words should be either left out, or pronounced out of order, there is one appointed of purpose as a prompter to read the same before the priest, out of a written booke, that hee misse not in a tittle; another also set neare at his elbow, as a keeper to obserue and mark, that he faile not in any ceremony or circumstance; and a third ordained to goe before and make silence, saying thus to the whole assembly & congregation, *Favete linguis*, [i. spare your tongues and be silent:] and then the fluits and haut-boies begin to sound and play, to the end that no other thing be heard for to trouble his mind or interrupt him the while. And verily, there haue been

A been memorable examples knowne of strange accidents insuing both waies, namely, as often as either the vnlucky foules by their vntoward noise * haue disturbed and done hurt, or if at any time there haue bin error committed in the prescript prayer & exorcisme: for by this means it falleth out oftentimes, that all on a sudden as the beast standeth there in place to be sacrificed, the master veine in the liuer, named the head thereof, is found missing among other entrails, and the heart likewise wanting: or contrariwise, both these to be double, and appeare twain for one. And even at this day there remaineth a most notable precedent and example to all posterity, in that prescript forme of exorcisme, whereby the two *Decij*, both the father and sonne, betooke themselves to all the hellish furies and fiends infernall: moreover, the imprecation of the vestall Nun *Tuccia*, when shee was put to proue her virginity, continueth extant vpon record; by vertue of which charme the carried water in a sieve without shedding one drop: which happened in the yeare after the foundation of Rome city 609. And verily, no longer ago than of late time in our owne age, we saw two Gracians, to wit, a man and a woman; yea, and some of other nations, with whom in those daies wee maintained warres, buried quicke within the beast-market in Rome: in which maner of sacrifice, whosoeuer readeth the prayer or exorcisme that is vied, and which the V Varden or Principall of the colledge of the Quindecemvirs is wont to reade and pronounce to the exorcist; he would no doubt confesse, that such charmes and execrations be of great importance: and namely, seeing they haue bin all approved and found effectuall by the experience and euents obserued for the space of * eight hundred and thirtie yeares: As for our vestall virgins in these our daies, we are certainly perswaded and beleue, that by the vertue of certaine spels and charmes which they haue, they be able to arrest and stay any fugitiue slaue for running one foot farther; provided alwaies that they be not gone already without the pourprise and precinct of the city walls. Now if this be receiued once as an vndoubted and confessed truth, and if we admit that the gods do heare some praiers, or be moued by any words; then surely we may resolute at once of these coniectures; and conclude affirmatiuely of the maine question. Certes, our ancestors from time to time haue euermore beleueed and deliuered such principle, yea, and that which of all other seemeth most incredible, they haue affirmed constantly, That by the power of such charmes and conjurations, Thunder and Lightning might be fetched downe from aboue (as I haue formerly shewed.) *L. Piso* reporteth in the first booke of his Annals or yearely Chronicles, That *Tullius Hostilius* king of Rome, was stricken dead with Lightning, for that when hee went in hand to call *Iupiter* downe out of heauen, by vertue of a sacrifice which king *Numa* was wont to vse in that case, hee had not obserued exactly all the exorcismes and ceremoniall words contained in those bookes of king *Numa*, but swarued somewhat from them. And many other writers do testifie, that by the power of words and oses, the destinies and prodiges of great importance prefiged to one place, haue bin cleane altered and transferred to another: as it was like to haue happened to the Romanes, at what time as they laied the foundation of *Iupiters* Temple vpon the mount or rocke *Tarpeius*. For when they digged there for the foundation of the said Temple, and chanced to finde within the ground a mans head: the Senate of Rome sent certaine Embassadors of purpose to the Sages and V Vifards of *Tuscane*, to know the signification of this strange sight and miraculous occurrent. V Whereof *Olenus Calenus* (who was reputed the most famous diuinor and prophet of all the *Tuscans*) hauing some intelligence, and foreseeing the great felicity and happinesse that it imported and prefiged, intended by subtil interrogatiue to translate the benefit thereof to his owne native countrey of *Tuscane*. Hauing therefore first with a staffe set out and described (as it were) the modell and forme of a Temple, vpon the ground which lay before him; hee came about the Roman Embassadors before said, and questioned with them in this wilie manner: Is it so, Romanes, as you say? and are these your words indeed? There must be a Temple here of *Iupiter* that most gracions and mighty god: we haue light here vpon a mans head. Vnto which interrogation of his, the said Roman Embassadors according to the instructions which they had receiued beforehand from the V Vifard or Diuinors sonne, answered in this manner: No, not here in this very place, but at Rome (we say) the head was found. And verily, our antient Chronicles doe all of them most constantly affirm, that had they not been thus forewarned and taught what to say, but had simply answered Yea, here we haue found a head, &c. The fortune of the Roman State and Empire had gone quite away to the *Tuscans*, and been established among them. The same had like to haue happened a second time, as we may see in the Records and Monuments of old date,

* Which is called *Ombutario* dicarum, as we may read in *M. Tull. de Divinatione*, l.

* In which yeare it seemeth *Piso* wrote this worke.

date, when as a certain chariot with foure horses, made of clay, and prepared for to be set vpon the louver or lantern of the said temple, chanced as it lay baking in the furnace, to grow into an extraordinary bignesse. For the foresaid Wise men of Tuscan being asked what the said prodigy should betoken, practised the like, as *Olenus* did: but the Romans being wise & wary in their words, saved and retained the same fortune still for the behoofe of Rome, which was presaged vnto them by that happy foretoken. These examples may suffice to shew & prouoe evidently, that the vertues and significations of these signes and presages do lie in our own power: and are no otherwise of force and effect, but according as euery one of them is so taken * and accepted. True it is, and held for an vndoubted principle in the Augures discipline & learning, That neither cursed execrations, ominous and vnlucky birds, nor any other presage by their flight singing and feeding, can touch those persons who take no heed of them, and do protest plainly, that they regard them not, what business soeuer they go about and be entering into: a greater gift than which, and testimony of the diuine indulgence and fauor of the gods to vs, we cannot haue, thus to subiect their secrets to our puissance. Moreover, in the laws and ordinances of the 12 tables here at Rome, are not in one place these very words to be found, *Qui fruges occentassit*, [i. who soeuer shall enchant or fore-speak any corne or fruits of the earth:] and in another place, *Qui malum carmen incantassit*, [i. What person soeuer vseth pernicious charmes to the hurt or mischiefe of any creature?] Ouer and besides, *Verrinus Flaccus* doth affirm vpon the credit of certain Authors which he alleadgeth and beleueeth, That the first thing which the ancient Romans were wont to doe at the siege and assault of any towne or city, was by their priests to conjure and call forth that god or goddesse which was the patron or patronesse therof, and withal to promise vnto the said god or goddesse, either the same place againe, or else a greater and more spacious seat; yea, and the like diuine worship, or better, among the Romanes: and euen at this day our Pontifices or Bishops haue the charge of this sacred ceremony amongst other functions belonging to their ministry. And herupon well known it is, that for this cause and nothing else, it was neuer divulged abroad, what god was the protector and patron of Rome city, for feare least some of our enemies should assay to coniure him forth, and deale by vs as we do by them. Furthermore, who is there that is not afraid of all maledictions and cursed execrations; and especially when the * names of the infernall fiends or vnluckie foules are vsed in such bannings? For feare likewise of some harme, see we not that it is an vsuall thing to * crush and break both egge and fish shels, so soon as euer the meat is supped and eaten out of them; or els to bore the same through with a spoone stele or bodkin? From hence came those amatorious eides and eclogues of *Theocritus* among Greek Poets, of *Catullus* and *Virgil* among vs, full of amorous charmes, in imitation of such exorcismes and coniurations indeed. I assure you many folke there be of this beleefe, That by certaine spells and words, in manner of charmes, all the pots and vessels of earth baking in a furnace, may be cracked and broken, without touching them at all. And there are not a few who are persuaded for certaine, that euen the very serpents as they may be burst by incantment, so they can vnwitch themselves: and that as brutish otherwise and earthly as they be, yet in this one thing they haue a quicke sence and vnderstanding, in so much, as at the charmes of the Marfians they will shrink from them and draw in their bodies round into a knot, though it were in the night season when they lie asleepe. Some there be also that when a skare-fire hath taken an house, write certaine * words vpon the walls, and thereby limit and confine the fire, that it shall go no farther. Certes, I am not able to say, whether strange, forraigne, and ineffable words hard to be pronounced, are more available to the effecting of these incredible things, or our Latin words, coming out at a venture vnlooked for and spoken at random: which must needs seem ridiculous in our judgement, seeing that the spir it and mind of man, expecteth alwaies some great and mighty matter in these coniurations and exorcismes, which may carry a majesty therewith to incline and moue the gods to mercy and fauour, or rather indeed to command their heauenly power perforce. But to proceed, *Homer* the Poet hath written, that prince * *Pylxes* being wounded in the thigh, stanchd the bloud with a charme. And *Theophrastus* testifieth, that there be proper spels to cure the Sciatica. *Cato* hath left in writing, that there is a special charme for dislocations, wherby any bone put out of ioint may be set again. And *M. Varro* reporteth the like vertue of certain good words for the gout. As for *Cesar* the Dictatour, it is commonly said of him, that hauing beene once endangered with the fall or overthrow of his coach wherein he rode, would neuer afterwards ride in coach againe, vnlesse so soone as euer hee

* Whereupon it was thought materiall to speake in this manner. *Accipio omen*. For otherwise it auailed not.

* As in saying thus, The Deuill take thee, or the Rauens peck out thine eyes, or I had rather see thee pie pect: and such like. * Because afterwards no witches might prick them with a needle in the name and behalfe of those whom they would hurt and mischiefe, according to the practise of pricking the images of any person in wax; vsed in the witchcraft of these daies. * That is to say, *Arse vesce*, out of *Afranius* Festus noeth, which in the old Tuscan language signifieth *Auerie ignem*, i. Put backe the fire: or rather the sonnes of *Auolentius* in his *dyffera*.

A had taken his place, and before that he set forward vpon his way, he had pronounced a certaine charm that he had in store: and persuaded he was, that if he laid it ouer three times together, he should come by no mischance in his journey, but trauel in security. A thing that I know many now adades to practise ordinarily as well as he. But for farther prooue and confirmation of this one but knoweth: What is the cause I pray you, that the * first day of euery yeare we salute one another for luck sake, with wishing a good new yere? What is the reason, tel me, that in all our publick processions and generall solemnities euery fifth yeare for the health and good estate of the city, they * made choice of such persons for to lead the beasts appointed to sacrifice, whose * names were good and fortunat: or how cometh it about, that for to preuent or diuert witchcraft and forcery, we obserue a peculiar adoration, and inuocat vpon the Greekeish [goddesse of vengeance] *Nemesis*; in which regard onely, we haue her statue or image set vp in the Capitoll, notwithstanding we know not yet what name in Latine to giue her? How is it, that in making mention of those that be dead, we speake with reuerence and protest that we haue no meaning to disquiet their ghosts thereby, or to say ought preiudiciall to their good name and memorion of odd numbers, beleueing that they be more effectuall in all things than the euen? a matter I may tell you of great consequence, if we do but obserue the critically daies in feuers. Also in the gathering of our first fruits, be they Pears, Apples, Figs, &c. wherfore vse we to say, These be old, God send vs new? What moueth vs to wish health and say, God helpe, or blesse, when one sneezeth? for euen *Tiberius Caesar*, who otherwise was known for a grim sir, and the most vsociale and melancholick man in the world, required in that manner to be saluted and wished well vnto, when soeuer he sneezed, though he were mounted in his chariot. And some there be who in this case do ceremoniously salute the party by name, and thinke there is a great point of religion lies in that. Moreover, is not this an opinion generally receiued, That when our ears do glow and tingle, some there be that in our absence doe talke of vs! *Attalus* auoucheth for a certainty, that if a man chance to espie a scorpion, and do no more but say this one word * *Duo* [i. two] the serpent wil be stil & quiet, and neuer shoot forth his sting. And now seeing by occasion of mentioning a scorpion, I am put in mind of A frick, you shall vnderstand thus much, that throughout all that country there is not one goeth about to do any thing, but before he begins he saith this word * *Africa*. A frick. As for other nations, in euery enterprise that men take in hand, they vse the name of their gods, & pray ordinarily, that it would please them to giue a grace and blessing to their attempts. As for this ceremony, namely, when the table is spread and furnished with viands, to lay a ring from the finger vpon it, we see it commonly & orderly practised; and that it is of force to put by many scruples and religious doubts it is very euident. You shall see some men to take the spittle out of their mouths, and conuey it with their fingers end behind the ear, for to reioice the heart & driue away all pensiuess and melancholick fancies that trouble the mind. And to bend or bow down the thumbs when we giue assent vnto a thing, or do fauor any person, is so vsuall, that it is growne into a prouerbiall speech, to bid a man put down his thumb in token of approbation. In adoring the gods and doing reuerence to their images, wee vse to * kisse our right hand and turne about with our whole body: in which gesture * the French do serue to turne toward the left hand; and they beleue that they shew more deuotion in so doing. As touching the maner of worshipping and adoring, flashes of lightening, all nations with one accord and conformity do it with a kind of * whistling or chirping with the lips. If there be mention made of seare fires at the table as we sit at meat, we hold it ominous, but we turn away the perillous presage thereof, by spilling and casting water vnder the board. When one riseth from his meat and is ready to depart, if they of the house go in hand presently for to sweep the floore and make all cleane: as also to take away dishes, trenchers, &c. vpon the board; or to remoue the cupboard of plate, & liuery table, whiles one of the guests is a drinking, are thought to be most vnfortunat tokens, and to presage much harm. *Servius Sulpitius* a principal person of our city, hath written a treatise of this argument, wherein he giueth a reason why we should not leaue or shift our trenchers at euery course or change of dishes, for in those daies there were no more allowed than there sat guests at the tables, and those were serued but once for all. If one chance to sneeze after repast, the order is to call for a dish of meat and a trencher againe to be set vpon the board: and in case he taste not of somewhat afterward, it is thought a most fearefull and

* i. The first o Ma ch.

* *Dich caesa*, i. pro forma. As *Valefius*, *Lucius*, *Satorius*, &c. which are significant, and import by the very letter, a some happines and prosperitie

* Which fashion was afterwards taken vp in doing reuerence to princes and great persons, whereas other nations obserued to turne to the right had, as appeareth by *Plautus*, *Quo me veritatem*, *Si dices salutes*, *Dextera sum censeo*, *Opprimus*, i. i. scilicet goul lips close together, and drawing the breath inward, is our manner in playing with a tame Sparrow, or cheating vp and making much of an host.

* Of the special providence of God: I thinke speaketh like himselfe, a heavenly Inſi- dell.

* Fame labor est.

* Which answer to our Rand A.

and cursed preface on this behalf: like as to sit at the table and eat nothing at all. * See how ce-
 remonious those men were, and what precise ordinances they instituted, who were of beleeft, that
 in all our affaires and actions, and at all times, the diuine power of God was present: and that by
 these means they left them pacified for all our sins and vices. Neither is there an end here: for
 ouer and besides it hath been marked, that many times all the table is hushed, and there is not a
 word heard from one end to the other: but this is noted neuer to happen but when the guests
 make a iust euen number. But what doth this silence preface? Surely, euery one of them * shall
 be in danger to lose or impaire his credit, good name, and reputation. Moreouer, if a peece of
 meat chanced to fall out of the hand down to the floore, it was taken vp and deliuered vpon the
 boord again, where it passed from one to another, and went through the table: but in any wise
 they were forbidden to blow therupon, for to cleanse it from the dust or filth that it caught. Fur-
 thermore, they haue proceeded thus far, as to gather prefaces from such things as happen iust at
 the time whiles one either speaketh or thinketh of the same. But of all others, this was counted
 a most execrable token, in case it chanced that the Pontifice or high Priest sitting at the table
pro forma, and for order sake, at any solemne feast or sacrifice, let fall a morcel of meat: but if the
 same were laid vpon the boord again, and afterwards burnt and sacrificed to the familiar gods
 of the house *Lares*, it was thought a sufficient expiatory satisfaction. Semblably, men are of opi-
 nion, That if any medicines purgatiue or others, fortune to be set vpon a table before they bee
 giuen to the patient for to drink, they wil do no good at all, but lose their operation. Also there
 is a superstitious ceremony in paring the nailes of the fingers, during the market daies held at
 Rome, with this charge, that the party hold his tongue and be silent all the while, & begin at the
 fore-finger, and this forsooth concernes the mony of many a man. Likewise, as great a matter as
 that, lieth in stroking or handling the haire of the head, either on the 17 day after the change of
 the Moon, or the 29: for a special means this is to keep the haire on, which is giuen to fall, as also
 to ease the head-ach. Moreouer, the peasants in the country obserue this custome in many man-
 ners and farmes of Italy, to forbid their wiues and women to spin as they walke vp and downe
 abroad in the street or any common way of passage, or to carry their rockes and distaues vndi-
 zened or bare, for this opinion they haue, that in so doing they preiudice the hope of al fruits, and
 the corne especially growing in the field for that yeare. Not long since, *M. Sernilius Nonianus*,
 (who in his time was a principal citizen of Rome) to preuent the blearednesse of his eies which
 he feared, before that either any man else foretold him of that disease, or himselfe once named
 it, took a little peece of paper, and wrote therein these two capital Greek letters P and A, which
 he lapped round & fast tied with a linnen thred, and so wore it hanging at a lace about his neck
 vnder his throat. *Mutianus* (who had bin thrice Consull of Rome) obserued the same effect by
 wearing a flie aliue within a little rag of white fine linnen cloth: and both of them did highly
 commend these medicines of theirs, reporting, that by those meanes they were free from blea-
 red eies. Finally, we read of certain charms and spels against storms of hail: against sundry sorts
 of diseases, and namely for any part that is burnt or scalded, and verily some of them haue been
 proued by experience to be effectual. But for mine own part abashed I am and ashamed to put
 them downe in writing, considering how diuersly men are affected in minde. And therefore to
 conclude this matter, I leaue euery man to himselfe to giue credit or otherwise vnto them at
 his owne pleasure and discretion.

CHAP. III.

¶ Remedies proceeding from man, for the cure of diseases.

IN my former Treatise as touching strange and wonderfull nations, I spake of certaine races
 of men which were of a monstrous nature, and carried a venomous regard and looke in their
 very eies: besides many other properties of beasts, which here to repeat were needlesse. How-
 beit, in this place I thinke it not amisse to note, that some people there be whose bodies be from
 top to toe all medicinable and wholesome to others. As for example, the men of those families
 which do terrifie serpents, and driue them away with their very presence: who also are of this na-
 ture, that they be able to cure and ease such as are stung already either by touching only, or else
 by a medicinable sucking of the place: of which kind are the *Psylli* and *Marfi*: those also in the
 Island * *Cyprus*, whom they call *Ophugenes*: and of this race and house there came an Embas-
 sadour

* Or *Paros*.

* *Euegon*.

A fador out of the said Island, whose name was * *Exagon*, who by the commandement of the Con-
 sul was put into a great tun or pipe wherein were many serpents, for to make an experiment and
 trial of the truth: and in very deed the said serpents licked his body in all parts gently with their
 tongues, as if they had bin little dogs, to the great wonder of them who beheld the manner of
 it. A man shall know those of this family (if any of them remain at this day) by this signe, that
 they breath a strong and stinking sent from them, especially in the Spring season. Now, these
 people beforenamed had not only a gift to cure folk with their spittle, but their very sweat also
 had a medicinable vertue against the sting of serpents. For as touching those men who are born
 and bred in *Tentyrus* (an Island lying within the riuer *Nilus*) so terrible they be vnto the *Cro-*
codiles, that they wil not abide so much as their voice, but flie from them so soon as they heare
 it. Moreouer, it is knowne for certaine, that all the sort of these people, who haue their bodies
 thus priuiledged by that secret antipathic in nature between them & serpents, are able to ease
 those who are stung, if they do but come in place where they be: like as a wound will be more
 angry and fore, if they come neare who at any time before haue been hurt by sting of serpent or
 rooth of mad dog: such also carry about with them in their bodies so venomous a quality, that
 their onely presence is enough to marre the eggs that a brood-hen sits vpon, and make them all
 adde, yea, and to driue ewes and other cattell to cast their yong before the time: such a virulent
 property remaineth still behind in their bodies who haue bin once stung and bitten, that not-
 withstanding they be cured thereof, yet venomous they are now and hurtfull to others, who be-
 foretime were poisoned themselves. But the only way to remedy this inconuenience, is to cause
 them to wash their hands before they enter into the roome where the patients lie, and with the
 same water to besprinkle and wash them who are to be cured. Again, this is to be obserued,
 that whosoever at any time haue bin pricked with a scorpion, shal neuer afterwards be stung by
 hornets, waspes, or bees. A strange thing this is no doubt, howbeit, no great wonder vnto them
 who know, that a garment or cloth which had bin vsed at funerals, wil neuer be afterwards morsh
 eaten: and how that serpents hardly can be plucked out of their holes, vnlesse it be by the left
 hand.

CHAP. III.

¶ Of certaine Sorceries: and the properties of a mans spittle. Also
 against Magicians.

THE inuentions of *Pithagoras* as touching numbers, beare a great stroke in these matters,
 and lightly misse not: but principally in this, That the said Philosopher would giue judg-
 ment by the vowels contained in the proper name of any person, concerning their fortunes,
 for in case the vowels were in a number odde, he pronounced, that if the party euer proued lame
 of a lim, lost an eie, or met with any such like accidents, the same should happen vpon the right
 side of the body: but contrariwise, if the number of vowels were euen, then these infirmities
 should befall the left side. Furthermore, it is commonly said, that if one take a stone, dart, or in-
 strument of shot, wherewith a man hath killed these three liuing creatures, a man, a wilde Bore,
 and a Bear, one after another, & that with one single stroke to euery one of them, and sling the
 same clean ouer an house where there is a woman in hard trauell of child-birth, so as it light on
 the other side without touching any part thereof, the woman shal presently be deliueed. More
 reason there is that a * light iauelin or *Pertuisan* should do this feat, which had bin drawn forth
 of a mans body, so as it neuer touched the ground after, for do but bring this murdering iauelin
 into the place where a woman is in labor, it wil forthwith procure her deliuerance. *Orpheus* and
Archelaus do write much after the same maner of arrows pulled out of men bodies, namely, that
 if care be had that they touch not the earth, & then be laid vnder the bed where man or woman
 lieth, they wil cause the parties to be enamored vpon them that bestowed the said arrows there:
 and these authors report moreouer, that the venison of any wilde beast killed with the same wea-
 pon which was the death of a man before, is singular to cure the falling sicknesse.

As some men there be whose bodies all throughout be medicinable, so there be others who
 haue certain parts onely of the same vertue, according as I haue written already concerning the
 thumbe of king *Pyrrhus*. In the citie *Elis* also the inhabitants were wont to shew as a wonder-
 full monument the rib of *Pelops*, which they auouched to be all of luory. And euen at this day,
 many

* *Uentris he-
 B*, which also
 was called *ce-
 libatus*.

effect, so that the dead party & the Patient be both of one sex. As for the tooth-ach, it is a common speech, That if one bite off a peece of some tree that hath been blasted, or smitten with lightning, provided alwaies that he hold his hands behind him at his back in so doing, the said morfell or peece of wood will take away the toothach if it be laid vnto the tooth. Some there be who giue direction to take the perfume of a mans tooth burning in the fire, for to ease the too h ach of a man; and semblably of a womans tooth to help women in the same case. Others you shall haue, that prescribe to draw one of the eie-teeth, called in Latine Canini, out of the head of man or woman lying dead and not yet entered, and to wear the same against the tooth-ach. It is a common speech, That the earth found in or about a man or womans skull, is a singular depilatory, and fetcheth away the haire of the eiebrows. As for the grasse or weed that grows therein (if any such may be found) it causeth the teeth to fall out of the head with chewing only. As also that no vicer wil spread farther but keep at a stay, if there be a circle drawne about it with the bone of a man or womans body. As touching the cure of a tertian ague, some there be who lade vp water out of 3 pits, as much out of one as another, and mingle all together; which done, they put the said water into a new earthen pot that neuer was occupied before, & begin to the Patient out of it, giuing the rest vnto him or her for to drink, when the fit commeth. But for the quartan ague, they get me a broken fragment of a wooden pin which held the sides & crosse peece of a paire of gallows together, wrap it within a lock of wool, and so hang it about the Patient: or els they take a peece of the halter or rope from the gallows, and vie it in like maner for the foresaid purpose: but wot ye what? when the patient is by this meanes rid of the feuer, the said parcel of wood or cord they vse to bury or bestow close in some hole within the ground, where the Sun may neuer shine on it, & then the access will neuer return more. See the toies & vanities of these Magitians! and yet these be not all; for they run on stil and say, that if one take a whetstone which hath serued a long time to whet knives & other edge tooles on, and lay the same vnder the bolster or pillow where one lieth that is ready to faint and giue vp the ghost vpon some indirect means, by forcery, witchcraft, or poisoning (but this must be done without the knowledge of the said party) you shall from the very mouth of the patient hear, what poison was giuen, in what place, & at what time; but who it was that gaue it, he or she shall not be able to name. Moreover, this is known for a truth, that if one be stricken speechlesse with lightning, and then the body be bent and turned toward the wounded place, the party shall recouer presently and speak again. Some there be, who to driue back and keep down the biles and botches that rise in the share, take the thred or yarn out of the weauers loome which serue for the selvedge or list, making feuen or nine knots, and in the knitting of euery one of them name some widow or other, and then tie it fast about the grieved place. Also for to assuage the paine of any wound, they giue order, that the wounded party take a naile or some other thing that one hath troden vnder foot, and to wear the same tied about the neck, arme, or other part of the body. For to be rid of warts, some chuse a time to pluck them vp by the roots, when the Moone is twenty daies old at least, and then lay themselves along vpon their backs in some ordinary high way, looking fully vpon the Moone, and stretching their armes backward as farre as they can beyond their heads, and looke what they can catch hold of with their hands, therewith they rub the place. If one cut and pare an agnell or corn in any part of the body, obseruing a time when a star seemeth to shoot or fall, they say, it will quickly weare away and be healed for euer. They would beare vs in hand, That if a man poure vinegar vpon the hooks and hindges of doors, and make a liniment with the durt that commeth of the rust thereof, and therewith annoint the forehead, it will assuage the head-ach. They promise also to do as much with a wyth or halter that a man is hanged withall vpon a gibbet, in case it be done about the temples of the head in manner of a frontal. Moreover, if any fish-bone stick in the throat and will not remooue, it shall incontinently goe downe, if the party ready thus to bee choked withall, put his feet into cold water: but if some peece of any other bones be ready to choke one, make no more adoe, but take some other little spils of the said bone and lay them vpon the head, you shall see it passe away and do no harm. If a peece of bread haue gone wrong or lie in the way readie to stop the breath, take the crums of the same loafe and put them into both the eares, you shall see it will soon be gon and do no further harme. Furthermore, the Grecks (who were giuen much to make money of euery thing, and namely of their publicke places of bodily exercise) made great account of certaine excrements that came from mens bodies, as singular remedies for many diseases: for the filth

that

A that was scraped & rubbed from the bodies of wrestlers, &c. serued to mollifie, to heal, resolute, and incarnate; a medicin consisting of sweat & oile tempered together with it they vsed to cure the inflammations, contractions, distortions, and risings of the matrice, by application outwardly: therewith they would draw down the monthly fleurs of women; lenifie the intemperat heat, and dissolve piles and swelling bigs in the seat or fundament: they vse the same also to assuage the griefe of the sinews, to rectifie dislocations & set the bones in ioint, and to discusse the nodosities of the ioints. Howbeit, the scrapings that come of sweating in banes and hot-houses, be counted of greater validitie in all these infirmities, and therefore no maruell if they enter into the composition of maturatiue emplasters, and which bring an impostume to suppuration: as for the foresaid medicines which stood vpon sweat, oile wherewith wrestlers were anointed, and some vrine mingled among, they be good onely to mollifie the nodosities of the ioints: for as they heat and resolute more effectually, so in the other respects nothing so forcible they are as those that be gathered out of stoues & baines. Verily a man would not beleeue to what shamelesse and impudent curiosity some authors are grown vnto (and euen those of all others who be most renowned) who bash not with open mouth to commend vnto vs that, for a singular remedy against the prick of scorpions, which I am not willing to name, euen the filthy sperme that passeth from a man by his priuities. Neither could they stay there, but to cause barren women for to teeme and beare children, they haue found out a proper pessarie to be put vp into their secret parts, made forsooth of the ordure that commeth away from infants so soone as they be out of their mothers womb: and this medicine they haue a pretty name for, & call it Meconion. Moreover, the Grecks haue gone so neare, that they haue scraped the very filth from the wals of their publicke halls and places of wrestling, and such like exercises; and the same (say they) hath a speciall excafcatory vertue, whereby it discusseth and resolueth the biles and impostumes called Pani; and serueth as a soueraigne liniment to heale the vlcers in the bodies of children and old folk, yea & to skin any place that is galled, raw, & blistred with burning. Lo what remedies haue bin found in the body of man? And surely since I haue taken the pains to put them down, I may not omit those voluntary medicines which depend vpon his minde, & proceed from his will and vnderstanding. In the first place, you shall haue some that wil fast and forbear all kinds of meat; others drink not at all; one while they abstaine from wine onely, another while from all flesh meats; and you shall see diuers men neuer come vnto bathe or baine, euery one according as their sicknes doth require. And this kind of abstinence or regiment of themselves, they hold to be the readiest and surest means to recouer their health. In the rank of these remedies, are reckoned bodily exercise, straining of the voice, vnction, scratching, and rubbing, as need and occasion requirerh; for hard and vehement friction doth constipat and bind the body: contrariwise, gentle and soft frictions do mollifie and open the pores; and, as much rubbing taketh down the body and causeth leanness, so that which is moderat setteth it vp and encreaseth fatnesse: but nothing is there more wholesome than walking and gestation; which is an exercise performed many waies. If the stomacke be weake, and the legs feeble, riding on horseback is an excellent exercise: for the phthisicke or consumption, nothing so good as to saile or be rowed vpon the * water: but in case there be a long disease hanging vpon a man, what better thing in the world E than to change the aire, and remoue from place to place? In like manner to procure sleep, by lying in some pretty bed that may be rocked too and fro, is oftentimes good for a mans health: as also to vomit now and then, but in no wise to vse it ordinarily. Lying in bed vpon the backe, is commended for the infirmities of the eies; but vpon the belly, for the cough. To lie vpon the sides shifting from one to the other, is held to be singular against rheums and catarrhs. Aristotle and Fabianus do say, That we be giuen to dreame at the Spring and Fall, more than in the other seasons of the yere; also, most when we lie with our face vpward, but neuer groueling. And Theophrastus affirmeth, That sleeping vpon the right side, helpeth forward the concoction of meat in the stomacke; whereas they that lie vpon their backe shall not haue so quicke digestion. The manner of bathing also and vsing the baine and hot house, (which is one of the chiefe and principal means of our health) is in a mans power to order as he list himselfe: like as he may chuse what kind of friction he will in the stoue or hot-house; either to be rubbed with linnen cloths, or well curried and scraped with kombes. Item, it is knowne to bee verie good and wholesome, to wash ones head with hot-water, before hee enter into the baine or hot-house; and after that he is out of it, to doe the like with cold water: as also to take a draught of cold water

Dd 2

immedi.

* Specially vpon the sea.

immediatly before meat, and to do as much between meals: likewise to drink the same to bedward, ea, and otherwhiles in the very night, so as we sleep both before and after; where, by the way this would be noted, That no liuing creature else but man alone, delighteth to drinke any drink hot, know then hereby, that such kind of drinks be not natural. Finally, to wash the mouth with wine before one goeth to bed, for a sweet breath: likewise so soon as he is vp betimes, with cold water against the tooth-ach, so as he do it three or fure times together, or at least wile obferuing such an odde number, as also to bath the eies in a morning with Oxycrat (i) with vineger and water mingled together, to preferue them for being bleared, are singular and approued experiments.

CHAP. V.

¶ *Obferuations as touching Diet, and the manner of our feeding, for the regiment of Health.*

Like to the former rules is this also, as touching our Diet, That it be not too precise, but so as we may feed indifferently of all viands, and acquaint our bodies with variety of meats; which is obserued to be the best way to maintain our health; and in very truth, Hippocrates faith, That to eat but one meale a day (i) to forbear dinners, is a diet that will drie vp a mans body within, and bring them soon to age and decay. But this aphorism of his he pronounced as a Physitian to reclaim vs from that hungry and sparing diet, and nor as a patron and maintainer of full feeding and gourmandise: for I assure you, a temperat and moderate vse of our meats, is the wholsomest thing that is for our bodily health. But *L. Lucullus* was so strict herein, that hee suffered himselfe to be ordered and ouer-ruled by his owne seruant, who would not let him eat but as he thought good: in such sort, that it was no small disgrace vnto him in his later daies thus to make his man his master, and to be gouerned by him rather than by his * own selfe: for was it not (think you) an approbrious and shamefull sight, to see a * slave and no better, to put his lords hands from a dith of meat, being an aged gentleman as he was, and who in times past had rode in triumph; to gage him thus (I say) and keep him short, though hee were set amongst great states at a roiall feast within the capitoll of Rome?

CHAP. VI.

¶ *Of sweezing: the vse of Venerie: and other means which concerne mans health.*

Sweezing dischargeth the heauinesse of the head, and easeth the pole or rheum that stuffeth the nose: and it is commonly said, That if one lay his mouth to the nothrils of a mouse or rat and touch the same, it wil do as much. To sneeze also, is a ready way to be rid of the yex or hicquet. And *Varro* giueth counsell, to scrape a branch of a * Date tree with one hand after another by turnes, for to stay the said hicquet. But most Physitians giue direction in this case, to shift a ring from the left hand to the longest finger of the right, or to plunge both hands into very hot water. *Theophrastus* faith, that old men doe sneeze with more paine and difficulty than others.

As touching carnall knowledge of man and woman, *Democritus* vtterly condemned it: and why so? Because (quoth he) in that act, one man goeth * out of another. And to say a truth, the lesse one vseth it, the better it is for body and mind both: and yet our professed wrestlers, runners and such gamsters at seats of a ciuility, when they feele themselves heauy or dull, reuiue and recouer their liuely spirits again by keeping company with women. Also this exercise clenferth the brest and helpeth the voice, which being sometime before cleare and neat, was now become hoarse and rusty. Moreover, the temperat sports of *Venus*, easeth the pain of the reins and loins, mundifie and quicken the eiesight, and be singular good for such as be troubled in mind and giuen ouermuch to melancholy.

Moreover, it is held for witchcraft, to sit by women in trauell, or neare vnto a Patient who hath a medicine either giuen inwardly or applied vnto him, * with hand in hand, crosse-fingered one between another: the experience whereof was well seene (by report) when lady * *Alcmena* was in labour to be deliuered of *Hercules*. And the worse is this peece of sorcery, in case the party hold the hands thus joined a-crosse one finger within another about one or both knees. Also

A to sit crosse-legged, with the ham of one leg riding aloft vpon the knee of the other, and that by turns shifting from knee to knee. And in very truth, our ancestors time out of mind, haue expressly forbidden in all counsels of State, held by princes, potentats, and Generals of the field, to sit hand in hand or crosse-legged; for an opinion they haue, That this manner of gesture hindereth the proceeding and issue of any act in hand or consulted vpon. They gaue out likewise a strait prohibition, That no person present at any solemnity of sacrifices or vows making should sit or stand crosse-legged or hand in hand in manner aforesaid.

As for veiling bonnet before great rulers and magistrats, or within their sight, *Varro* saith, it was a fashion at first not commanded for any reuerence or honour thereby to be done vnto gouernors, but for healths sake; and namely, that mens heads might be more firm & hardy, by that ordinary vse and custome of being bare.

When a mote or any thing els is false into one eie, it is good to shut the other hard. If there be water gotten into the right eare, the maner is to jump and hop with the left leg, bending and inclining the head toward the right shoulder; semblably, if the like happen to the left eare; to do the contrary. If one be false into a fit of coughing, the way to stay it is to let the next fel low spit vpon his forehead. If the uvula be false, it will vp again, if the Patient suffer another to bite the haire in the crown of his head, and so to pull him vp plumb from the ground. Hath the neck a crick or a pain lying behind, what better remedy than to rub the hams? Be the hams pained? do the like by the nape of the neck: lay the cramp take either feet or legs, plucking & stretching the sinewes when one is in bed, the next way to be vsed, is to set the feet vpon the floore or the ground where the bed standeth: or put case the crampe take the left side, then be sure with the right hand to catch hold of the great toe of the left foot: and contrariwise, if the cramp come to the right leg, do the like by the right foot. If the body fall a shaking and quivering for cold, or if one bleed excessively at the nothrils, it is passing good to bind strait and hard the extreame parts; to wit, hands and legs, yea and to plucke the eares also. It falleth out oftentimes, that one cannot lie dry nor hold his water, but it cometh from him euer and anone; what is then to be done? mary tie the foreskin of his yard with a linnen thred or a papyr rush, & withall, binde his thighs about in the middle. If the mouth of the stomacke be ready to turne, and will neither receiue nor hold any thing, it is good to presse hard and straine the feet together, or els to thrust both hands into hot water.

D To come now vnto our speech and exercise of the tongue: in many cases and for diuers causes it is wholsom to speak but little. I haue head say, that *Mecenas Messius* inioined himselfe three yeres silence, and during that time neuer spake word, for that in a fit of a conuulsion or crampe, he had beforetime cast vp bloud. In case any thing be ready to fall or rush violently against vs, and that we be in danger of some stroke, say that we be climbing vp hill, or turned downe backward, or lying along, there is not the like meanes againe to preferue our bodies, as to hold our winde: and this inuention we had from a bruit and dumbe beast, according as I haue shewed before.

Moreover it is said, that to stick down a spike or yron naile in that very place where a man or womans head lay during the fit of the falling sicknesse, at the very first time that hee or she fell, E secureth the party that so doth, for euer being troubled with that disease. Also it is holden for a singular thing to mitigat the intollerable torments of the reins, loins, and bladder, to pisse with the body bending forward and groueling in the bathing tubs within the baines. As for greene wounds, it is wonderfull how soon they will be healed, in case they be bound vp and tied with a * *Hercules* knot: and verily it is thought, that to knit our girdles which we wear about vs euery day with such a knot, hath a great vertue in it, by reason that *Hercules* first deuised the same.

Demetrius, in a treatise that he compiled as touching the number of foure, affirmeth that it is of great efficacy; and he alledgeth reasons why it is not good to prescribe in any medicine to be drunke, the quantitie of foure sextars or foure cyaths. To rub the ears behind, is supposed to be very good for them that are giuen to be bleare-eyed: like as to rub the forehead, for weeping or watering eies.

Concerning the signs of life & death which may be found in man, this is one, That so long as the Patientes eie is so cleare that a man may see himselfe in the apple of it, wee are not to despair of life.

As for the Vrine of mankind, diuers authors haue treated of it; who as I find, haue not onely

* For euery man is to be his owne Physitian: where-upon might rise this proverbe, *A sole or a Physitian*. * Thought to be *Calpurnius* his Physitian: for in those days Physitians were reckoned but seruants to such persons as *Lucullus* was.

* *Palmis alterna manu scilicet: vnde hec* meaneth [to scate] the palm or inside of the hand, &c.] which answereth somewhat to the remedies next following.

* *Homo alius ex illo ex homine: vnde* hec meaneth thus, For that a man in that action, goeth beside himselfe. * For it holdeth women in pain still, &c. hindreth the operation of Physicke. * There was an old witch that by this meanes kept her in a long and tedious trauail.

* Wherein no ends are to be seene, they are so close enclosed, & therefore hardly to be vnloosed.

set downe their reasons in nature as touching the vertue thereof, but also haue bin very ceremonious and superstitious in handling that argument; yea, and they haue written distinctly of the feuerall kinds of vrine digested into certain principal heads. And among other things, I remember, that they set downe the vrine of * men that are vnable for generation, to be singular good by way of injection, to make women fruitfull. But to speake of such remedies as we may be bold to name with honesty: the vrine of yong children who be not yet vndergrowne nor 14 yerres of age, is good against the venomous humor of the Apides or Adders which the Greeks name * Ptyades, for that they spit their poison vpon the eies and faces of men and women. Also the same is held to be singular for the pearle, the catara, the filmes, the pin and web in the eies; like as for the eie-lids also, and the accidents happening vnto them. Being incorporate with the floure of Erulle, it is good for sun-burnings: soddan also with bolled leeks to the consumption of the one halfe in a new earthen pot which was neuer occupied, it is excellent to mundifie the eares that run with matter, or that haue any worms or vermin within them: and verily a stouph made with the vapour of this decoction, bringeth downe the desired sicknesse of women. Dame Salpe ordaineth to foment the eies with the said decoction, for to fortifie the sight, and to strengthen them that they fall not out of the head: she appointeth to make a liniment with it and the white of an egge, but principally if it be of an ostrich, and therewith to annoint the skin that hath bin tanned and burnt in the Sun, for the space of two houres together: with it a man may wash away any blots or blurs of ink. Mans vrine is much commended for the gout in the feet, as wee may see by Fullers, who neuer be goutie, because ordinarily their feet are in mens vrine. Stale chamber-lie or vrin long kept and incorporat together with the ashes of oister shels, cureth the red-gomb in yong infants, and generally in all running vlcers: the same so prepared, serueth in a liniment for eating cankers, burns and scalds, the swelling piles, the chaps and rifts in the feet and feet, also for the sting of serpents. The most expert and skilfull midwiues haue pronounced all with one resolution, that for to kill an itch in any part of the body, to heale a scald head, to scoure away dandriffe and scurfe in the head or beard, and to cure the corroding vlcers in any place, but in the priuy members especially, there is not a liquor more effectuell than vrine, with a litle sal-nitre put thereto. But surely, euery mans own water (if I may for reuerence of manhood so say) is simply best; and namely, if the Patient that is bitten with a dog, do straightways bath the place therewith; or in case there be any prick of vchyn, hedghog, or such like spill sticking in the flesh, to apply the same thereto in sponges or wooll, and so let it lie on. But say it was a mad dog that bit the Patient, or that he be stung with a serpent, it is good to temper it with a shes and lay it vnto the sore. For as touching the vertue thereof against Scolopendres, it is wonderfull what is reported, namely, That whosoever be hurt by them, if they doe wet the crown of their heads but with one drop of their own vrine, it will presently cure the same, so as they shall feele no more pain nor harm thereby.ouer and besides, by the speculation of our vrine, we are able to giue iudgement and pronounce of health and sicknesse; for if the first water made in a morning be white and cleare, and the next after it higher coloured and inclining to a deep yellow, the former sheweth that concoction was then begun, and the second is a signe that digestion is now perfect. A red vrine is naught, but the black is worst of all: likewise if it be full of bubbles and froth aloft, and be withal of a grosse and thick subsistence, the same is but a bad water. If the Hypostasis or Sediment which ferleth heavy to the botom, be white, it signifieth that there is some pain and grievance like to insue about the joints or principall parts within the body. Dorth an vrine look greenish; it betokeneth some obstruction or disease already in the noble bowels and inwards: is it of a pale hew: it saith that choler aboundeth in that body: If it look red, the blood be sure is predominant and distempered. The vrin is not to be liked but pre-fageth danger, wherein there appeare certain contents like brans & blackish clouds: also, a white thin, and waterish vrine is neuer good: but in case it be thick and of a stinking smell withall, it is a deadly signe, and there is noway but one with the Patient. As for children, if their water be thin and waterish, it is but ordinary and naturall.

The Magicians expressly forbid in making water, to lay bare the nakednesse of that part against Sun and Moon, or to pisse vpon the shadow of any person. And therefore Hesiodus giueth a precept, to make water against a wall, or something standing full before vs, for feare least our nakednesse being discouered, might offend some god or Angell. To conclude, *Hesiodus* doth vpon his warrant assure vs, That whosoever droppeth some of his owne vrine euerie morning

A morning vpon his feet, he shall be secured against all charms, forceries, and deadly poisons whatsoever.

CHAP. VII.

¶ The remedies that womens bodies do minister.

The medicines which are said to proceed from the bodies of women be such, and the operations so miraculous, that they come nearer to the nature of monstrous wonders than true reports of naturall works: to say nothing of much mischief and many wicked parts committed by the means of their vntimely births and infants still born, which haue bin dismembred and cut in pieces for some abominable practises: to let passe the strange expiations wrought by their monthly terms, and a thousand more deuises which haue bin deliuered and set abroad not only by midwiues, but also by secret harlots that haue slippt their conceptions, and bin deliuered in corners. But to speake of the foresaid remedies which are in vre, and commonly known. The perfume that the hairs of a womans head make whiles they burn, chafeth away Serpents. The smell thereof also raiseth and reuiueth women, who in a fit of the mother lie speechlesse and breathlesse. The ashes verily of the said hairs burnt in some earthen pan or fish-shell, being applied alone or with litharge of siluer, is a singular medicine for the asperity of the eies, & the itch. Item, It taketh warts away, and cureth the red gum and sores that infants be subiect vnto, if it be vsed with hony. The same ashes mingled with Hony and Frankincense, healeth wounds in the head, and doth incarnate or fill vp with good flesh hollow vlcers whatsoeuer they be. And incorporates with swines lard, it is good for the broad bites called Pani, for the gout, and *S. Antho-* such like.

Toucing womens milke, it is holden by a generall accord, of all other to be sweetest & most delicat: whereupon it is prescribed by Phyticians vnto those that haue lien of a long & languishing feuer; as also to such as be troubled with a fluxe occasioned by a feeble stomack: but in these cases, that milk is reputed most wholsom which a nourse giueth that hath newly weaned her child: besides, when the appetite of women is giuen to an inordinate longing after strange things, in agues also, in gnawings and frettings of the stomacke, it is found by experience to be most effectuell. Likewise, being incorporat with Frankincense, it is singular good for the impostumes breeding in womens breasts. If the eies be bloudshoten vpon any stripe, if they be in pain or troubled with a violent rheum falling into them, let a nourse milk it in them, they shall find very much ease thereby: howbeit for the accidents abouenamed, it is held to be more soveraign, in case it be applied to the place together with hony & the juice of the daffodil, or els with the powder of frankincense: where by the way this would be obserued, that for what vse soeuer milk is imploied, that is ordinarily of more force which a woman giueth that bare a man child but if she was brought to bed of two twins, both boies, then it is best and most effectuell; provided alwaies, that the mother her selfe do forbear drinking of wine, & eat no meat or sauces that be sharp. Moreouer, this is knowne for certaine, that if womans milk be incorporat with the liquid white of an egge, and so applied to the forehead with wooll wet in the said liquor, it staieth the flux of humors into the eies. Moreouer, a soveraign remedy is milk against the venomous slime or spittle of roads, in case they pisse or spurt into our eies. Also if they haue bitten one, there is not a better thing either to be drunk or dropped vpon the sore, than breast milk. It is a common saying, That whosoever can meet at one time together with the milk of mother and daughter both, shall neuer need to feare all their life long any infirmities of the eies, so they be annointed or bathed therewith. Semblably, womens milk is singular for to cure the accidents befalling to the eares, if it be dropped in with a litle * Opium put thereto: but if so be the eares are pained by reason of some stripe that they haue receiued, the said milke would haue some Goose grease mixed with it, and so be instilled warme. And say that they haue a strong and stinking smell with them, as commonly it falleth out in all long diseases, there is nothing better than to put wooll into them, which is soaked in breast milk and hony together. If it happen that the eies look still yellow after the jaundise, it is good to drop milk into them with the juice of the wild Cucumber. This peculiar vertue it hath ouer and besides those abouenamed, if it be taken in drink, to help those that haue bin poisoned with the sea-Hare, the worrne Buprestis, and as *Ar. stotie* saith

* Madice ad-
miso opio.

saith, with the deadly Dwale called Dorycnion. In this maner also it cureth those whose brains be troubled and intoxicated with drinking Henbane. Physicians likewise haue prescribed to make a liniment with milke and Hemlock for to be applied vnto the gout. And some there be who vse it in that case, together with Osetype (v) the sweat or fattinesse of vnwasht wooll, and Goosegrease: in which manner it serueth in a pessary to be put vp in the naturall parts of women, to assuage the pain of the marrice. To drinke breast milke is a good meane to stop a laske, as *Rabirius* writeth, & yet the same doth prouoke the monthly course of womens fleurs: what is to be sayd now of a womans milke who hath borne a maid child? surely it is better than the other in these cases only; to wit, in scouring the skin of the face, and taking away the pimples, spots, and freckles, which be therein. But I must not forget, that any breast milke whatsoeuer, cureth the maladies incident to the lightes: and if there be tempered therewith the vrine of a yong lad not full fourteen yeares old, and Attick honey, so there be of each one spoonfull, I find it to be an excellent remedy for to rid away the ringing and thumping within the ears. And to conclude, it is a general speech, That if dogs do lap and tast the milke of a woman which hath borne a maid child, they will neuer run mad.

As touching the fasting spittle of a woman, it is judged to be a proper medicine for blood-shotten eies, also for the rheum that hath taken a course thither, if to be the corners of the eyes be euer and anone bathed and wet therewith when they be hot and inflamed; but more effectually will this remedy work, in case the woman forbear all meat and wine the day before. I read moreover in some Authors, That if the head be bound vp with a womans haire lace or fillet, it easeth the pain thereof. And thus much in some good sort as touching the medicines proceeding from women. As for the rest that are written and reported, they exceed all reason, and there is no end of them.

For first and formost it is said, that if a woman whiles her monthly sicknesse is vpon her, bee set into the wind abroad with her belly naked, she will scar away haile storms, whirlewindes, and lightnings, yea, and avert any violence of the weather whatsoeuer. And at sea verily, any woman standing openly against the weather bare, although she haue not her fleurs, is enough to secure the failers and passengers from all tempests. As for the very monthly flux it self of women, (a thing in other respects and at all times, as I haue shewed before, of a monstrous nature) there be writers who tell and presage wonders thereof, such as be horrible, abominable, and indeed not to be spoken: and yet some of these things I hold it no shame to deliuer in writing; namely, If it fall out just in the eclipse of Sun or Moon, that a woman hath her sicknesse come down, the same is a pestilent quality, and apt to breed diseases incurable. Likewise, if haply the time of the change, when the Moon is in coniunction with the Sun, and those things concur together, the man who medleth with her during that time, shall not auoid his bane but it will bring vpon him some pestilent malady remediless. Moreover, the venome thereof is so strong at that time especially more than at any other, that the presence or breath only of a woman then, will infect and staine any purple cloth. And yet bad enough it is at all times: for whensoever they are in their fleurs, it skills not in what quarter of the Moone, if they goe about any field of corn with their nakednesse vncovered, yee shall see the canker wormes, caterpillers, beetles, and all such wormes and hurtfull vermine, to fall from the corn as they passe along. This inuention by the saying of *Scepsius* and *Meiodorus*, came from the Cappadocians, who being infected with a number of those green flies called *Cantharides*, deuiled this means to be rid of them; for they caused their women at the time of their monthly terms (sauing the reuerence of womanhood be it spoken) to go through the standing come, with their cloths tuckt vp round about their waist, and all bare beneath. In other countries yet they are more mannerly, and in a better respect to the honor of women, put them only to go barefoot for this purpose, with their haire hanging loose about their eares, vngrirt, vnclaced, and vnbraced. Howbeit, great heed must be taken, that they walke not thus at the Sunne rising, for then surely all the crop vpon the ground will wither and dry away to nothing. Also if a woman during her natural courses doe but touch any yong vines, it is enough to marre them for euer. As for Rue and Luie, Plants otherwise of themselves most medicinable, and indued with singular vertues against poison, they will presently die with their touch. Much I haue already said of this strong and pestiferous venome, and yet I haue not written all. For ouer and besides, certaine it is that if a menstruous woman doe no more but touch a Bee-hiuc, all the Bees will be gone and neuer come to it againe. Also if at such a time she handle

A die any skains or slips of linnen yearn and set them ouer the fire, to seeth, they will in the boiling turn black. Let her but take a barbers rasor in her hand, the edge wil turn and become blunt: nay if she do no more but touch any brassen vessel, it is wonderfull what a strong sauer it wil cast, and how it wil rust and canker therupon; and the rather, if this fall out to be in the decrease or wane of the moon. Doth a woman at such a time touch a mare that is in foale, it is enough to make her cast the same before due time. And not onely so, but the very sight of women in that case, although they be a great way off, is able to do much harm; but principally the first time that they haue the said fleurs after the losse of their maidenhead; or otherwise during their virginity, when they first come down by course of nature of the owne accord. The malignitie of this venomous humor is so great, that the slime ingendred within the lake of Sodome in Iury, as viscus as it is otherwise, will forgoe all that tenacity, and diuide in sunder by nothing els but a thred infected with the said menstrual blood, according as I haue declared heretofore. So forcible it is besides that the very fire, which is of power to ouercome all things and change their nature, is not able to conquer and alter this: for burne or calcine it to ashes, and strew neuer so little thereof vpon any cloths that are to be washed or scoured in the Fullers mill, it wil change their color, though they were of purple, and cause any die whatsoeuer to lose the fresh lustre. And more than that, so pernicious is the quality of this venome, that as naturall otherwise as it is to women, it is no better than a poison to those of their own sex: for in case one woman with child be annointed about her naturall parts, with the foresaid blood of another, or do but step ouer the place where it is, she will immediatly fall to labour, and slip an abortiue birth. As for the famous curtizans, C *Lais* and *Elephantis*, who haue written so contrary one to the other of this argument, and namely, as touching abortions, and of what efficacy the cole of Colewort, Myrtle, or Tamariske root is, after it hath bin quenched in the said blood; as also, how shee Asles will not conceiue for so many yeres as they chance to eat Barly corns infected therewith; besides other strange deuises vnto their writings, considering the monstruosities & contrarieties which they haue put down; whiles the one prescribeth medicines for to make fruitful, & the other ordaineth the very same, to hinder conception and cause them to be barren. Moreover, *Bythm* of *Dyrrbachium* saith, that for to make a mirror or looking glasse cleare againe, which was dusked and dimmed by the aspect of a menstruous woman, the next way is to cause her to cast her eies backward and to look ouer her shoulders vpon it againe; he saith moreover, that if women in that case haue about them the fish called a Barbill, they shall not by that means infect or do hurt at all, but the same menstrual blood shall lose all the foresaid strength.

Well, as hurtfull and mischievous as it is otherwise, yet many there be who affirm it to be in many diseases medicinable; and namely, for the gout, if the place be annointed therewith: as also if women while their monethly sicknesse is vpon them, doe handle the wens named the Kings euil, the swelling kernels behind the ears, the broad tumors or biles called Pani, shingles, *S. Anthones* fire, felons, or violent flux of humors to the eies or other parts, there wil insue much ease therupon. *Lais* and *Salpe*, two notable strumpets, haue left in writing, That if the foresaid menstrual blood bestowed within a little Locke of wooll that came from a blacke Ram, be worne inclosed within a siluer bracelet, it is a soueraigne remedy against the biting of mad dogs, and for Tertian and Quartan agues. *Diostimus* of Thebes reporteth, That any little peece or rag of cloth, yea, though it were but a thred stained therein, and so set handfomly into a bracelet, is sufficient to do as much. *Sotira* the renowned midwife affirmed, That there was not in the world so good a thing against the Tertian & Quartan, as to rub & anoint therewith the soles of the patients feet: but much more effectually would it do the deed, in case the woman her self had the doing of it with her own hand, so as the sick party know not thereof in any hand. And this (quoth she) is a soueraigne medicine to raise them out of a fit of the Epilepsie, who are surprisid and fallen therewith. *Ictidas* a worthy Physician among the Greeks, assureth vs vpon his word, That Quartane agues will make an end and go away by the act of generation, at what time onely as a woman beginneth to enter into her fleurs. But this is agreed vpon by all authors professed and seen in this theam, that if one be bitten with a mad dog, and so far gone, that he is afraid of water, so as he dare not see it or drink at all, do but put a clout or shred of cloth dipped in the said menstrual blood vnder the cup whereout hee is to drinke, hee shall immediatly be deliuered from that feare: And this commeth by that powerfull and predominant Sympathie, whereof the

the Greeks write so much, between mad dogs and the said blood, considering, as I haue before-
said, that they begin first to run mad by tasting thereof. This is known for certain, that the ashes
of a burnt cloth infected therewith, or of the blood it self calcined, is a singular powder to heale
the farcins or sores of horses and all such laboring beasts, so it be mixed with the soot of chim-
ney or furnace, and al incorporat together with wax. Now say there be any garment or cloth pol-
luted therewith, there is not any thing will take out the stain, but the urine onely of the same
woman. The ashes before said tempered alone with oile of Roses into a liniment, and so applied
in maner of a frontal to the forehead, allaieth the headach of women specially. This also would
be noted, That for the first yeare after a woman hath known a man, and so parted from her vir-
ginity, her fleurs are most sharp, mordant, and fretting. Furthermore, this also is resolved clearly
among all writers, That there is no charme or enchantment whatsoeuer, of any validity to doe
harm to that house where the side posts or dore cheeks are striked lightly ouer with mensruous
blood: an argument I assure you, that convinceth notably the folly of these Magitians, the vai-
nest people vnder heauen, and ouerthroweth all their art: and a point that pleaseth me very wel,
& which for mine own part I am right willing to beleue: and since I am light thus vpon them,
I care not much, if to detect their vanities, I set downe one of the most modest receipts that they
haue giuen their word for, and which may seem to carry some shew of truth or probability. For
thus they prescribe with great warrantize, To take al the nail-parings of toes and fingers of man
or woman lying sick of an intermittent feuer, and to mix or incorporat them with wax, so as the
party in the doing herof do say these words, *I am about a remedy for the Tertian, Quotidian, or Quar-*
tan ague (according as the patient is troubled with the one or other of these feuers) which done
and said, to stick vp the said wax vpon the dore of another man or womans house that is not sick
at all, and that before the Sun be risen, which no doubt (as they say) wil cure the sick person, and
set the ague vpon another that was well before. Now would I gladly know what greater vanitie
and folly there can be, if this medicine misse and do not the feat? or what more villany and mis-
chiefe, than thus to transfer and remoue diseases from those that be sick already, vnto such as be
sound and think no harme? To conclude, some of these Magitians are so far gone, that after all
the foresaid nailes of fingers and toes be pared, they ordaine them to be thrown into Ant-holes,
and to obserue that Emmet that first begins to draw one of them into her nest, to catch her vp
quickly, and hang her about the necke of any one that is sick of an ague, and so the patient *pro*
certo, shall shake off the disease and be quite rid of it.

CHAP. VIII.

¶ The medicines that are found in diuers strange and forraign beasts, as namely, the Ele-
phant, Lion, Cammell, Hyena, Crocodile, Chamaleon, Skinke, Water-
horses, and Onnces.

These be the remedies which the bodies of men and women do affoord: as many I meane as
I may with some honesty relate: and yet ywis many of them be such as are not to be read
out and vttered, but with leaue and patience first craued, for the reuerence that we owe to
chaste eares. I know ful wel there is a great deale more behind that I haue not touched, but such
stufte I assure you as is detestable and not fit to bee spoken or committed to writing, which
makes me rather to make hast and leaue the discourse of Man and Woman, and so to proceed
to the singular vertues and operations of bruit beasts.

And to begin with the Elephant, The blood of that beast, especially the male, staieth all flux-
es of humors, which the Greeks cal Rheumatismes. The shavings of yvory (which is the Ele-
phants tooth) incorporat with Attick hony, scatter (as folk say) the dusky spots that appeare
in the visage: like as the dust thereof, which the file or saw doth make, cureth the whitflawes or
impostumations breeding at the naile roots. The trunk or muffle of an elephant if it be but touch-
ed only, allaieth the head-ach; & the more effectually it is, in case sneezing come withall. It is
said moreover, if one take a piece of the right side of the same trunk, & carry it fast about him
with the red ocre of Lemnos (called Terra Sigillata) it will incite him mightily to carnal lust.
The blood of an elephant is singular good for those that be in a consumption & wast away: like
as the liuer helpeth such as be giuen to the falling sicknesse.

The greafe or fat of a Lion tempered with oile of Roses into an vnguent, preferueth the skin
of

A of the face from all ill fauor spots, and keeps it white and smooth. The same ointment healeth
the skin that is scorched and pilled with cold, by travelling ouer mountains charged with snow;
yea, and abateth the tumors & nodosities vpon the ioints. Now, if we list to beleue the foolle-
ries of Magitians, they would bear vs in hand, that whosoever be anointed all ouer with the said
greafe, shall be gracious with princes and kings, yea, and win much fauor among the people, and
any state or nation where they shall conuerse; but principally it must be the fat in the forehead
between the eie-brows (where indeed it is vnpossible to find any at all.) The like effects they do
promise of the Lions teeth, and those especially of the right side; like as of the shag haire (for-
sooth) that should hang vnder their nether jaw. Indeed the gal of a Lion mixed with water, cla-
rifieth the eiesight, in case the eies be bathed therewith: the same tempered with the own greafe,
B dispatcheth as they say the falling sicknes, in case the patient tast neuer so little of it, & so soon
as he hath taken it, run a while for to digest the same. A Lions heart cureth a Quartane ague, if
the sick person do eat thereof, and their fat is a soueraigne remedy for the feuer Quotidian, if it
be vsed with oile rosat. There is not a beast so fel and sauage, but it wil run away from them that
be anointed with Lions greafe: and it is thought to be a singular preferuative for to preuent any
secret ambushes or practises intended against one.

As touching the Cammell, his braine (by report) is excellent good against the epilepsie or
falling sic knesse, if it be dried and drunk with vinegar, so doth the gall likewise taken in drinke
with hony: which also is a good medicine for the Squinancy. It is said that a Cammels tail dri-
ed causeth loosnesse of the belly: like as the dung reduced into ashes and incorporate with oile,
C doth curle and frizle the haire of the head. The said ashes made into a liniment and so applied,
yea, and taken in drinke as much as a man may comprehend with three fingers, cureth the dysen-
tery: so doth it also the falling sicknesse. Cammels pisse (they say) is passing good for Fullers
to scour their cloth withal: and the same healeth any running sores which be bathed therein. It
is well known that the barbarous nations keep this stale of theirs vntil it be 5 yeres old, and then
a draught thereof to the quantity of one hemine, is a good laxatiue potion: likewise that the
heire of their tails, twisted into a wreath or cord, and so worn about the left arme in manner of a
bracelet, cureth the Quartane ague.

As for the Hyena, there is not a wild beast of the field that the Magitians haue so much in
D admiration as it: for they hold that in the Hyena it selfe there is a certaine magicall vertue, at-
tributing a wonderfull power thereto, in transporting the mind of man or woman, and rauishing
their senses so, as that it will allure them vnto her very strangely. Concerning the rare property
of these beasts to chaunge the sex each other yeare (i. to be male this yeare, and female next;
as also touching other monstrous qualities obserued in their nature, because I haue discoursed
already of them, it remaineth now that I proceed to shew the medicinable vertues that are re-
ported to be found in them: wherof this may be counted for one of the chiefe, that considering
they be so terrible * to Panthers, that they dare not quetch nor make head against them: who-
fouer hath about him but a piece of the Hyenes skin may be sure that a Panther will not set
vpon him, nor once come neere. And that which is a wonderfull thing to be spoken, in case the
E hides of them both be hung vp one against another, the haire of the Panther will fall off. When
the Hyenaes flie before the hunter and would not be taken, they wind with a carriere out of the
way toward the right hand, and wheele about vntil the man be gotten before them; & this they
do, because they would meet with his traicts and footing, which if they happen vpon, and get be-
hind him, you shall see the hunter incontinently to be so intoxicat in his brain, that he is not a-
ble to beare his head nor sit his horse, but to fall from his back. But in case that they turn on the
left hand, it is an euident signe that they be ready to faint, and then will they quickly be taken.
The sooner also and with more ease be they caught (if we may beleue art Magick) if the hun-
ter tie his girdle about his middle with 7 knots, and the cord of his whip likewise wherewith he
ruleth and jerketh his horse, with as many. But see how subtil and cunning these Magitians bee
F to cloke and colour their vanities and deceits, with superstitious circumstances! This chase for-
sooth after the Hyene, must be iust at the very point when the moon is passing through the sign
Gemini: and then if they be taken, the huntsman must be sure to saue euery haire of their skins,
and misse not one, so medicinable they are. By their saying also the skin that grows to the head
of the Hyene, if it be applied in manner of a frontal, is singular good for the headach: the gall
of the Hyene cureth bleared eies, if the forehead be anointed therewith: but if the same bee fod-
den

den with three cyaths of Attick hony and one ounce of Saffron, to a liniment, it is an excellent G
preseruatiue to keep one from euer being blear-eyed, if so be the eyes be annointed with it. The
said composition likewise is singular for to rid away the cloudy films and catarracts that breed
in the eies. But for to clear the sight & quicken it, the older this medicine is, the better they hold
it to be. And kept it must be in a brazen or copper box, which eie-falut they say, serues also for
the mailles or spots, for the asperities, excrescences, cicatrices, dents, & excoriations remaining
in the eies. The graue or dripping likewise of the Hyænes liuer, newly taken out of the body
and roasted, being incorporat with clarified hony into an vnguent, riddeth away the red film that
ouercasteth the apple of the eie and darkneth the sight thereof. They will make vs beleue, that
the Hyænes teeth are good for the tooth-ach, if the pained teeth be but touched therewith, or if
the said teeth be arranged in order, and so applied fast vnto the patients teeth, as they may fit e-
uery tooth in his head. The shoulders also of the Hyæne are proper to ease the paines that lie
in our shoulders and arms both, so they be set likewise orderly and hanged close to the grieved
parts. The teeth of the said Hyæne plucked out of the left side of the chaw, and bound vp sure
within a piece of a sheep or goats skin, is right soueraigne to be worn in manner of a scutcheon
or stomacher for to ease the intolerable paines of the stomacke. A dish of meat made of their
lungs and eaten, is soueraigne for the flux proceeding from a feeble stomack. But if the same be
burnt and reduced into ashes, and so brought into the form of a liniment with oile, and applied
accordingly, it comforteth the stomack mightily. The pith or marrow taken out of the backe-
bone along, and incorporat with old oile and * gall, is passing good for the nerues. The liuer of
the Hyæne drieth away Quartan agues, in case the patient take three bits thereof one after a-
nother before the access. Take the ashes of the Hyænes ridge bone, the tongue and right foot
of a Seale, put thereto a Buls gall, seeth them all together and make a cataplasme therof, prea-
ding the same vpon a piece of a Hyænes skin, and apply it accordingly, you shall see how it will
ease the pain of the gout. The very gal likewise of this beast mixed with the powder of the stone
Asius, is commended by them for to cure the said malady. They that are subiect to trembling
and to the cramp, such also as be giuen to leap out of their beds, or are troubled with the bea-
ting and panting of the heart, ought to take and boile the heart of the Hyæne, and eat one part
therof, and with the other being burnt to ashes and with the brains of the said Hyæne together
reduced into a liniment, to annoint the grieved part. This composition likewise serueth to take
away the hairs of any place, if it be annointed either with it alone, or els with the gall, & in case
one would not haue them euer to come vp againe, they ought to be plucked vp before, and then
the place to be annointed. Thus they vse to rid away the haire of the eie-lids that be trouble-
some. In like manner for the paines of the loins, the flesh about the Hyænes loines is prescribed
to be eaten, and therewith oile together, and the place also is to be rubbed well and besmeared.
They say moreover, that if a woman which is barren, eat the eie of a Hyæne with Liquorice and
Dill, she shall proue fruitful: and so neare they go, as to promise she shall conceiue within three
daies after. And (by their report) whosoever are haunted with sprites in the night season, and be
affrighted with such bugbears, let them but take one of the master teeth of the Hyæne, & weare
it about them tied by a linnen thred, they shall be freed from all such fantastical illusions: these
Magitians also giue direction to those that be out of their wits and gon besides themselves, to
haue a perfume made with the smoke of those teeth, and to weare one of them hanging before
the brest, with the fat growing about the kidneys, or els with the liuer or the skin. If a woman be
with child, and would gladly go out her full time, let her take a peece of the white flesh of this
beast, and 7 haire, neither more nor lesse, together with a stags pizzle, bind them all fast within
the skin of a Buck or Doe, and so weare them hanging about her necke just against her brest,
she shall not slip an vntimely fruit. Furthermore they promise in the behalfe of this beast, that
if a man or woman do eat the genital member of a Hyæne, according to their sex, they shall be
prouoked to fleshly lust, how cold soeuer the man were before, and could not abide to imbrace a
woman.ouer and besides, if the said pizzle and shap of this beast be kept in any house, together
with a joint of the ridge bone, skin & alas it groweth too, the whole family shall agree together
well, and liue peaceably; now this ioint or knot about said they call Atlantion, and it is the very
first spondyle of them all. The same also they make no small reckoning of, but hold it for a spe-
ciall remedy for the falling sickness. Fry the grease or fat of an Hyæne, the fume therof (by re-
port) wil chase away serpents: a piece of the chawbone beaten smal to powder & eaten together
with

* Felle: some
read mell,
i. Honey.

A with anise seed, doth mitigat the quivering & quaking in a cold ague fit. A suffumigation made
therewith, draweth down womens sicknesse, if we may beleue magitians, who are grown to this
passe in their vanity, that they auouch for certain, that if an archer do bind vnto his arm a tooth
of an Hyæne, growing on the right side of the vpper chaw, hee shall shooor point blanke and ne-
uer misse his mark. Take the palat or roufe of the mouth of this beast dried and made hot toge-
ther with Ægyptian Alumne, put the same into the mouth and change it three times for new
stil, they promise it shall correct a stinking breath, and heale any vlcers or cankers in the mouth.
And as for those that weare vnder the soles of their feet within the shoe, a Hyæns tongue, there
is not a dog will be so hardy as to bay or bark at them. The brain of the Hyæne lying in the left
side of the head, easeth any deadly diseases of man or beast, if the nostrills be annointed there-
with. The skin of the forehead serueth as a countercharm against all witch-craft and inchaun-
ments. The flesh growing to the nape of the necke, being dry and made into powder, appeaseth
the pain in the loins of the backe, either eaten or drunk, it skils notwithstanding. For the griefe of si-
news, they giue order to make a suffumigation with the nerues of Hyæna, which run along the
shoulders and back. And the hairs growing about the muzzle of this beast, haue an amatorious
vertue with them, to make a woman loue a man, in case her lips be but touched therewith. The
liuer of the Hyæna giuen in drink, cureth the cholique and stone. As for the heart, be it taken in
meat or drink, it easeth all the paines of the body: the milt cureth the spleen: the kelle with the fat
about it, helpeth any inflammation of vlcers if it be applied with oile: the marrow within the
bones, appeaseth the griefe of the backbone and sinews, and finally, doth recouer and refresh the
wearinesse of the reins and kidneys. The sinews of this beast drunk in wine with frankincense, re-
store women to the fruitfulnesse of the wombe, especially when by indirect meanes of sorcery
they are become barren and vnapt for conception. The matrice of the female Hyæne giuen in
drink with the rind of a sweet pomegranat, is a very comfortable medicin for that part in a wo-
man. A suffumigation made with the fat taken from the hetchfill piece or loines, is singular for
those women that be in hard trauell of childe, and procureth them speedy deliuerance: the ma-
row or pith out of the ridge bone whosoever carrieth about them, shall find help against vain il-
lusions and fantasticall imaginations. The pizzle of the male Hyæna, if it be burnt, casteth a
fume which is good for them that haue any sinews pluckt with the cramp. Saue the feet of this
D beast, and the very touching of them is soueraigne for blear eyes, for ruptures, & inflammati-
ons: but this regard must be had, that the left foot be applied to those griefes in the left side, and
the right to the contrary. But wot ye what? if the right foot of the Hyæna chance to be carried
ouer a woman whiles she is in labour of childbirth, she shall surely die of it; but contrariwise,
let it be the right foot, she shall haue a quick dispatch and be deliuered with ease. The skin or
purse that holdeth the gall, being either drunke in wine or taken with meat, helpeth those that
for weaknesse of stomack be apt to faint and fall into cold sweats: and the bladder taken with
wine, cureth those that cannot hold their water. Now look what vrine is found within the blad-
der of this beast, you must thinke it is an excellent drink if it be mixed with oile, Sesame seed,
and hony, for any old griefe whatsoever. The first rib and the eighth wil make a perfume, which
E is passing good for those who are bursten: the spondyles or ioints of the ridge-bone, are as con-
uenient for women in trauell of child-birth: and the Hyæns blood taken inwardly with fried
barly meale, doth mitigat the wrings and gripes of the belly. If the side pofts or dore cheeks of
any houle be striked with the said blood, wherefoeuer Magitians are busied with their feats and
jugling casts, they shall take no effect, whether they be charms, exorcismes, or inuocations: in so
much as they shall not be able to raise vp spirits, nor haue any conference with familiars by any
means of conjuration, whether it be by torch-lights, by bason, by water, by globe, or otherwise.
The flesh of this beast eaten, is very effectuall against the biting of a mad dog, and yet the liuer
is of greater efficacy in this case. If there chance either flesh or bone of man or woman whom
this beast hath killed and deuoured, to be found in the maw, surely the perfume thereof is a pre-
sent remedy for the gout, as these Magitians would seeme to persuaade vs. But how if there be
F found the nails of man or woman there: then woe be to all those that were at the hunting and ta-
king of this beast, for it presageth that one of them is sure to die for it. Beside all this, they do
affirme, That either the excrements or bones which the Hyæna dischargeth out of the belly at
the time that she is killed, serue for countercharms or preseruatiues against sorceries and practi-
ses of Magitians. As for the ordure or dung which is found within her guts, being dried and ta-
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ken in drinke, is auailable against the dysentery: and the same reduced into a liniment with goose greafe and so applied, helpeth those that by some poison are infected all the body ouer. The greafe likewise of this beast vsed as an ointment, hath a singular property to cure the biting of a dog, so that the patient be couched vpon the skin of the said Hyæna, as say our Magicians: who affirm moreouer, that a decoction made with the ashes of the pastern bone of the left leg, boiled together with the blood of a weazil, causeth as many as be anointed all ouer therewith, to be odious in the eyes of all men. The same effect do they attribute to the decoction of the eie. But of all the fooleries that they haue broched as touching the Hyæna, this passeth and may go for the chiefe, That the hindmost end of the gut in this beast is of vertue, that no captain, prince, or potentat, shall be able to wrong or oppresse those who haue but the same about them: but contrariwise assureth them of good speed in all their petitions, and of happy issue in all suits of law and trials of iudgements. The concavity or wrinkle thereof, if a man do weare fast tied about his left arme, is so forcible to charme a woman, that if he do but set his eie vpon her, she will leaue all and follow him presently. The ashes of the haire growing therabout made into a liniment with oile, and applied accordingly, causeth those men who before were giuen to lewd wantonnesse and liued in bad name, not onely to become chaste and continent, but also to put on grauity and grow staide in their behauiour. Thus much of Hyæna.

For fabulous tales, the Crocodile may challenge the next place: a beast this is which naturally doth liue as well on land as in water: for two kinds there be of them; whereof the former (keeping thus in both elements) hath this especiall vertue, if we may beleue these Magicians, To prouoke vnto carnal lust, if the teeth which grew in the right side of the chaw, be hanged fast likewise to the right arme of man or woman. The eie-teeth of the said Crocodile, filled vp with frankincense (for hollow they be) and tied to any part of the body, put by those periodicall fevers which vse to return at sett and certaine hours, but then the patient must not for five dayes together, see the party who fastened the same about him. And they report likewise, that the little grauel stones taken out of their belly, be of the same vertue to driue away the shaking fits of agues when they are coming, which is the cause that the Egyptians vse ordinarily to anoint their sick folke with the fat of this beast. The other Crocodile resembleth this in forme; but far lesse he is, and keepeth only vpon the land, liuing vpon most sweet and redolent flowers. In which regard, much seeking there is after his guts, for the pleasant senteurs and odors wherewith they be stuffed full: this dung they call Crocodileia, a singular remedy for all the diseases of the eyes, and namely against cataraets, suffusions, and mistie films, if they be anointed with an eie-salue, made of it and the iuice of Porret mixed together. The same brought into a liniment with the oile Cyprinum, serueth to take away all pimples that rise in the face, and clenseth the skin from those spots that blemish the visage. But if it be incorporat with water, it scoureth whatsoever accidents be apt to run ouer the face, and reduceth the skin vnto the natie color; for it riddeth freckles, moles, and generally any spots or flecks that marre the beautie or fauour. The same is good to be drunke in oxymell to the weight of two oboli for the falling sicknesse: and applied in forme of a pessarie, it prouoketh womens fleurs. Now if you would chuse the best Crocodileia, take that which is whitest, brittle, or easie to crumble, least weighty in hand, and withall swelling in manner of a leuaine, if it be rubbed between the fingers. The manner is to wash it, as they do white lead called Cerusse. Sophisticated it is with amyll, or the scouring Fullers clay & Tuckers earth called Cimolia, but principally with the dung that sterlings meut, which are of purpose caught and fed only with rice. Now there is not a better thing in the world (say these Magicians) for the cataraet, than to anoint the eyes with it and honey together. And if a man may beleue their words, there is a soueraigne perfume made of the guts and the whole body besides, for women who are sicke of the mother, or otherwise diseased in the matrice, if they sit ouer it whiles it smoketh. In like manner, it doth them good to be lapped round about with wooll that hath bin so perfumed. The ashes of the Crocodiles skin, as well the bigger as the lesse, brought into a liniment with vinegar, and applied vnto those parts of the body which had need to be cut away or dismembred, causeth the patient to haue no sense or feeling at all either of saw or launcer. The very swoke also of the said skin burning, doth the semblable. The blood of both Crocodiles mundifieth the eyes, and causeth them to see cleare which are anointed therewith, removing the fil-nes and dispatching the spots that impeach the same. The very body or flesh it selfe of the Crocodile, all saue head and feet, is good meat sodden, for those

A those who bee troubled with the Sciatica: the same cureth an old cough, especially the chin-cough in children; and assuageth the paine of the loins. The Crocodiles haue a certaine fat in them that is depilatorie; for no sooner is the hare rubbed therewith, but presently it sheddeth. The said fat or greafe preserueth those who be anointed therewith, from the danger of the Crocodiles, and is excellent good to bee melted and dropped into the wounds made by their bite. The Crocodiles heart wrapped within a lock of wooll which grew vpon a black sheep, & hath no other color medled therewith, so that the said sheep were the first lambe that the dam yeained, is said to driue away quartane agues.

To this discourse of Crocodiles, wee shall not doe amisse if we annex other beasts in some sort resembling them, and which be likewise straungers as well as they. And to begin with the Chamæleon, *Democritus* verily made so great reckoning of this beast, that hee compiled one entire booke expressly of it, and hath anatomized euery feuerall member thereof: and certes, I cannot chuse but take great pleasure therein, knowing as I do by that meanes how to decipher and deliuer abroad the loud lies of vaine Greekes. This Chamæleon for shape & bignesse, is much answerable to the Crocodile last named, differing onely in the curbing or crookednesse of the ridge-bone, and largenesse of the taile. There is not a creature in the world thought more fearefull than it; which is the reason of that mutability whereby it turneth into such varietie of colours: howbeit of exceeding great power against all the sorts of hawkes or birds of prey; for by report, let them fly and soare neuer so high ouer the Chamæleon, there is an attractive vertue that will fetch them downe, so as they shall fall vpon the Chamæleon and yeeld themselves willingly as a prey to be torne, mangled, and deuoured, by other beasts. *Democritus* telleth vs a tale, That if one burne the head and throat of the Chamæleon in a fire made of oken wood, there will immediately arise tempests of rainy stormes and thunder together: and the liuer will do as much (saith he) if it burne vpon the tiles of an house. As for all the other vertues which the said author ascribeth to the Chamæleon, because they smell of witch-craft, and I hold them meere lies, I will ouerpasse them all, vnlesse they be some few, for which he deserueth well to be laughed at, and would indeed be reprobued by no other means better: namely, That the right eie of this beast if it be pulled out of the head whiles it is aliue, taketh away the pearl, pin and web in man or womans eyes, so it be applied thereto with goats milk. The tongue likewise plucked forth quicke, secureth a woman from the danger of childbirth, if shee haue it bound to her body whiles shee is in trauell. If there be found by chance a Chamæleon in the house where a woman is in labor, she shall soon be deliuered in safety: but if such an one bee brought thither of purpose, the woman is sure to die. Also, the Chamæleons tongue pulled out of the head whiles the Chamæleon is quicke, promiseth good successe in iudiciall trials. The heart bound within black wooll of the first shearing, is a most soueraigne remedy against quartan agues. The right forefoot hanged fast to the left arm within the skin of a Hyæna, is singular against the perills and dangers by theeues and robbers; as also to skar away hobgoblins and night spirits. In like manner, whosoever carry about them the right pap of this beast, may bee assured against al fright and feare. But the left foot they vse to torrefie in an oven with the herb called also Chamæleon, and with some conuenient ointment or liquor to make in certaine troches, wherof if a man do carry any in a box of wood about him, he shal go inuisible, as sayth *Democritus*, if we were so wise as to beleue him: who affirmeth moreouer, That whosoever hath about him the right shoulder of the Chamæleon, shall bee able to ouerthrow his aduersarie at the barre, and to vanquish his enimie in the field: but first, hee must be sure to cast away and make riddance of the strings and finewes belonging thereto, and to tread them vnder foot. As for the left shoulder, I am ashamed to relate, vnto what monstrous spirits hee doth consecrate it; and namely how by the vertue thereof, a man may cause what dreames and fantasticall illusions hee listeth, yea, and make those whom hee will himselfe, to imagine the same apparitions. As also, how the right foot of the said beast driueth away all such strange visions; euen as the lethargie will goe away by the meanes of the left side of this beast, which lethargie was occasioned by the right. Touching head-ache, hee sayth plainly, that the next way to cure it, is to besprinkle and wet the same with wine, wherein either of the two sides were foked. Take the ashes (quoth hee) of the left thigh or foot, chuse you whether, incorporate the same with the milke of a Sow, and therewith anoint the feet, it will be an occasion, speedily to bring the gout vpon them. But of the Chamæleons gall, for the most part, folk are in manner verily persuaded, that

that it will rid the pin and web, the cataraft also of the eies, with three daies anointing; chafe away serpents if it be dropped into the fire; gather al wezils in a country together, only by throwing it into the water, and fetch off haire if the body be anointed therewith. It is a common saying also, That the liuer of this beast is of the same effect, in case it be brought into a liniment with the lights of a hedge land: tode-like as, that all amatorious drinks & loue-charms become void of none effect by the said liuer. As for those who be troubled in mind & giuen to melancholy, they find remedy, if out of this beasts skin they drink the iuice of the herb Chamæle. Furthermore, the guts, and the dung therein contained (and that is worthy to be noted, considering this beast liueth vpon no meat at all) being striked vpon the dore of an enemies house, together with the vrine of apes, cause him to be hated of all the world. The like wonders they report of the Chamæleons taile, namely, how it will stay any violent streame of riuer; stop the course and inundations of waters, and withall, bring asleep and mortifie serpents. The same being aromatized or spiced with Cedar and myrrh, and tied fast to a branch of the Date tree growing double or forked, wil diuide the waters that be smitten therewith, so as a man may see what fouer is in the bottome. And would God Democritus himselfe had met with one ctop of this branch, to haue made him hold in so many lies as he hath told, considering hee hath reported this quality of it among other, namely, to repress intemperat speech and inordinat walking of the tongue. But euident it is, that the only reason why Democritus faulted that way (being otherwise a man of a singular wit and wholly addicted to the good of mankind) was an excessiue and extraordinary zeale that he had to profit and benefit the whole world.

Much like to this kind is the Skink (whom some haue named the land Crocodile) saue that the skin is whiter & more fine. But the principal difference is this, for that the bristles or scales are couched so, as they tend from the taile vpward to the head; whereas in a crocodile the same are set contrary. The biggest of this sort, be those of India: the next be they which are brought out of Arabia; & transported they be to vs salted. The muffle & the feet giuen to drink in white wine, do inflame the heat of lust; but especially when they be mixt with Satoryon and Rocket seed, of each one dram, mingled with two of pepper; and when they be wrought into trosches weighing euery one a dram, one of them must be taken at once. But the very flesh of the Skinks fides, drunk to the quantity of 2 oboli, with myrrh and pepper in like proportion, are supposed to be more effectual for this purpose. The same (as Apelles reporteth) taken both before & also after meat, is a singular preseruatiue against inuenomed arrows. Besides, it is one of the ingredients which go to the noble compositions that be called Antidors. Howbeit, Sestus is of opinion and doth write, that if a man drink aboute one dram weight of it in a hemin of wine, it is enough to indanger his life. Moreover, the iuice or broth of the Skinks flesh boiled and taken with honny, is thought to keep downe the fish and to coole lust.

As touching the riuer-horse called Hippopotamus, there is a great affinity or kindred rather between him and the crocodile, in regard that they both do haunt the same riuer, and participate both of land & water. This beast (as I haue shew'd hertofore) deuised first the practise of phlebotomy or bloud-letting. Great store there be of them beyond the Seignory Saitica in Ægypt. Take the ashes of this beasts hide, and reduce them with water into a liniment, it is singular to cure the broad biles or apostemations called Pani. The greafe, and likewise the dung, is good against the cold fits of agues, if the patient receiue the perfume thereof. The teeth which grow on the left side of the mouth, do ease the tooth-ach, if so be the gums be scarified therewith: the skin taken from the left side of the forehead, laid vnto the share and kept fast thereto, staierth the prouocations to venery. The ashes of the same doth cause the hair to grow again thick in those places, where by discafe it is shed. Take of the generoires of this water horse, the poise of one dram, and drink it in water, it is a good counterpoison against the venome of serpents. As touching their bloud, it serueth painters in good stead.

The Onces be likewise taken for strange and forrein, and of all foure-footed beasts they haue the quickest eie and see best: by the testimony of all writers, there is in the Island Carpathos, a singular kind of ashes made of their houfs, burnt together with their hide; and they hold, that if men drink therof, they will become chaste, were they neuer sollicitious and libidinous before: again, let women cast the same vpon their nature or priuie parts, it will coole their appetite of mans companie; yea and kill the itch in any part of the body, if it be rubbed therewith. And the vrine of this beast helpeth the Strangurie, to wit, the infirmities of the bladder when the water passeth

A passeth by drop-meale: which propertie they being by a naturall instinct aware of, so soone as euier they haue pissed, do hide and couer the vrine with mould, which with their feet they raise just ouer it, as it is commonly reported. The same vrine is prescribed for a good remedy in the pain or griefe of the throat. Thus much may suffice as touching forrein beasts: returne therfore now I will to those in this part of our world; and first declare the vertues and properties medicinal which are found common in all liuing creatures, yet making choise of those that be singular about the rest.

CHAP. IX.

B ¶ The common and ordinary medicines drawne as well from wild beasts as those which betame of the same kind. The vse of milk in Physicke, with the obseruations belonging thereto. Also of Cheefe, Butyr, the greafe also and tallow of beasts.

And to begin with Milk: these points following are to be obserued: *Imprimis*, Each liuing creature liketh best and findeth most good by the own mothers milk. *Item*, For nourses to conceiue with child whiles they giue suck, is a most hurtful thing to their babes: for after such a time, their milk will thicken and cruddle in manner of a cheefe (a dangerous matter for sucking infants) who thereupon be called Colostrati. Now the beestings, called in Latine Colostris, is that thick and spongy milk which is drawne first from the teat after the birth of the young, be it in woman or beast. Also, there is no milk so nutritiue as that of a woman, what soeuer it be: next vnto which, goats milk is thought to nourish most: whereupon haply arose the fable that Poets fained, who deuised, that *Iupiter* was suckled therewith. Howbeit, letting womans milke aside, the sweetest of all other is that which the Camels giue: but asses milk is supposed to haue most vertue and efficacie in it. Moreover, this is to be noted, that the bigger bodied beasts be more glad-milch, and their milk sooner passeth away through the belly and is easier digested than that of the smaller kind. Goats milk agreeth best with the stomach; the reason is this, because they brouse rather than graze: but cow milk is held to be more aromaticall and medicinable; howbeit ewes milk is the pleasanter, & yeeldeth more nourishment; norwithstanding it be not so wholesome, for that it is more fatty and grosse than any other. And generally, the milke which any beast giueth in the Spring, is more waterish & fuller of whey than in summer: time: like as the milke of any young thing is thinner than other. But simply the best milk is that held to be, which sticketh to ones naile and wil not run off. Milk is least offensive and hurtfull when it is foddren, especially with little grauell stones among. Cow milk of all other is thought meetest for to make the body soluble. But what milk soeuer it be, lesse ventrosities it ingendreth boiled than raw. In sum, this property hath milk in general, To heal all inward vlcérations, but chiefly of the kidnies, bladder, guts, throat, & lungs: applied outwardly, after a spare diet or abstinence from meat, it cureth the itch of the skin; & any wheals & breakings forth occasioned by phlegmatick humors. As for the diet drink made of cow milk (which they vse in Arcadia for the phthisick or consumption of the lungs, for those that be giuen to colliquations and to weare away, as also in case of milking when the habit of the body receiue no benefit by food) I haue written already in my treatise of herbs. We shall find vpon record in the Chronicles, diuers who by drinking asses milk, haue bin deliuered from the goat, as wel of hands as feet. The Greek Physitians, besides the generall kinds of milk, haue made mention of one more, which is artificial, and they name it Schiston: the maner of making it is thus: Take what quantity you will of any milke, but let it be of a goat especially, if you can come by it, seeth the same in a new earthen pan neuer occupied before, with certaine branches of fig-tree, such as be fresh and new gathered; but you must put to euery hemine of milke, one cyath of mead or honied wine: while it doth seeth, keepe it from running ouer the vessell, by plunging into it a siluer goblet or boll full of cold water, and take heed that none thereof doe run out: after it is thoroughly foddren take it from the fire; for when it is cooled, you shall see how the parts therof wil diuide, and the whey depart from the milky substance. Some there be, who take the very whey againe, being now very strong of the mead or Must aboute sayd, and boile the same vntill a third part thereof be consumed, and then set it a cooling abroad in the open ayre: The vse heereof is very effectual and commodious, if for fure daies space together, the Patient

tient take at times, with some rest between, one hemine thereof in a day; but after the drinking of this whey, if some exercise by gestation be presently vsed, it will haue the better operation. This drinke is vsually giuen to those that be subiect vnto the falling sicknes, the passions of melancholy, and the palfie; also for the leprosie, elephanisie, and all gouts or discales of the ioynts. But to returne againe vnto milke: a clystire made therewith, is excellent good against any inward gnawings and frettings occasioned by the taking of some strong purgatiue medicines. Also in case of the dysentery, or hot exulceration of the bowels, the decoction of milke foddren together with the grauell stones about the sea-side, or with barley ptisan, is passing good to be clysterized; but for the corrosion of the guts, the milke of kine or ewes is better than any other. Also for the dysentery or bloody flux, the milke that is injected by way of clystire, would be fresh and newly drawne from the vdder: for the cholique, it ought to be ministred raw without any boiling: in like manner is it to be vsed raw, for the diseases of the matrice, the sting of serpents, the phthisicke the poisons of the Cantharides, Salamander, Buprestis, & Pityocampe. But to grow vnto more particulars, cow milke is singular for them who be poisoned with drinking Colchicon, hemlock, Dorycnium, or the venome of the Sea-hare. As for asse-milke, it is souveraign good for those who haue taken inwardly, any plaster ceruse, * brimstone, or quick siluer: also to loosen the belly that is costive in a feuer: moreover, if the throat be exulcerat within, it is an excellent thing to gargarize therewith. The same is a very good restorative for them to drink, who after great weaknes are vpon their recouerie and would gather strength againe: such also as the Greekes call Atrophos, who haue no feeling nor benefit of their meat: also it may be allowed in an ague, so that the patient haue no head-ach. It was held in old time for a notable secret in Physicke, to giue vnto children before meat one hemine of asses milke; or at the end of a meale, if they felt any fretting or gnawing occasioned by their meat: but for default hereof, they vsed goats milke in stead of the other. The whey of cow-milke is about all, souveraign for those that be troubled with straitnesse of breath, so as they cannot fetch their wind but sitting vpright, if there be put to it a little cresses: also it is good therewith to anoint bleared eies, adding to euery hemine of milke foure drams of Sesame beaten to powder. Goats milke cureth the hardnesse and swelling of the spleen, especially if the goats being kept from meat two daies, were the third day fed with Ivy; of which milke the patient must drink three daies together, and forbear all other food: and yet milke otherwhiles is contrary to those who be giuen to head-ach, subiect to the debility of the liuer, and the opilation of the spleen; to such as haue the ague, occasioned by some infirmite of the sinews; or be troubled with dizinesse, with the murre, poise, and stuffing in the head; with the cough also, and bleared eies, vnlesse it be giuen as a purgation. Sows milke is of al other most excellent for the inordinat desire to the stooles, and straining thereupon without doing any thing; for the bloody flux also, and the phthisicke or consumption of the lungs. And some Authors there be, who affirme, that it is most wholesome for a woman to drink in any of the afore-named infirmities.

Of Cheefe, and the sundry kinds thereof, I haue spoken sufficiently in that discourse wherein I treated of Vdders, and the feuerall parts or members of liuing creatures. And verily *Sestius* attributeth the same effects to the cheefe made of mares milke, as he doth to that which is gathered of cow-milke: that kind of cheefe he calleth Hippace. Generally, all cheefe vn salted (or) fresh and Greene, is good for the stomack. Old cheefe stoppeth a laske, abateth flesh and maketh the body lean, yea, & is * hurtfull to the stomack. In sum, all salt meats take down those that be corpulent, whereas soft and tender viands do feed and nourish the body. Fresh cheefe applied with hony, reduceth the skin which is black and blew by reason of stripes, to the fresh and naturall color againe. * Old cheefe maketh the body costive, and assuageth the torments of the belly, if it be made into trofches, and those foddren in some stypticke or austere wine, and afterwards fried in a pan again with hony, and so applied. There is a kind of rotten & putrified cheefe, which the Greekes call Sapon: the same being punned with salt and drie Seruoises, and so giuen in wine to drinke, cureth the flux of the belly caused by the infirmite of the stomack. The cheefe made of goats milke, stamped into a cataplasme and so applied, healeth the carbuncles engendred about the priuy parts; so doth the soure cheefe also with oxymell. The same reduced into a liniment with oile, taketh away all spots in the skin, if the body be therewith annointed in a stouph or hot-house.

As touching Butyr, it is made likewise of milke, and among barbarous nations is held for the daintiest

A daintiest meat, and which doth distinguish the * rich and better sort from the poore commons. The milk of kine yeeldeth most butyr, whereupon it tooke that name: but the fattest Butyr is made of Ewes milke. Also there is a kind of Butyr gathered of Ewes milke: but in Winter the milke ought to be heated: whereas in summer time there needs no more to do but to presse it forth from the milk after much shaking & often agitation in certain long vessels (called cherns) hauing in the very mouth, a little narrow hole to receiue aire and giue vent to that within, or els otherwise stopped close, and bound vp with some cloth. Now in the churning, they vse to put thereto a little water, to the end that the milke may soure the sooner. After this beating and working of the milk, the thickest part [which is Butyr] floteth aloft, & is naturally of an oily substance. The rest they vse to boile in certain pans, & that which swims about, they take from hath, the better it is esteemed to be: & in very truth, stale butyr that hath bin long kept, is mingled in many compositions: for by nature it is * astringent, emollient, incarnatiue, & mundificatiue. Moreover, there is another way to make Oxygala, namely, to put four milke into the fresh and sweet which you would haue to be soure, and this kind of chern milke, four-milke, or butter-milk, call it what you will, is thought to be most wholesome for the stomacke. But the properties and effects thereof I will set down in another place.

Among the medicinable parts which be common to all liuing creatures, their fat deserueth greatest commendation: but especially swines greafe, which in old time they vsed with great ceremony and religion. Certes, euery at this day there is a solemne ceremony, that the bride newly wedded, as she entrench into her husbands house, should strike the side posts therewith for good luck sake. Hogs lard or greafe may be kept two manner of waies, either with salt, or as it is of it selfe vn salted: and indeed, the older, the better. The * Greeks in their books called it Axungia, because it is a beast that feedeth much of herb roots. Which is the cause also that their dung is much vsed for a number of purposes. And therefore take my words thus, that I meane no other swine but such as * feed and root in the field: among which, the female, especially a guelt that neuer farrowed, is more effectual than a [tame] bore, barrow hogge, or a breeding sow. But the greafe and dung both, of the wild bore, is preferred before al. Swines greafe then is imploied to goute an ointment made of it, with goose greafe, bulls tallow, and the greasie sweat of wooll carolin, and pitch. Hogs greafe alone vn salted and simply as it is, healeth burns and scaldings, yea, though one were scorched and sendged with snow. It cureth also kided heels, if it be tempered with the ashes of burnt barley and gall nuts pulverized, of each a like quantity, and so reduced into a salve. Also it is good to anoint merigals therewith, namely, when one part of the body is fretted & chafed against another: likewise it refresheth those that be weary & tired with much trauell: for an old cough, seeth of fresh hogs greafe, that is sweet, the quantity of three ounces in as many cyaths of wine, putting hony thereto, and let the patient drinke it. Old seame also that is tried and kept vn salted, made into pills and taken inwardly, cureth the phthisicke & consumption of the lungs. For surely if it haue taken salt once, there is no vse therof, vnlesse it be to mundifie and cleanse, or els before the part is exulcerat. Some there be who ordaine to seeth hogges lard & hony, of each three ounces, in three cyaths of wine, for a medicine to cure the consumption of the lungs: with this charge, that the first day after the patient take a quantity of tarre in a rare egge, hauing his side, breast, and shoulders well swadled before and emplaistered with the said composition: for so forcible it is, that if a plaster thereof be but bound to the knees, the very sent thereof will come vp to the mouth, and cause a kind of saluation, whereby the patient shall seeme to spit it vp againe. The greafe of a young guelt which neuer had pigs, is a very proper medicine for women, to make their skin supple and enen without wrinkles. But any hoggs seame tempered with beastes tallow or suet, to the quantity of a third part, & some pitch, all melted together, & made somewhat hot, is souveraign for scabs. Swines greafe that is pure and vn salted, if it be put vp beneath in manner of a collyrie or pessary, giueth comfort to the infant within the mothers wombe, which otherwise would haue bin ready to slip forth before time, and proue an abortiue fruit. The same being tempered with cerusse or litharge of siluer, into a salve, and so applied, reduceth any skars to the naturall colour of the other skin about them. But with

* Either for that the rich only are allowed to feed vpon butyr, or because they haue plenty thereof, and raise a yearly revenue for that commodity, whereas the rest can spare none from their own bellies: * *Quis magis virus respicit?* Some would amend this place, and for *[magis]* put in *[minus]* in a contrary sense: but I suppose he writeth in regard of barbarous people who make more account of such rancie butyr: like as the vnicuall fish in these dyes. * *Natura eius adstringere, some reade digere, it is digestive.* * And yet it is a latine name of *axis & ungus* because they vse to grease axeltrees therewith. * Not those that be franked or kept in sties.

* *Suppletur:* I marvaile hereat, considering that brimston may be taken inwardly with safety. I suppose therefore that for *Spum*, which is *Solum maticon*, is deadly dwale, (a pestiferous and venomous herbe) he read *Spum*, brimstone, in the author whom he followed.

* *Inutiliores:* ex *Discolor*, & *asurper*.

* *Pecunia*.

brimstone it cureth the raggednesse of the nails: it staieth likewise the haire of the head which G
is giuen to shed: also if it be mixed with a fourth part of gall-nuts, it healeth the vlcers in a w-
mans head: but if it be well smoked, it helpeth to preferue the haire of the eie-lids. An ounce
weight thereof boiled in one hemine of old wine, vntill there be three ounces and no more of
the whole remaining, is giuen (an ounce at once) to those who are in a phrissick. Some appoint
a little hony to be put thereto. The same together with Quick-lime reduced into a liniment, is
singular for the biles and impostumes called Pani, as also for felons and the hard tumors of wo-
mens paps: it serueth besides to cure inward ruptures and convulsions, spasmes, crampes, and di-
flocations. Being applie d with white Ellebore, it healeth corns, agnells, fissures, chaps and callo-
sities. But incorporat with the powder of a saltars pot-shard, it heales the swelling impostumes
behind the ears, as also the wens called the Kings euil, being ordered in like manner. If the body H
be well rubbed and annointed therewith in the baine or hot-house, it taketh away all itch, red
pimples & wheals rising in the skin. Moreouer, prepared after another sort, to wit, with old oile
together with the stone called by the Greekes Sarcophagus, beaten to powder, adding thereto
the herb Cinquefoile stamped in wine either with Quicklime or with ashes, and so reduced in-
to a liniment, it is very good for those that be troubled with the gout. Thereof also is made a
singular plaster against inflammations, in this wise, Take of the said grease the weight of four-
score and five pound, of white litharge of siluer one hundred pound weight, mix them both to-
gether. As for Bores grease, if there be a liniment made of it and rosin, it is thought to be excel-
lent good for to anoint therewith vlcers that be corrosiue and giuen to spread farther. [In old
time men vsed it most about the axletrees of their carts and wagons, anointing them therewith, I
that the wheels might turn about more easily: whereupon it took the name Axungia.] And be-
ing employed in this maner, it serueth for a medicin to cure the vlcers of the feet & priuy mem-
bers seruing to generation, by reason that it is mixed and coloured with the rust of the yron in-
corporat into it. The antient Physitians made most account alwaies of the said hogs grease, by
it selfe, which was plucked from the kidnies, for after it was clesned from the strings, veins, and
skins, they washed it often and rubbed it well in rain water, which done, they sod it in new ear-
then pots, shifting it out of one into another many times; and beeing thus tried and clarified,
they kept it for their vse. Howbeit, all are agreed, that when it hath taken salt, it is a greater e-
molliuic, it heareth also, discusseth and resolueth more: yea, & heing washed in wine, it is much
better than otherwise.

As touching the fat or grease of a Wolfe, *Massurim* writeth, that in old time it was esteemed
before any other, & had the price above all. And he saith, that new wedded wiues were wont vp-
on their marriage day to anoint the side posts of their husbands houses therewith at their first en-
trance, to the end that no charms, witchcrafts and forceries might haue power to enter in: thus
much of grease. Look what vertue grease hath, the same, be sure, is the suet and tallow endued
with which commeth from those beasts that chew cud: and although it may be handled & dres-
sed otherwise, yet in force it is nothing inferior. But what tallow soeuer it be, the best way of pre-
paring it, is after the skins or veins be rid away, to wash it first either in sea water or salt brine,
and then within a while to stamp it in a mortar, eftsoons sprinkling it with sea-water: after which
it ought to be sodden in many waters, vntill it haue lost all the sauer & rank tast that it had: and
then at last by setting it in the Sun continually, it will be reduced to a perfect whitenesse: more-
ouer, this is to be noted, that the best suet is that which groweth about the kidnies. But say that
old tallow is called for, and to be vsed in any cure, it ought first to be melted, and then anon to
be well and often washed in fresh cold waters; which done, it must be liquified a second time,
casting and pouring thereupon eftsoons the best odoriferous wine that may be gotten: after
which maner they vse to seeth it again and again, and neuer giue ouer, vntill the rank smell and
sent thereof be clean gone: and verily many are of opinion, that particularly the fat of Buls, Li-
ons, Panthers, and Cammels ought thus to be ordered and prepared. As for the vses & proper-
ties of these Pomonades, I will treat thereof in conuenient place.

Concerning marrow, it is a thing common to all creatures, like as the fat abouesaid. All the M
kinds thereof are emolliuic and incarnatiue: they dry also & heat the body. The best marrow
simply is that of Deere, as well red as fallow: next to it in goodnesse is calues marrow: and then
in a third rank follow kids and goats marrow. Prepared they ought to be and dressed, before Au-
tumn, when they be new and fresh washed, and dried in the shadow. But afterwards they must be
be

* If they come
from beasts of
hot nature: for
to herwise they
be temperat.

A be melted again and run through a finer sercer or pressed through linnen strainers, which done,
they should be put vp in earthen pots, and set in a cold place.

But of all those things which are generally to be found in euery living creature, the gall is
that which is of greatest efficacy in operation: for power it hath naturally to heat, bite, cut, draw,
discusse and resolu. The gall of smaller beasts is taken to be more subtil and penetratiue than
that of the greater, and therefore supposed to be the better for to go into eie-salues. Buls gall is
thought to haue a speciall faculty aboue all others, principally in setting a golden colour vpon
skins, & brasse. What gall soeuer it be, in the preparation thereof for any vse, regard must be had,
that it be taken fresh and new, and then the orifice of the burse or bag wherein it is contained,
ought to be tied fast with a good round packthred; thus being bound vp close, it must be cast in-
to boiling water, and there remain halfe an hour, within a while after, so soon as it is dried (out
of the Sun) it ought to be preserved and kept in hony. The gal of horses only is vtterly condem-
ned, & reputed as a very poison: which is the cause that the arch-Flamin or principall sacrificer
is forbidden by law expressly to touch an horse, notwithstanding that in Rome it is an ordina-
ry thing to sacrifice euen horses publickly: and not their gall alone but also their blood, is cor-
rosiue by nature, and putrifiatiue. The blood of Mares milke likewise, vnlesse they be such as
were neuer couered nor bare soles, doth corrode: in which respect it is good to eat away scurfe
about the brims of fores and vlcers: and verily * Buls blood fresh running out of the body, is
reckoned no better than venom: and yet I must except *Agira*, a city in Achaia, where the priest-
esse of the goddesse * *Ops*, at what time as she is to prophesie and foretel things to come, vseth
by drinking buls blood to prepare her self before she goeth down into the vault or shrouds out
of which she deliuereth her prophesies: so forcible is that sympathy, wherof we speak so much,
that otherwhiles it is occasioned either by a religious opinion & deuotion in mens mindes,
or els by the nature of some place. *Drusus* sometimes a Tribune of the commons in Rome, drank
(as it is reported) Goats blood, to make himselfe look pale & * wan in the face, at what time as
he meant to charge *Capio* his enemy with giuing him poison. And verily, the blood of a buck
goat is so strong, that there is not any thing in the world wil either sharpen the edge of any yron
tools sooner, or harden the same when it is keen, than it. And as for the ruggednes of any blade,
it will take it away more effectually and polish it better than the very file. Considering then this
diuersity which is seen in the blood of beasts, I cannot write thereof in such generall termes as
of a thing indifferently common to euery one of them, but I must be forced to speak particular-
ly of their severall effects. In which regard I will treat respectiue of beasts, according as they
do yeeld remedies against this or that malady: and first as touching those which are aduerse vn-
to Serpents.

To begin then with Stags and Hinds: no man there is so ignorant but he knoweth, that they
plague serpents to the very death, for they pluck them forth of their holes, and eat them when
they haue don. And not only whiles they be aliue do they war against serpents with the breath
of their nostrils, but also when they be dead, euery member and piece of their body is contrary
vnto them. Burne a piece of an Harts horne, you shall see how the smoke and smell thereof will
chase away serpents, as I haue obserued hertofore: & yet they say that the perfume of the bones
which are about the throat of a Stag, hath a contrary property, to gather them together. Let a
man lay vnder him Stags skins in stead of a matrace, he shall sleep securely, without any feare
that serpents will approach to do him harm. The rennet in their maw, or the rede it selfe, if it be
drunk with vineger, is a soueraigne antidot against their venomous sting: and look what day one
do but handle it, he shall be sure and safe from any danger by them. The generoits of a Stagge
kept vntill they be dry, like as the pizzle also made into powder and taken in wine, is a singular
counterpoison, resisting the venome of Serpents. Euen as the rim of the paunch, which is called
in Latine Centipellio. Who soeuer haue about them so much as the tooth of an Hart, or be an-
nointed with the marrow or suet of a Stag, Buck, or Hind-calf, need not to feare any serpents, for
they will flie from them. But aboue all remedies, there is none like to the rennet of a Fawne or
Hind-calf, such a one especially as was ripped out of the dams belly, as I haue shewed hereto-
fore. If together with Deeres blood there be burned the herbe Dragon, bastard Mariaram, and
Orchanet, in a fire made with Lentisk wood, Serpents (by report) will gather round together in-
to an heap: take away the same blood and put into the fire the root of * *Pyrethrum*, they will
scatter asunder againe.

* *Theriacetes*,
ther with poi-
soned himself.
* *Agira* or
Terra the
earth.

Invidia, for
Linos.

* *Pelitory* of
Spain.

I read in Greek writers of a certain beast lesse than a Stag, but like in haire, called Ophion, G which folk say is wont to be found only in the Isle Sardinia: but I suppose that the race of them is vtterly extint and gone. Wherefore I will forbear to write of the medicinable properties reported by that beast.

CHAP. X.

¶ *The medicines (against Serpents) found in the wild Bore, in Goats, and wild horses. Also of other remedies which diuers beasts do yeeld against all diseases.*

THe brains of a wild Bore is highly commended against the sting and venome of serpents. H So is the bloud likewise. Semblably, is the liuer kept and preserued long with Rue, if the same be drunk in wine. In like manner the fat of the wild bore incorporat with hony & rosin. Also the liuer of a tame bore being clenfed from the filaments and strings therein, taken to the weight of foure oboli, or the very brains drunke in wine.

If a man burn the horn or haire of goats, the fume thereof driueth away serpents, as it is commonly said: and the ashes that come thereof either drunke inwardly or applied in a liniment without, are of great force against their stings. Moreover, a draught of Goats milke taken with the grape of the vine Taminia, or of their vrine drunk with squilliticke vineger. Furthermore, it is said, that cheefe made of Goats milke together with Origan vsed in a cataplasme, or their tallow incorporat with wax, worketh the like effect. A thousand medicines besides are reported to be drawn from this beast, as shall hereafter appeare: whereat for mine own part I much maruel, considering, it is commonly said that he is neuer out of a feuer. The wilde of this kinde do afford medicines more effectuell than the tame, and those as I haue said multiplie exceedingly. As for the Bucks or male Goats, they haue medicinable properties apart by themselves. And Democritus saith, That the Buck which the dam bare alone, is of greater efficacy than any other: who affirmeth moreover, that it is very good to anoint the place stung with serpents, with Goats dung sodden in vineger: also with the ashes of the said dung fresh made, and tempered with wine into a liniment. In sum, as many as hardly are cured of serpents stings, recouer thereof passing wel, if they ordinarily haunt Goat-pens and stals where they be kept. But such as would haue a more speedy & assured cure, take the panch cut out of a Goat newly killed, together with the dung found therein, & presently bind the same fast to the place affected, so soone as they be stung. Others perfume the flesh newly hurt, with kids hair burnt: & with the same smoke chase away serpents: they vse also to apply their skin newly flaid, to the wound: like as the flesh and dung of a horse that lieth out and feedeth abroad in the field: the rennet likewise of an Hare in vineger against the prick of a scorpion and the venomous tooth of an hardishrew. Moreover, it is said, that as many as rub and anoint their bodies with hares rennet, need not feare their stinging. If any be hurt by a scorpion, Goats dung helpeth them; but the better, if it be boiled in vineger: and in case one be poisoned with swallowing down those venomous flies called Buprestes, he shall find great help by eating lard and drinking the broth or decoction thereof. Furthermore, if a man round an asse in the eare, and say closely, That he is wounded by a scorpion, the pain and grievance thereof will immediatly passe away: yea and any venomous thing whatsoever, will flie from the fume of his lungs as it burneth: also it is good for those who are stung by scorpions, to be perfumed with the smoke of calues dung. If a man be wounded by the biting of a mad dog, some there be who cut round about the place to the very quick, laying thereto the raw flesh of a calfe, and then giue the patient to drink the broth of the said flesh boiled, or els hogs greafe stamped with quick-lime. Others highly praise the liuer of a buck Goat, affirming that if it be once applied, he shall not fall into that symptome of hydrophobie or fearing water, incident to those that be bitten with a mad dog. They commend also a liniment made of goats dung and wine or hony tempered together: like as the decoction of a grey or badger of a cuckow and a swallow, taken in drink. For the biting of other beasts, it is an ordinary practise to lay vnto the sore, dry cheefe made of goats milke, together with origan, but they giue direction to drink the same in some conuenient liquor: in case one be bitten by a mans tooth, they prescribe boeufe sodden and applied, howbeit the flesh of a calf is more effectual; with this charge, that this cataplasme be not remoued before the fift day. It is a common saying, that the muffle or snout

A snout of a Wolfe kept long dried, is a countercharm against all witchcraft and forcery; which is the reason that they vsually set it vpon gates of countrey farms. The same force the very skin is thought to haue which is flaid whole of it self, without any flesh, from the nape of the neck. And in truth, ouer and aboue the properties which I haue reported already of this beast, of such power and vertue it is, that if horses chance to tread in the tracks of a Wolfe, their feet will be immediatly benumbed and astonied. Also their lard is a remedy for those who are empoisoned by drinking quick-silver. Asses milke if it be drunke, doth dull and mortifie the force of any poison: but more particularly, if any haue taken Henbane, the viscus gum of the herb Chamæleon, Hemlock, the sea-Hare, the iuice of Carpathum, the poison Pharicum, or Dorycnium: also in case that cruddled milke haue done harm to any, for surely it is no better than poison, especially the first beestings, if it quail and cruddle in the stomacke. To conclude, Asses milke hath many other medicinable properties which we will speake of hereafter. But remember alwaies to vse this milke whiles it is fresh and new drawne out of the vdder, or els not long after, & then it must be warmed: for there is not any milke that sooner loseth the vertue. Moreover, the bones of an Asse well broken, bruised, and sodden, are giuen for a counterpoison against the venome of the sea-Hare. And for all these purposes before said, the milke and bones of the wild Asses be thought more effectual.

As touching wild horses, the Greeks haue written nothing, because throughout all Greece there are none of them to be scene. Howbeit, whatsoever medicinable vertues be attributed to horses, the same we must think more forcible in the wild than in others. Neither had the Greeks any experience of those Neat or Buffles called Vri and Bisontes: & yet the forest of India be full of wild buls & kine. Now by good reason and proportion, we are to think, that whatsoever cometh from them, is more auailable in Physicke, than from the tame of that kind. And verily, Cow milke is said to be a generall counterpoison, able to kill any of those venoms abouenamed. Ouer and besides, if the dangerous Lilly called Ephemerum Colchicum, be taken inwardly and setled in the stomack, or if the Greene flies Cantharides haue bin giuen in drink, the said milke will send vp all againe by vomit. And as for the Cantharides, the broth of Goats flesh will doe the like. Against those corrosiue poisons which kill by exulceration, the tallow of a calfe or any Boeufe, is a soueraigne medicine. As for the danger that cometh by drinking Horse-leaches, Butyr made of Cows milke, is a singular remedy, if it be taken with vineger, heat with a gad of Steele. The same alone without any other thing is a good counterpoison, for if oile be wanting, butter may serue the turn as well. Being ioined with hony, it healeth the sores occasioned by the biting of the Porceleets called Multipedæ. The broth made of their tripes, if it be drunke, is thought to kill any poison abouenamed: and besides, the Aconite and Hemlock: so doth the suet of a Calfe. Greene cheefe made of Goats milke, is good for them that haue drunk the venomous viscositie issuing out of the herb Chamæleon, called Ixias: but their milke is a remedy against the flies Cantharides and the venomous hearbe Ephemerum, if it be drunke with the grape Taminia. Goats bloud sodden together with the marrow, is taken against the poisons called Toxicæ; and kids bloud against the rest. The rennet found in the maw of a kid, hath a peculiar vertue to mortifie the venom of the foresaid viscus gum Ixias, as also of the herb it self, Chamæleon the white, yea, and Buls bloud: for which the rennet of an Hare with vineger, is a singular defensatiue. Against the venomous Raie or Puffen called Pastinaca Marina: the pricke or sting also of any sea-fish, the said rendles of an Hare, Kid, or Lamb, is a singular antidot, taken to the weight of one dram in wine. As for the rennet of an Hare, it is one of the ordinary ingredients that go to the composition of all preseruatiues and counterpoisons.

There is a kind of Butterflie that vseth to fly about candles as they are burning, which is reckoned among poisons. The aduersatiue remedy against it, is a Goats liuer: like as their gal is soueraigne against any venomous drinks made of the rusticke weazill.

CHAP. XI.

¶ *Receits and remedies for many kinds of maladies, taken from sundry beasts.*

BUt now will I returne to the remedies appropriate to diseases respectiue to the particular members of the body: and first to begin at the head: Bears greafe mixed with Ladanum, and that kind of Maidenhaire which is called Adiantum, retaineth the haire of the head which is

is giuen to fall off: also the places that be already bare, it replenisheth again with new haire: the same being incorporat with the fungous excrecence growing about the candle-snuffe, as also with the foot found sticking to the lockers of lamps and candlestickes, causeth the haire of the eie-lids to come thick. Mixed with wine, it is good against the skurfe and dandruffe among the hairs: for which purpose serueth the ashes of Harts-horn burnt and applied with wine: the same also preferueth the haire from breeding lice and nits. Likewise, Goats gall mixed with Fullers * earth and vineger, if the head be washed withall, so as the hairs may dry againe by little & little. Semblably, the gall of * Buck-goats tempered with Buls stale, killeth lice: now if the sayd gall be old, adde thereto brimstone, and it scoureth besides the dandruffe. It is thought, that the ashes of an asse pizzle will make the haire to grow thick, and preserue them from being grey, if the place be first shauen and well rubbed therewith, or anointed with the liniment made of it and oile, punned together in a leaden mortar. Likewise, the vrin of a yong Asse sole is supposed to thicken the haire: but there would be mixed some Spiknard with this washing lie, to rectifie the strong sent of the said vrin. Buls gall mixed with Egyptian Allum, serueth for a liniment to make the haire come againe, if the bald place be anointed therewith warm. As for the running skals of the head, there is not a better thing to cure them than Buls vrin: so doth stale chamber lie, if there be put to it Sowbread and brimstone: howbeit, Calues gall is of greater efficacy in this case, which if it be mingled with vineger, and the head rubbed therewith hot, riddeth nits also. Calues suet stamped with salt and reduced into a liniment, is singular good for the fores in the head. In these cases great account is made of Fox greafe, but especially of their gall and dung, tempered with an equall portion of Senvy and so brought into an ointment. Take the powder or ashes of Goats horn, but principally of the Bucke, put thereto sal-nitre and the seed of Tamarisk: incorporat all with butter and oile into an vnguent. It is wonderfull effectuell in keeping haire from shedding, so that the head be first shauen. Semblably, the ashes of a dogge burnt, & made into a liniment with oile, causeth the haire of the eie-brows to look black: goats milk by report taketh away nits. An ointment made with their dung & hony together, causeth the hair to grow thick, in places despoiled thereof by occasion of some diseases. Likewise the ashes of their house incorporat with pitch, keep the haire on which is about to shed.

As touching the pain of the head, the ashes of an Hare burnt, mixed with oile of Myrtles, al-lay the same: so doth the blown water which is left in the trough after that a boeufe or Asse hath done drinking, if the patient take a draught of it: and if we may beleue it, the genitall member of a he-Fox, worne about the head in maner of a wreath, cureth the head-ache. The ashes of a Harts horn brought into a liniment with vineger, oile rosat or oile of Ircos, hath the like effect. For watering eies there is a singular ointment made of boeufe tallow boiled together with oile. And the ashes of Harts horn serueth by way of iniunction to cure their asperity and roughnes: for which purpose the very tip and points of the knags are thought more effectuell. The excrements or dung of a Wolfe are good to anoint the eies for the catara&t. The same reduced to ashes and made into a liniment with the best Attick honey, is singular for those whose sight is dim and troubled, so that the eies be anointed therewith: in which case, Beares gall is excellent. The greafe of a wild Bore incorporat with oile rosat, is singular good for the bloody fals or chil-blanes called Epiny&tides.

The ashes of an Asses house mixed with Asses milke, taketh away the cicatrices of the eies, together with the films and pearls that trouble the sight, if they be annointed therewith. The marrow of a Beefe taken forth of the right leg before, punned with foot, and so incorporat together in manner of a liniment, rectifieth the disordered hairs, and other accidents of the eye-lids and corners of the eies: but for to haue an excellent foot, proper to make a salve for to beautifie the eies, it ought to be gathered from a wicke or snuffe made of Papyr reed, and burning with Sesame oile, in such sort as the same may be wiped away with a wing into a new earthen pot that neuer was vsed: & verily, this is a soueraigne foot to hinder the growth againe of haire after they be once plucked vp from the eie-browes. Of an Oxe gall tempered with the white of an egge, are made eie-salues reduced into rolles, which beeing dissolued in water, serue to annoint the eyes for foure daies together. Calues suet with Goose greafe and the iuice of Basill, is singular for all the accidents whereto the eie-lids be subiect. The marrow of a Calfe, incorporate with equall weight of wax and common oile or oile Rosat, together with an egge, maketh a soueraigne liniment for the Strian or any other hard swellings in the eie-lids. The violent rheums that

A that fall into the eies, are repressed and allaiued with a cataplasme of tender cheefe made of goats milke foked in hot water, and so laid too: and if there be any tumor or swelling risen by occasion of such a flux, it would be applied with hony: and both of them, as well with swelling as without, ought to be fomented with warme whey. But say the eies be inflamed and bleered onely, without any * extraordinary moisture appearing in them, the little muscles lying within the loins of a swine, roasted and afterwards punned to a cataplasme, and so applied, do quite rid away the same bleerednesse. It is commonly said, that goats be neuer troubled with bleered eies, nor yet roe-bucks or does, by reason of certain herbs which they feed vpon: and for that their sight is as good by night as day, therefore certain pills be ordained for the infirmities of the eies, made of their dung, inwrapped within wax, for to be swallowed at the change of the Moone. Many

B there be who are of opinion, that such as be dim-sighted and see little or nothing toward night (whom the Greeks call * Nyctalopes) are cured with goats blood, especially the male: also with the liuer of a goat sodden in some austere or hard wine. Some giue direction, to annoint the eies all ouer with the graue or dripping of the said liuer roasted, or else with the gall of a goat, and to feed of the said flesh, with this regard, That whiles the same is a seething, the eyes may receiue the vapor and steem thereof. And of this opinion they be, that the said medicine will do the better, if the goat be of a bright ruddy colour. Moreover, they would haue the eyes of the patient to be fomented with the vapor and fume that riseth from the decoction of the liuer whiles it boileth: but others there be, that prescribe to take the smoke thereof as it riseth or

C frieth. As for goats gall, there be that vse it many waies prepared; some with hony, against the fumosities that trouble and dim the eie-sight: others, with a third part of white Ellebore, for the pin and web: others againe with wine, against cicatrices, pearles, obscurity of sight, films and spots. But for the eie-lids, after the haire which pricked and offended the eie is pulled out, they applie it with the iuice of Beets, suffering the said liniment to dry vpon the eie-lids. If any tunicles of the eie be broken, they take womans milke to apply vnto it. In sum, for all infirmities of the eies whatsoever, they hold a goats gall which is old and hath bin long kept, to be more soueraigne and effectuell in operation than any other. Neither doe they reiect the dung of this beast, but repute a liniment made of it and honey, to be as good for waterie eyes, as the marrow for the paine thereof: likewise the lungs of an hare. And verily the gall of an hare (as it is commonly reported) incorporat with cuic or honey, and so applied, helpeth those that be dim-sighted. Furthermore they ordaine, to rub and annoint the eies against their inflammation and bleedrednesse, either with woolues greace, or else with swines marrow. And no maruell, for they say, That whosoeuer vse to carry about them in a bracelet a foxes tongue, shall neuer be troubled with foreeies.

For the pain & infirmities incident to the ears, there is not a better nor more excellent thing than the vrin of a wild bore saued and kept in a glasse: the gall likewise of a wild bore or sow, as also of a boeufe, mixt with Cicinie oile and oile Rosat, in equall quantity, is a singular remedy: but especially buls gall, dropped into the ears warm with the iuice of Porret, or els with hony, in case they be impostumat within and run with water. The same alone by it selfe warmed in the rind of a pomegranate, is excellent to take away the ranke and strong sauour of the eares: and if any part within be broken, the said gall instilled with womans milke, healeth it effectually. Some there be, who ordaine the eares to be well washed with it so prepared, for to remedy the difficulty and hardnesse of hearing: others vse to put into the eares wooll, washed before in hot water, and inclose therewith a peece of a serpents slough, with vineger: but if the deafenesse be the greater, they infuse the said gall into the eares, tempered with Myrrhe and Rue, and so made hot all together in the pill of a Pomegranate. Fat lard also is good for this purpose: and the greene dung of an Asse instilled with oile Rosat, provided alwaies, that all these medicines be warme when they be dropped into the eares. But the some that a horse doth froth, is better than all these: or the ashes of horse dung fresh made and burned, mixed with oile of Roses. In this case likewise are commended boeufe suet, goose greafe, and fresh butter. The vrin of a Goat or bull, yea and stale chamber-lie which fullers vse, made hot, and the vapour thereof receiued into the eare, at the narrow mouth or necke of a bottle, cureth the deafenesse thereof. Some put thereto a third part of vineger, and a quantitie of the pisse of a calfe which is yet a suckling and neuer tasted grasse: yea and others there be, which put thereto the dung mixed with the gall of the said calfe. The skin or slough also which snakes cast off, is very good to be applied vnto the

* Nyctalopes

* Nyctalopes, are they also called, who see better in the night than by day: according as the word importeth.

* Creta Cimolia
* Hircium.
* Somerende
* Scropanum.
* Swines gall.

ears, but they ought to be well chaufed and set into an heat before. Now are these medicines to be inclosed within wooll, and so applied. Moreouer, calues tallow, with Goofe greafe and the iuice of Basill, is good for the hearing: also calues marrow incorporat together with the poudre of cumin, and so powred into the ears. The slimy sperme of a bore which passeth from the flap of a sow after she is brimmed, if it may be gotten before it touch the ground, is singular for the paine of the ears. If the ears be crackt and hang flagging down, there is nothing better than glue made of calues pizzles, if the same be dissolued in water. For other impediments of the ears, the fat of foxes is very good. In like manner, Goats gall, with oile of Roles warme, or the iuice of leeks: or if there be any rupture within the ears, the said gall must be applied with breest-milke. For those who be hard of hearing, or haue their eares running and suppurate within, it is not amisse to drop into them a beasts gall, with the vrine of a shee-goat or of the male, it makes no matter. But these medicines howsoeuer they are to be vsed, are thought to be more effectual by far, in case they were put into a goats horne, and so hung in the smoke for the space of 20 dayes together. Also there is great commendation of the rennet of an hare, if there be one third part of a Roman denarius thereof, and halfe a denare weight of gum Sagapene, conincorporat in Aminean wine. As for the swelling impostumes behind the ears, bears greafe represseth and keepeth them downe, if there be a cerot made thereof, together with the equall weight of wax and bulls tallow: some there be who put Hypocistis thereto: and butter alone is good to annoint them with, so that they were fomented before with the decoction of Fenigreeke. Howbeit, of much better operation it would be, in case Nightshade were added thereto. The stones of a fox, bulls bloud also dried and reduced to powder, be commended in this case. Moreover, the vrin of a shee goat made warme, and so dropped into the ears: the dung likewise brought into a liniment with hogs greafe is very good.

hogs greafe is very good
To come now to the infirmities of the teeth: if they be loofe and shake in their sockets, the afhes of harts horn will fettle them firme and faft again: if they ake, the fame afhes are verie good to eafe the paine, whether the teeth be rubbed or wafhed therewith. But fome are of opinion, that the powder of the faid horne not burnt at all, is far better than the afhes in thefe cafes: howbeit, there be dentifrices made both of the powder and alfo of the afhes. Moreouer, the afhes of a wolues head is thought to be a foueraigne remedy for the pains incident to the teeth. Now it is well knowne, that among the excrements of a wolfe, there be many times bones found, which if they be hanged about the necke, arme, or other parts of the body, haue the fame effect. Likewise the crudled rendles of an hare infused into the eare, are fingular for the tooth-ache: the afhes alfo which come of the head burnt, is a pretty dentifrice for to rub the teeth withall: but if you put Nard thereto, it doth correct and palliat a finking breath. But fome there be, who chufe rather to mingle therewith, the afhes of mice and rats heads. There is found in the fide of a hares head a certaine * sharpe bone like vnto a needle, herewith, Phyficians giue counfel to fcarifie the teeth and let the gums bloud, for the tooth-ache. Take the bone of a beaft, fet it on fire, and when it is red hot, hold it clofe to the teeth that be loofe and ake withall, it wil fet them faft againe: the fame being reduced into afhes, and tempered with myrrhe, is a proper dentifrice to blaunch the teeth. The bonie fubftance likewife of hogs cleyes burnt and calcined, is of the fame force and operation: alfo the hollow hetchill or whirlebones of their hips, about which their hucklebones turne, worke the like effect if they be brought into afhes. Well knowne it is, that if the fame be conuighed downe by a horne into the throat of horkes and fuch like beafts, they will cure the wringing torments of the botts that fret and gnaw them in the bellies: and beeing burnt, they are fingular good to confirme and faften the teeth that bee loofe and doe shake. Alfo if the teeth be payned by occafion of fome blow giuen vnto them, Affes milke helpeth them: fo do the teeth of the faid beaft, if they be calcined and reduced into afhes: this infirmitie is helped alfo with the roughwert or corne of an horfe if it be infused into the eares with oile: this bunch is called by the Greekes Lichen: and it is not that which is named Hippomanes, whereof I haue no purpofe to fpeak (confidering it is a hurtful and venomous thing) but a certaine excrescence growing about Horfe knees, and about their houfes. Moreouer, in the heart of an Horfe there is found a bone, like for all the world to the eye-teeth of a dogge: this they hold to be a very foueraigne thing for to fcarifie the teeth when they ake. Alfo if one take a tooth out of one of the chawles of a dead horfe, it will eafe his owne that aketh. fo it be correspondent in place and number to that which is in paine. The sperme that paffeth from

A from the mature of a mare after she hath been couered by a stallion, if the wicke of a candle of lamp be therewith besmeared and set a burning, doth represent a most strange and monstrous sight of horse heads, as *Anaxilans* hath reported: euen so will that of the shee Asse, make a shew and apparition of Asse-heads. As for Hippomanes before named, it is so strong and forcible a venome, especially to incite and stirre vnto lust, that being vpon a time poured into the brazen mettall that was cast into the forme and similitude of a mare at Olympia, the stone-horses which came neare vnto the said image, were set into such a heat and so farre enraged, that they could not by any means be held back but they would needs couer the said brazen mare. Moreover, the glew that Carpenters and Ioyners vse, cureth the tooth-ache, if the same be boyled in water, and the teeth annointed therewith, but the same within a little while after must be removed, and the mouth presently washed with wine, wherein were sodden the pill of sweet pomegranats. Furthermore, if the teeth be ill affected, a collution made with goats milke, or buls gal, is thought to be a remedy of great efficacy. Finally, the ashes of the ankle bones of a female Goat whiles they be fresh and new, are counted an excellent dentifrice to whiten the teeth: so are the said bones of all other four-footed beafts, reared or nourished about a ferme house, if they be in like manner calcined: which I note but once for all, because I would not repeat one thing so often.

С Ч А Р. XII.

¶ Remedies obserued out of the bodies of beasts, for the accidents that befall to the visage, necke, and breast.

IT is thought generally, that the skin of the face may be made smooth and without wrinkles, tender and delicate, yea and be kept faire and white, with asses milke: for well knowne it is, that some dauntie dames (forsooth) there be, that keep and maintain daily in ordinary to the number juit of 500 the Asses for this purpose: according to the first example of the Emperesse *Poppaea*, wife to *Nero* the Emperour; for she vsed commonly to bath in Asses milke, and deuised whole baines to swim therewith: and euer as shee rode in progresse, or remooued from place to place, she had her curie of the Asses in her traine attending vpon her for no other intent, but only to wash and bath her body in their milke. As for the pimples and wheales that breake out in the face, if they be annointed with butter, they will weare away and be gone; and the sooner, if Ceruss or Spanish white be tempered therewith: but pure butter alone without any thing else mingled with it, killeth any fretting humors in the face that be corrosiue, if so be that presently after the inunction, barly meale be cast vpon the place. The gleane of a Cow hauing newly calued, taken whiles it is moist and so applied, is good for any vlcers of the visage. There is another receit made for this purpose, which may seeme but a fantastical and foolish thing, howbeit, for to satisfie and please in some sort, our fine dames that are desirous of such deuises, I am content to set downe: They say (forsooth) that the pasterne bones of a young white bulkin or steere, sodden for the space of 40 daies and nights together, vntill such time as they be resolued into the liquor, if the face be wet with a fine linnen cloth dipped in the said decoction, it causeth the skin to looke cleare and white, and without any riuels or wrinkles; but the said liniment must be kept all night to the face in manner of a maske. Moreouer, they say, that bulls sherne is an excellent complexion forsooth, to set a fresh rosat or vermillion colour in the ball of the cheeke: and the liniment Crocodilea, made of Crocodiles ordure, doth it no better: but then they giue order, that the face be washed with cold water both before and after this dressing. The dung of a calfe tempered and wrought in ones hand with oile & gum, is singular good to take away sun-burning, or any thing whatsoever whereby the colour is decayed and lost. As touching the vlcers and chaps appearing in the lips or face, the suet of a Calfe, or beasts tallow, incorporat with Goose grease and the iuice of Basil, maketh a singular pomado to amend and redresse those defects and imperfections. There is another composition also for this purpose, to wit, calues suet and deeres marrow mixed together, with the leaues of the white *Saint Mary* thistle, punned all together and reduced into a liniment. The same operation hath any marrow, though it be of a cow, and the broth of cow boeufe. The tectars and wild-fires breaking forth about the mouth and nose, there is not the like medicine againe to be found, to kill and

extinguish, than a glew made of a calues genetoirs, dissolved in vineger with quicke brimstone, G
and mingled together with a fig-tree branch; with this charge, that when it is fresh made, the
place affected be anointed twice a day therewith. This glew boiled in hony and vineger, is sin-
gular for the leprosie: which disease, the liuer also of a calfe applied hot, doth cure: like as goats
gall healeth the foule white leproy called Elephantiasis: but an oxe gall and sal-nitre mixed ther-
with taketh away the leproy and the filthy dandruffe appearing in the skin. The vrine of an asse
taken about the rising of the Dog-star, clenseth the face from all spots: so doth the gall as well
of an asse as a bull, vied alone by it selfe, after it hath bin well broken and tempered in water, and
the old skin of the face taken off; but then the patient must forbear to goe abroad either into
the Sun or wind. The like effect hath buls tallow or calues gall, incorporat with the seed of Sa-
uorie and the ashes of an Harts horne, if the same be burnt at the beginning of the Dog-daies. H
Asses greafe is a soueraigne thing to reduce vnto a fresh and natie colour, any skars or places
of the skin blemished with the stools remaining of ringworme, tetter, and leprosie. The gall of
a buck-goat incorporat with cheefe, sulphur vit, and the ashes of a sponge, and brought to the
consistence and thicknesse of honey, taketh away moles and pimples. Some make choise rather
of old galls which hath been long kept to vse in this case, mingling therewith hot brans to the
weight of one obolus, and four times as much of hony, but first the said spots and specks ought
to be plied well with chaufing and rubbing. The suet of the same Goat, tempered with Gith
or Nigella seed, Brimstone, and Floure-de-lys root, is verie effectuell for this purpose. Sem-
blably it is good for the chaps in the lips, if it be incorporate with Goofe greafe. Deeres mar-
row, rosin, and vnuencht lime. I finde it recorded in some Authors, that they who are giuen to
haue red pimples appearing in their face, are disabled for exercising any sacrifices belonging to
Art Magicke.

If the tonsils, throat, and windpipe, be either inflamed or exulcerat, they finde much ease by
cow milke, or goats milke, so the patient gargarize therewith warme as it commeth new from
the beaf, or otherwise made warme againe afterwards: but goats milke is the better of the twain,
if mallows be sodden therein, and a little salt. For blisters in the tongue and throat, the broth
made of tripes is very good to be gargarised: and more particularly, for the inflammations and
fores incident to the tonsils or almonds of the throat, the kidnies of a fox dried are singular, if
they be beaten into powder and reduced into a liniment with honey. The gall of a bull or goat
mixed with hony, serueth right well for the squinancy. The liuer of a grey or badger tempered K
with water and made in manner of a collution, rectifieth a strong and stinking breath: the can-
kers also and sores in the mouth, are healed with butyr. If a thorne, fish-bone, or any other such
thing sticke in the throat, take the dung of a cat, rub & annoint the place wel without-forth, the
same (by report) will thereupon come vp againe, or passe downward. As for the swelling wens
called the kings euill, either the gall of a bore doth scatter and dispatch; or else of a boeufe, if
the place affected be annointed therewith warme: for hares rendles tempered with wine and put
into a linnen cloth, is good to be applied vnto the same onely when they be fore and run. The
ashes also of the house both of horse and asse, incorporat with oile, water, and hot vrine, into a
liniment, & so applied, doth resolue them before they be broken. Of the same effect is the ashes L
of an Oxe or Cowes clec, applied vnto the place with water: as also their dung laid too very hot
with vineger. In like manner Goats sewet with quicke-lime, or their dung sodden in vineger
and the genetoirs of a fox. For this purpose, there is much good done with sope: an inuention
deuised by the French for to colour the haire of the head yellow: made it is of tallow and ashes:
the best of all other is that which they make of Beech-wood ashes and Goats suet; and the
same after two manner of waies; either thicke and hard, or else liquid and soft: but the one as
well as the other is verie much vsed in Germanie, and a great deale more indeed by men than
women.

The crickes and pains in the neck, are much assuaged by rubbing the nape of the neck with
butter or beares greafe: if the same be stark and stiffe, there is nothing in the world better than
beasts tallow, the which, together with oile, is very good for the kings euill before said. The
painfull *cramp that draweth a man back, so as he cannot bow his head forward (which conuul-
sion the Greeks name Opisthotonos) is much eased by infusing into the eares the vrine of a shee
goat, or with a liniment made with their dung and bulbe roots.

If the nailes be bruised, it is passing good to tie about them the gal of any beaf whatsoeuer. As

* Cupinus &
posterganeus,
capinus. Auto-
liano.

A As for the risings and sore excrescences about their roots, buls gall dissolved in hot water, and
so applied, easeth that griuance: some there be who put thereto brimstone and alumne, of each
a like weight.

Moreouer, it is said, that a wolues liuer taken in a draught of wine warme, cureth the cough:
also a bears gall mingled with hony: or the ashes made of the vppermost tips of a beasts horne:
likewise the froth or flauer of an horse mouth: and some say, that be the cough neuer so bad, it
will make an end thereof in three daies drinking. Semblably, the lights of a stag, together with
the throat dried in the smoke, and afterwards puluerized and brought into a loch or liquid ele-
ctuary, is good for the cough, to be taken ordinarily euery day: and for this purpose, the lungs
of the spitter in this kind of red deere, is thought to be more effectual. In case a man spit blood,

B the ashes of Harts is much commended: and the rendles of an hares maw taken in drinke to the
weight of a third part of a denier, with Terra Samia and Myrtle wine, cureth it perfectly. The
ashes likewise of Hares dung drunk in wine late in an euening, staith the cough which is busie
in the night season: also a perfume made with the hair of an hare, dischargeth the lungs of those
tough and viscous humors which stick vnto them, and are not otherwise easily remoued. The
purulent vlcers in brest and lungs, remaining after a pleurisie or peripneumony: the strong and
stinking breath also proceeding from the lights, are cured most effectually with an electuarie
made of butter, boiled with a like quantity of Attick hony, vntill it look reddish, if the patient
take thereof euery morning the measure of one ligula or spoonfull: some in stead of hony, chuse
rather to put thereto the * rosin of the Larch tree. If one do reach or cast vp blood, it is said, that

C cowes blood, taken moderately and with vineger, is of great force and efficacy to stay the same:
but to think that this is meant of buls blood, were great folly and rashnesse. Howbeit the strong
glew that is made of a buls skin, taken to the weight of three oboli in warm water, is soueraigne
for an old infirmity of reaching and fetching blood vpward.

* Which is
our Turpe-
tine.

CHAP. XIII.

¶ Receipts for the paine of stomacke and loines: also for the infir-
mities of the reins.

D IF there be an vlcere growne in the stomacke, drinke the milke of an Asse or Cow, and it will
heale it. Stew a peece of boeufe in wine and vineger among, the broth thereof is singular for
the gnawing and fretting in the stomacke: the ashes of an Harts horne is verie good to drie
vp rheumes and catarrhes, that haue taken a course thither. As for those that cast vp blood, the
fresh blood of a Kid taken to the quantity of three cyaths, with the like proportion of sharpe
vineger, and so drunke as hot as may be: the rendles also of the said Kid drunke with vineger, so
as there be two third parts of the vineger to one of the rundles, is a singular remedy for the said
infirmities.

For the grieve of the liuer, caused by obstructions, the liuer of a wolfe dried and taken in honi-
ed wine, is a proper receipt. So is the liuer of an Asse being dried and brought into powder with
two parts of stone parsley, and so incorporat with three nut kernels and hony, which composi-
tion, the patient must vse to eat. In which case, goats blood is highly commended, if it be prepa-
red so as it may be taken with meat.

Moreouer, it is said, that for them who be short winded, there is nothing so good as to drinke
the blood of wild horses. In the next place to it, great account is made of Asses milke warme, or
sodden together with bulbe roots, so that the patient drinke the whey that commeth thereof,
putting to three hemines of the blood one cyath of white garden cresses, infused first in water,
and then tempered with hony. The liuer also or lungs of a fox, taken in some grosse wine like
Alegant: or a bears gall in water, doth open the wind-pipes stuffed with fleame, and giueth free
liberty for the wind to go and come.

Furthermore, Beares greafe is exceeding good for the paines in the reins of the backe, yea and
for any place els that hath need of emolliuities, in case it be wel rubbed therewith. Also in these
cases, it is thought meet, to take the ashes either of a bores or sowes dung which hath bin long
made, and therewith to spice a cup of wine.

But before I proceed any farther, it is to be noted, that Magitians also haue medled with this
part of Physicke, and haue deuised strange medicines, drawne from the parts and members of
beasts.

beasts. And first of all they would make vs beleuee, that be a buck-goat neuer so much intraged, G do but stroke him by the beard, he will come into good order and be quiet againe: cut and lop the same off with a paire of sheers, he will not stray away nor depart to another flock. But to returne to the griefe of the reins: the Magitians adde to the foresaid medicine, goats dung, which being put into a linnen cloth, and the same well greased, they giue direction to hold in the hollow ball of the hand, as hot as may be indured; with this regard, that if the paine be in the left side, this medicine be made in the right hand, and so contrariwise. Moreover, the dung or treadinges which must serue this turn, they giue order, that it be gathered and taken vp with the point of a brassen needle or bodkin. Now the foresaid medicine must be held in the hand so long, vntill the patient perceiue that the vapor thereof do pierce as far as the loines: which done, they appoint afterwards to anoint the head with the iuice of leeks stamped: to rub the loines also with H the said dung tempered with hony: giuing counsell, to eat the stones also of an Hare, for to appease the said pain. As for those that be troubled with the Sciatica, they ordaine a cataplasme of oxe or cow dung, to be laid vpon the griued place, but it ought first to be lapt within some leaues, and so made hot in the embers. For the pain in the kidnies, they giue order to swallow downe the kidnies of an Hare raw, or at leastwise foddren, yet so, as the patient touch them not with his teeth.ouer and besides, they do say, that whosoever haue about them the ankle bone of an Hare, shall not be griued with the belly ach. As touching the paine of the spleene, the gall of a swine, be it Bore or Sow, taken in drink, or the ashes of Harts horn in vinegar, assuageth the same. But the most effectuall and soueraigne remedy of all other, is the milt of an Asse which hath bin long kept; for within one three daies the benefit thereof will be felt, and the patient I shall find ease. Also, for the disease of the spleen, they vse to giue in oxymell, the ordure of an asses sole, which first came from it after it was soled (and this dung the Syrians call Polea:) furthermore, for this infirmity the tongue of an horse which hath bin kept dry a long time, giuen in wine, is a present remedy: and this is a secret which *Cacilius Bion* reporteth that he learned of the Barbarians, while he conuersed among them. In like manner, a beasts milt whether it be cow or oxe, hath the same operation, if it be vsed in that manner: but say it be fresh and new taken out of the beast, then it ought to be either roasted or foddren, and so taken as meat. ouer and besides, take 20 heads of garlick, pun them all, and after they be bruised, put them into a beasts bladder with a sextar of vinegar; apply the same to the region of the spleene, it assuageth the pain. And if all be true that these Magitians say, the milt of a calfe is singular good for the malady of the spleen; but then it must be bought at the same price that the butcher setteth first vpon it, without hucking and beating it lower for to haue any thing abated; because in their opinion (so ceremonious they be) therein lieth a great matter. Now when it is thus bought, it would be slit through the length in two parts, & both pieces attached to the shirt of the patient; with this charge, That when he is about to put on his other cloths and make himselfe ready, he suffer the said pieces to drop down to his feet, and then take them vp again, and so dry them in the shadow: for in thus doing, the diseased spleen of the sick party will likewise fall and settle down, so as the patient shall sensibly perceiue himself to be deliuered of that infirmity. Finally, the lungs of a Fox dried in the ashes and so drunk in water, is good for the spleen: as also the milt of a kid, applied to the griued part accordingly. K

CHAP. XIII.

¶ For to stop a leak and knit the belly: for the flux proceeding from the imbecillitie of the stomacke: for the dysenterie or bloody flux: for the ventosities and inflation of the belly: for ruptures: the straining vpon the sege without doing any thing: for the wormes in the guts, and for the cholique.

TO stay the running out and extraordinary loosenesse of the belly, these medicines following be conuenient: *Imprimis*, the blood of a stag: *Item*, the ashes of an harts horne: the liuer of a bore fresh and without any salt at all, taken in wine: likewise the liuer of a sow roasted, or of a male goat foddren in one hemine of water: the crudled rennet in a hares maw, drunk in wine to the quantity of a cich-pease, or in water, in case the patient haue an ague. Some there be, who put gall nuts thereto, others content themselues with Hares blood alone foddren with milke. Also the ashes comming of horse dung drunke in water: the ashes of that part of an old bulls

A bulls horne which groweth next to the head, strewed into a draught of water. In like manner, Goats blood foddren vpon coles. A Goats skin or fell, haire and all boiled together, yeeldeth a decoction which is good in this case to be drunke.

Contrariwise, to loose the belly: the runnet found in a Colts maw: the blood of a femal goat, or els hermarrow or liuer, are thought conuenient laxatiues. *Item*, a plaster made with a wolues gal, together with the iuice of a wild Cucumber, and applied to the nauil. Also a draught either of Mares or Goats milke, taken with salt and hony. The gall of a she-Goat is good for this purpose, if it be taken with the iuice of Sowbread and a little Allum. But some there be who think it better to put thereto salnitre and water. Buls gall stamped and incorporat with Wormwood, made into a round ball, and so put vp in stead of a suppositorie, will giue a stoole, and make the body soluble.

Butter eaten in any great quantity, is good for those who haue a flux occasioned by the weakness of the stomack, and a dysenterie or bloody flux: so is a Cowes liuer: the ashes of an Harts horn, taken to the quantity of as much as three fingers will comprehend, in a draught of water: likewise the rennet of an Hare wrought in dough for to make bread: or if the patient do voyd blood withall, the same ought to be incorporat in parched Barley meale. The ashes of a Bores, Soves, or hares dung, is good to spice a warme potion of wine in these infirmities. Moreover, an ordinary Veale broth, as it is commonly giuen, is counted one of the remedies for these kind of fluxes abouenamed, whether they come of feeble stomacke or exulcerat guts. But if the patient drink Asses milk for this purpose, it will be the better, if hony be put thereto. Furthermore, the

C ashes of an Asse dung taken in wine, is as effectuall in operation as the rest, for both diseases. As also the first ordure of the Asse sole, which we termed Polea in the former chapter. The ciuds or rennet of an horse sole maw, called by some Hippace, is soueraigne for such lasks, yea, though the patient did shere blood vpon the stoole. The ashes also of horse dung, and the powder of Horse teeth is said to be singular: yea, and Calues milk foddren and so drunke. But if the flux do proue to be a dysentery, Physicians giue aduise to put thereto a little hony: if gripes come thick, they prescribe the ashes of Harts horn, or buls gall tempered with Cumin seed: and the fleshy substance of a Gourd, to be laid in maner of a cataplasme to the nauil. The tender cheefe curd of Cowes milke clysterized, is passing good both for the stomack flux, and also for the bloudie flux. In like sort the butter made of Cows milk taken to the quantity of foure hemins with two ounces of right Turpentine, either in the decoction of Mallows or oile of Roses. The suet of a Calfe, or beasts tallow, is likewise an ordinary remedy in these cases. But diuers there be who seeth the marrow forth as well of the one as the other, with meale, wax, and a little oile, yet so, as the broth be clear, that it may be supped off. Their marrow also is vsually incorporat in the paste whereof bread is made, and so taken with great successe. Goats milke foddren vntill the halfe be consumed, is reputed also a proper medicine. And in case the guts besides be wrung & griped; there would be put thereto a little vnpressed wine of the first running, called Mere-goutte: howbeit, some there be who think it sufficient for to appease the torments of the wombe, to drinke Hares rennet but once in a draught of wine warm: but the wiser sort and those that deale more warily, think it good withall to make a liniment of goats blood, incorporat with barley meale

E and rosin, & therewith to anoint the belly. And they also aduise their patients for any violent flux of the belly whatsoeuer, to apply thereto soft cheefe: but if the flux be from the stomack, or dysenterical, they prescribe old cheefe to be grated and giuen to the patient in wine, with this proportion, that in 3 cyaths of wine there be a third part of cheefe. Goats blood boiled with this marrow, is singular good for the dysentery or bloody flux. The liuer of a female goat roasted, is a soueraigne medicine for the fluxions of the stomack, but it were better if the male Goats liuer were taken in drinke after it hath bin foddren in some green and austere wine, or with oile of Myrtles reduced into a cataplasme, and so laid to the nauil: some seeth the same in water, from six sextars to one hemine, and put Rue thereto. Others roast the milt of a goat, male or female (& skilleth not) and vse it for the same purpose, or else they take the suet of a buck goat with bread that hath bin baked on the hath vnder the embers. But aboue all they hold, that the suet taken from the kidnies of a she goat, & so drunk alone by it selfe, is a singular remedy for these infirmities: but they inioin the patient presently therupon to drink a little cold water. Yet there be others who ordain the same suet to be boiled in water with fried barley groats, Cumin, Dill, and vinegar mixt all together. And they giue order to such as haue the stomack flux to anoint their bellies

The eight and twentieth Booke

bellies with Goats dung sodden with honey. And for both these fluxions, as well from the stomack as the vicer of the guts, they prescribe the rennet of a Kid to the quantity of a Beane for to be drunk in Myrtle wine: also a pudding made of the bloud thereof, which kind of meat we call in Latine * Sanguiculus. Moreouer for the dysenteric, they ordaine to iniekt into the guts by a clystire, Bulls glue resolued in hot water.

For any ventosities, Calues dung is holden to be singular good for to resolue them, if it be sodden in wine and the decoction thereof vsed. But if the guts be diseased any waies, the rennet of red Deere is very effectually, sodden with Lentils and Beets, and so eaten with meat. Likewise the ashes of the haire of an Hare boiled with hony. Also to drink Goats milk sodden with Mal-lowes and a little salt put thereto, is good for the said infirmities: but if the rendles be mixed therewith, the operation will be the better. Of the same vertue is Goats suet, taken in any warm supping, with this charge, that the Patient drinke presently vpon it cold water. Moreouer, it is said, that the ashes of a kids hanch hath a wonderfull vertue to soulder the rupture, whereby the guts are false downe. Likewise, Hares dung sodden with hony, and taken euery day to the quantity of a Beane, is a medicine for a rupture, so soueraigne, that it hath bin knowne to cure them who were past all hope of remedy. Much commended also is the decoction of a Goats head sodden, haire and all together.

The disease called Tenefmos, which is a desire to go often to the stoole without doing any thing, is cured by drinking of Asses and Cowes milke.

All the sort of worms bred in the guts, the powder of Harts horn taken in drink, doth expell. There be, as I said before, certaine bones found among the excrements of a Wolfe, which if they be hanged about the arme, do cure the Collicke; if this regard were had before, that they neuer touched the ground. As for Polea (whereof I made mention before) which is the first ordure of an Asses sole, it is singular good in that case. Likewise the powder of a Sows dung taken in the decoction of Rue sodden in water, with Cumin, is singular for the collicke. Finally, the ashes of a yong Harts horne while it is new come vp and tender, incorporat with the shell fishes of Barbary, stamped shels and all together, and so taken in a draught of wine, is highly commended for the passion of the cholicke.

CHAP. XV.

¶ For the dolorous torments of the bladder: for the stone and grauell. The remedies for the infirmities of the members, of generation, of the fundament and the share.

THE vrine of a Bore helpeth those who be tormented with the paine in the bladder, and the stone: yea, and the very bladder of the Bore eaten as meat, is singular good in that respect. Howbeit, if the one and the other were permitted to be consumed before in smoake, you should see a greater operation. Now the said bladder ought to be first sodden & then eaten: and if a woman be troubled with the said griefs, she is to chuse the bladder of a wild sow. There be found also in the liuers of Swine certain little stones, or els hard callosities like vnto stones, and white of colour, such as we may see daily in our tame swine: which being beaten into powder and drunk in wine, do expell the stone and grauell within our bodies. And verily the Bore feedeth himselfe so far forth charged with his own vrine, that vnlesse hee be deliuered thereof before, he is not able to flie before the chafe, but suffereth himselfe to be taken as if he were inclosed and fast bound within net and toile: and they say that his vrine doth burne him within. The kidnies of an Hare kept vntill they be dry, then made into powder and drunk in wine, doe thrust forth the stone. In the pestle and gammond both of a swine, there be certain ioint whirlobones as I haue said before, which if they be sodden, do yeeld a broth that is very good for the easie passage of vrine. Likewise, the reins of an Ass dried, pulverized, & giuen in pure wine of the grape, do cure the diseases of the bladder. The furots or rugged werts in horse legs & the corns about their hoofs called Lichenes, drunk either in simple wine or meath for the space of 40 daies together, do expell the stone and grauell engendred in the body: the ashes also of an horse house, taken in wine or water, is good in that case. In like maner Goats dung drunk in honied wine, is singular for those accidents; but especially that of the wilde Shamois is much more effectually. Moreouer, the ashes of Goats haire is thought to auaille much in these diseases.

As touching the botches and carbuncles which arise in the priue members; the brains and bloud of a Bore or Sow are thought to be proper remedies for them: and say there be some cancerous or corroding vlcers in those parts, the liuer of a Bore or swine burned in a fire made principally of Luniper wood, together with the Papyr reed and Arfenicke, doth heale the same: so doth the ashes of their dung. Or els take a Cow or Oxe gall and Egyptian Allum, wrought and incorporat together with * Myrrh, to the consistence of honey. Beets also sodden, yea, and their flesh boiled in wine and so applied as a cataplasme. In case they be running sores: the suet and marrow of a calfe boiled in wine, or Goats tallow tempered with hony and the iuice of the brier, are reputed to be soueraigne. Now if the said sores spread farther stil, it is said, that their dung incorporat with hony or vineger, doth much good: as also butter and nothing els simply applied to the grieved place. If the cods do swell, the suet of a calfe made into a liniment, with sal-nitre put thereto, keepeth downe the tumour. Of the same operation and effect is the dung also of a Calfe boiled in vineger.

Such as cannot hold their vrine, but that it passeth from them against their wiils, finde great helpe by eating of a Bores bladder roasted or broiled. And verily the ashes of a Bore or Sows cleyes, is singular good against the involuntary shedding of vrine, if a cup or drinke be spiced therewith for the patient to take. Likewise, the bladder of a Sow burnt and giuen to drink, serueth well in this infirmity: so doth the bladder of a kid, or the lungs in that manner vsed. Furthermore, it is said, That the brains of an Hare taken in wine, is singular to helpe this infirmity. Semblably, the stones of an Hare broiled and eaten, or the rennet in the Hares maw, incorporat with Goose grease in Barley groats. The kidnies besides of an Ass, reduced into powder and drunk in pure wine of the grape. The Magitians haue a deuise by themselves, and they affirme, That for to hold ones vrine, it is passing good to drink the ashes of a Bore pizzle in sweet wine: but they instruct the patient withall, to make water in a dogs kenel, and in so doing, to say these words, *I do this, because I would not pisse my bed as the dog doth his couch*. Thus much for the incontinency of vrine. Now if one be pent and would gladly void vrine, let him take the bladder of a Swine, so that it neuer touched the ground, and apply the same to the share, for it will prouoke the water to passe.

But to come vnto the diseases of the * seat: there is nothing so good for them as Bears gall, incorporat together with their grease. Some put thereto litharge of siluer and Frankincense: in which cases butter is very good, if with Goose grease and oile of Roses it be reduced into a liniment: the consistence or thickenesse of which composition, must be such as the grieved place will admit; namely, that it be gentle and smooth, so as there be no paine in the anointing. Also Bulls gal is a soueraigne medicine applied thereto vpon soft lint: for it wil quickly skin the chaps and clefts in the fundament. If that part be swelled, the suet of a Calfe is very good to anoint it therewith: but if the tumors appeare about the share, then there would be Rue iointed thereto: as for other infirmities incident to those parts, nothing better than Goats bloud, tempered with parched Barly meale. In like manner, for the hard knobs in the seat called Condylomata, Goats gall by it selfe is a speciall remedy: so is the gall of a Wolfe tempered in wine and so applied.

For the biles and impostumes rising in any place therabout, there is not a better medicine to scatter and dissolue them, than Bears bloud or Bulls bloud, dried first and so beaten to powder. But the soueraigne remedy of all others, is the stone which a wilde Ass is said to void with his vrine, at what time as he is killed in chafe: which stone as it cometh first forth of his body, seemeth very liquid and thin, but being shed once vpon the ground it groweth thicke and hard of it selfe. This stone tied to the twist or inward part of the thigh, is said to dispatch all collection of humors that might ingender biles and botches; or at leastwise so to resolue them, that they shall neuer impostumat and come to suppuration. This stone is very rare and hard to be found, for it is not in euery wild ass: but surely famous it is and much spoken of by reason of this medicinal property that it hath. Moreouer, the vrin of an Ass together with Nigella, otherwise called Gith, is singular good in these cases. Likewise a liniment made with the ashes of an horse house incorporat together with oile and water: so is the bloud of any horse, but especially of a stallion: the bloud also and gal of a Cow or Oxe. Their flesh moreouer, which we call boeuf, hath the same effect, if it be laid warme vnto the place. The ashes also of their cleies tempered with water and hony. The vrine of the Goats; the flesh of the male Goats boiled in water. In like manner their dung sodden with hony. Bears gall or the gall of a bore: last of all, the vrine of a Sow

applied

* Somer read
Murius, in
pickle or
brine.

* That is to
say, vnto blind
hemorrhoids,
chaps, fissures,
and swelling
biggs.

applied vnto the place with wooll. As touching the galls, which by ouermuch riding on horse-back be incident to the twist and the inner parts of the thigh, as euery man knoweth full well, which do burne and chaufe the skin in those parts; the some slime which a horse yeeldeth, as well from his mouth as his cullions, is foueraigne therefore, if the place be annointed therewith. It falleth out many times that there arise swellings in the very thare and groine, by occasion of some fores or vlcers in other parts of the body, for the repressing of which, there is a present remedy, namely, to take three horse hairs, and to tie them in as many knots, and so conuey them into the said vlcer which is the cause of such tumors.

CHAP. XVI.

¶ Proper remedies for the gout: the falling sicknesse: for such as be taken or stricken with a Plannet or dead palse: for the Iaudise, and fractures of bones.

A Cerot made of Beares greafe, Bulls tallow, and wax, of each an equall quantity, is singular good for the gout in the feet. And yet some there be who adde vnto them Hypoquists and Gall nuts. Others preferre a male Goats tallow, together with the dung of a female goat, Saffron, or Mustard seed, and the branches of Yvie stamped with Parietary also of the wall; or els the floures of the wilde Cucumber, reduced all into the forme of a cataplasme and so applied. In like manner, others vse a pulstesse made of beafts dung & the mother of vineger tempered together. Some magnifie & highly commend in this case the dung of a calfe, which hath not as yet tasted of grasie, or Bulls blood alone without any other thing: likewise a wolfe sodden in quicke till all the flesh be gon and nothing but bones remaining: or els a liue Wolfe sodden in oile till the said oile be gellied to the height or consistence of a cerot. Semblably, there is good account made of the tallow of a hee goat, with as much Parietary of the wall, and a third part of Senvy: as also of the ashes of Goats dung incorporat with hogs greafe: moreover, it is said, that the best thing that the patient can do for to haue ease of the Sciatica, is to endure the said dung as hot as possibly he can, vnder his great toes, till it be ready to burne them. For all other joint-gouts as well in feet as hands or elsewhere, the gall of a Beare is a foueraigne medicine: as also a Hares foot bound fast to the place affected. And some are of this opinion, that the gout of the feet will be assuaged, in case a man cut off the foot of a quick hare, & carrie it about him continually. As touching kibes, beares greafe cureth them: so it healeth also the chaps in the feet: but more effectual it is, in case there be allum put thereto: for which purpose Goats suet is commended: the pouder also of horse teeth: the gall of a bore or sow: the lights likewise of a swine, together with the fat laid to the place. Now if the feet be subatted, galled, and bruised in the sole by treading or stumbling against that which offendeth them, the same medicines be very good: but say they are benumbed and frozen with cold, the ashes of Hares haire bringeth them into order again. The lungs also of an Hare slit and skied & so laid too, is good for any bruise or contusion in the feet, or the ashes of the said lungs applied thereto. Contrariwise, if they be scorched, and burnt with the heat of the sun, they find a most foueraigne cure by the greafe of an asse: likewise by boeufe tallow & oile of roses mixed together. The corns, agnells, chaps, & callosities of the feet, the fresh dung of a bore or sow doth heal, if it be applied thereto in form of a cataplasme, and not remoued before the third day. Of the like efficacy are the ashes of a swines ankle bones, the lungs of a bore or sow, or of a stag. If one haue galled his feet by the fretting & stubbornnes of hard shoes, the vrin of an asse together with the mire that is made of the same vrin vpon the ground, doth heal if it be applied to the place: the corns or agnells find much ease by boeufe suet & the pouder of frankincense reduced into a liniment. But kibed heels are best healed with the ashes of lether burnt, especially if it were an old shoe. Again, if the feet haue bin wronged by strait shoes, take the ashes of a goats skin tempered with oile. As for the painfull swelled veins, named in Latin Varices, there is a foueraigne cataplasme to assuage their griefe, made with the ashes of calues dung boiled with lilly roots, & a little hony put thereto: the same is singular for all impostumat inflammations that tend to suppuration. This medicin is good also for the gout in the feet, & for all diseases of the ioints, if so be the said dung came from an ox calf: The ioints if they haue gotten a sprein by any rush, find remedy by the dung of bore or sow, if it be laid to hot in a linnen cloth. The dung also of a calf that yet sucks & neuer did eat grasie, hath the same effect: euen as goats dung boild with hony in vineger: the raggednes of nails haue a proper remedy of

A of calues dung, of goats treddles likewise, if there be red Arsnick or Orpinent mixed therewith. As touching werts, there is not a better thing to take them away than the ashes of Calues dung tempered with vineger, or the durt that is made by the vrin of an Asse.

B For those that be subiect to the falling euill, it is singular good to eat the genetours of a bear, or to drinke the stones of a Bore either out of Mares milk or plain water: also the vrin of a bore mingled with oxymell. But more effectually in operation is that vrin which hath bin suffered to dry as it lieth in the own bladder. The stones likewise of a sow which are taken from her when she is spaiued, if they be kept vntill they be dried, and so brought into pouder, are excellent in this case taken in the milk of a sow, with this charge, that the patient abstain from wine for certain daies together, both before and after the receiuing of this medicine. For this infirmity also they vse to giue the lungs of a hare poudered or kept in salt, with a third part of frankincense in white wine for 30 daies together. Also the rennet or cruds found in the maw. The braines of an Asse first dried in the smoke * within certain leaues, drunk to the weight of halfe an ounce euery day in honied water; or the ashes of the said beafts house, taken to the quantity of 2 spoonfulls daily for a months space, are appropriat medicines for this malady. In like manner, their stones preferred dry and reduced into pouder, serue to spice their drink, whether it be the milk of Asses (which is the best) or shere water: the pellicle wherein the yong sole was lapped in the dams womb, specially if it were a male that was soled, is of great force to withstand this disease, if the patient do but smell thereto when the fit is comming. Some giue counsell to eat the heart of a black he asse, together with bread: but in any wise it must be done abroad in the open aire, and when the moon is but one or two days old at the most. Others prescribe to eat the flesh; & there be againe who aduise to drinke their blood dilaid with water for 40 daies together. Some take horse stale, mingling it with smiths water fresh out of the forge for the said purpose: & with the said drink cure those that be lunatick & mad at certain seasons. Mares milk is ordinarily giuen with good successe to those that be troubled with the falling euill: so are the rugged * werts growing vpon horse legs to be drunk in oxymell. And to this effect the Magitians would haue a dish of meat made with goats flesh roasted against a funeral fire, where some dead corps is burnt: who ordain besides their tallow and bulls gall, of each an equall weight, to be sodden, and then to be put vp again into the bladder or bursle of the said gall, that it touch not the ground in any case; and being thus prepared, the patient forsooth must drinke it in water standing vpon the dore sill, and vnder the very lintell thereof. Now, if you would know whether a man be subiect to this sickness or no, do but burn before him either a Goats or Stagges horne, the very smoke or fume thereof will bring the fit vpon him, if he be tainted therewith.

Concerning those that be suddenly taken with a dead palse of the one side of their body, it is said that the vrin of an Asse sole incorporat with Spikenard into the form of a liniment, is very good for them, if the inunition therewith be vsed.

E For the Iaudise, Harts horn burnt and reduced into ashes, is a very proper medicine: so is the blood of an asse sole drunk in wine. Likewise the * dung of an asses sole which came first from it after it was soled, giuen to the quantity of a bean in a draught of wine, cureth the Iaudise within three daies. The same operation and effect there is in the first ordure that a colt maketh after it is come into the world.

If any bone be broken or brused, there is not a more present remedy than the ashes of a cheek either of a wild bore or tame swine. In like maner, their lard sodden & tied round about the broken bone, doth consolida and fonder it again wondrous soon. And verily if there be any ribs in the side broken, the foueraigne and only remedy commended, is goats dung tempered with old wine, for it openeth, draweth, and healeth the fracture thoroughly.

F As touching feuers, the feeding vpon the venison of red Deere driueth them all away, as I haue before shewed: but more particularly, if it be any of these Typicke and Periodicall agues, which be intermittent and return by fits, there is not a better thing, if we may beleue Magitians, than to take the right eie of a wolfe, salt it, and so tie it about the necke or hang it fast to any part of the patient. Of these feuers, there is one called a quotidian, which the Greeks name Amphemerinos; & from it (by their saying) a man shal be thoroughly rid, in case he let an asse blood in the eare vein, and drinke three drops thereof iust in 3 hemines of water. But against the Quartan ague, the Magitians giue order to wear about the neck or hanging to the arme cats dung, together with the claw or toe of a * scriche Owle, but so as they may not fall off nor be remoued

* In some forme
remedy sayes, in
the baines or
foures.

* Lichenes, some
take them for
the Malanders

* Called before
foles.

* Bubon
moued

The eight and twentieth Booke

The eight and twentieth Booke

moued before seuen fits be past. Now tell me (I pray you) what was he that could find out this secret first? Gladly would I learne what reason there is in this mixture, and why an owles claw or toe was chosen about all other for this purpose? Certes, there be some of them yet more modest than their fellows: and they haue giuen out, That the liuer of a Cat killed in the wane of the Moone, laid vp in powder with salt, is to be giuen in a draught of wine a little before the access or fit of a Quartan. And these magicians haue yet another pretty receipt against such agues: for they take the ashes of a Cow or Oxes mucke, and sprinkle it wel with the vrin of a yong boy; wherewith they anoint the toes of the patient: but to his hands or arms they bind the heart of an Hare; which done, they ordain also to giue him before the fit, the Hares rennet in a draught of drinke. To conclude, they say, that a fresh greene cheefe made of Goats milke, out of which the whey hath bin well pressed, is singular to be giuen in hony.

CHAP. XVII.

¶ Proper remedies against the trouble of the braine by reason of Melancholy, against the leibargie, dropicks, shingles, and S. Anthonies fire. Also for the paine of the sinewes.

THe dung of a Calfe sodden in wine, is an excellent remedy for those who are given to melancholy. For to raise and awaken them that are in a lethargie, there is not a better thing than the rough werts growing upon an Asles leg, if the same be tempered with vinegar into a liniment, and the nostrills anointed therewith: also the perfume of the horne or haire of a Goat: yea, and a bores liuer: which is the cause that it is given ordinarily to those that haue the drowie disease, and be alwaies sleepe.

For the phthysicke, the liuer of a wolfe foddren in wine is very good: likewise the lard of a lean running sow feeding only vpon grasse: as also Asse flesh foddren and eaten with the broth: and verily in Achaia this is the principall course they take for the cure of that diseafe. Moreouer, it is said, that to receiue through a pipe or reed the smoke of the dry dung made by Cow or Oxe lying forth and feeding only vpon green grasse, is very wholsome for those that haue the phthysicke or consumption of the lungs. Also there be who calcine the tips of Boeufs horns, & taking the measure of two spoonfulls of the ashes, incorporat the same with hony, make it vp into pills, and so swallow them down for the said malady. Many there are who affirm, That the phthysicke and cough be cured by eating a kind of portage made with Frumenty corne and goats suet: and they hold opinion, That the said suet taken fresh and sweet and so dissolved in mead, with this proportion, that to every cyath of the mead there be put an ounce of suet, and that order be taken to mingle them thoroughly well, with a branch or sprig of Rue among, is a foueraigne medicine for those infirmities. There is one writer of good credit & authority, who vpon his certain knowledge doth auouch, That there was one so far gone in a phthysicke, that he was giuen ouer by the Physitians, & yet he recovered by drinking the suet of a Shamois or wild goat, together with milk, of each one cyath at a time. Others say, that much good hath bin found by drinking in sweet cuit, the ashes of swines dung, as also by the lungs of a red Deer, especially the Spitter of that kind, dried in the smoke, reduced into pouder and so drunke in wine.

In case of the dropsie, the vrin of a Bore found in his bladder given to the patient in drink by little and little, helpeth very much: but of greater efficacy it is, if the same be permitted to drie within the bladder. Furthermore, the ashes of Harts dung, & namely of that Deer which is called the Spitter: as also of Neats dung, such I mean as go abroad and feed with the heard (& that they call by a peculiar name * Bolbiton) is a souveraign remedy for the dropsie. Mary, if the patient be a woman, there must be choise made of cow dung; but if a man, the dung of the other sex is to be taken: and this I may tel you is such a secret mytery, that the Magitians would not have to be revealed & made known. Many other medicines there be for the dropsie, to wit, the dung of a Bull calve vsed in a liniment: the ashes of a calves dung drunk in wine, with an equall quantity of the wild parsnep seed: goats blood together with the marrow, eaten with meat: it is thought that this blood will worke the better, if it be taken from the male Goats; provided alwaies, that they feed vpon the Lentisk tree, and then no doubt it will do the deed surely.

As touching *S. Antonies* fire, the shingles, &c. the meanes to quench the flame, is to annoint the place with Bears greafe, and especially the fat that is found about the kidnies: also with the greene

A greene dung of a calfe, cow, or ox. Some vse hard cheefe made of goats milke and porret together: also the fine scrapings of a fags skin fetcht off with a pumish stone & brought into powder, and so applied with vinegar. For the rednesse of the skin with much itching, the fume of an horse mouth, or the ashes of his house, is a singular medicine. If there be any wheals or small pox proceeding of fleam, do annoy the skin, no better thing than a liniment made of asse-dung ashes incorporat in butyr: say these wheals or pimples appear blackish and swert by reason of melancholy, dry cheefe made of goats milke brought into an ointment with hony and vineger, is good to rub the body withall in a bain or hot house, without any vse of oile at all. For blisters and angry meazils, the ashes of swines dung are thought to be very meet: as also the ashes of harts horn, so that the place be rubbed with them and water together. If there be any dislocation or bone out of ioint, the green dung of a bore or sow is good to be applied: so is that of a calfe: the fume frothing from a bore, laid to the place with vineger: and goats dung with hony.

There is not a better thing to bring down any swelling, than a cataplaine of raw beefe: and as for any hard tumors, swines dung made hot and dried in an earthen pot, sheard, or upon a tile, is excellent to discusse and resolute them: the greafe of a wolfe is exceeding good to break any impostumation that is grown to ripenesse: so is neats dung made hot vnder the embers: or goats treddles sodden in wine or vinegar: as touching fellons & such like apostumations, boeuf tallow with salt is much commended for to resolute them: & if the place be much pained, it were good to dip the said tallow in oile, and to melt the same without any salt: and in like manner is goats C seuet to be vsed. For a burn or scald, there is a proper salve made of bears greafe and lilly roots: for which purpose, the dung of bore or fow that hath bin long kept, is very good: so is the ashes of their bristles (such as pargettars whiting brushes be made of) wrought and incorporate with greafe: also the ashes of a beatts ankle or pastern bone tempered with wax and the marrow either of a deere or bul: like as the dung of an hare. And verily, goats treddles are so accomodate to this cure, that (by report) they will heal a burn without any skar at all. The most excellent glew is made of the ears and pizzles of bulls: and there is not a better thing in the world than it, for to heal any place burnt or scalded, but nothing is so much sophisticate, what with other old skins and hides, and what with old shoes and such like leather, boiled again and made into glew. The most fast and strongest glue which a man may trust vnto, is made at Rhodes, and that is it, which D painters & phyficians most vs: the whiter that the same is, the better is it esteemed: that which looketh black, and is hard withall and brittle like wood, is reiected.

It is thought, that for the pain of the sinewes, goats dung boiled in wine with honey is souveraigne, yea though a nerue began to putrifie: convulsions, crampes, and sprenes of nerues upon some violent stroke, are cured with bores dung gatherd in the spring & so dried. After the same manner, such as be overstrained and plucked with the draught of any charriot, or wounded with the wheels going over them; and generally, howsoever the blood be fetled black vnder the skin by contusion or bruise, if the places be anointed with the said dung, though it were greene and fresh, much ease and help in eueth therupon: howbeit, some think that it were better to seeth the dung first in vineger; and others reduce the same being drie into powder, and promise them that be either bursten, wounded and bruised inwardly, or haue bin ouerthrowne and faine from on high if they drink it in vineger, that they shall haue help thereby. But the better, and those that loue not to make the greatest boast of their medicines, vse the ashes thereof with water. And verily it is said, that the Emperor *Nerow* was wont in this kind of drink to take great pleasure, and with it to refresh himselfe, when his purpose was by that means to win a name, and approue himselfe a doubtrie wight, in running with coaches in the great cirque or shew place. To conclude, next to the dung of a bore, is commended that of a fow or any other hog, and thought to be in a second place of operation.

CHAP. XVIII.

¶ Medicines to staunch blood : to heale ulcers, cancerous sores, and the wild scab : also what medicines they be that draw thorns, prickles, or what faeuer sticketh within the flesh. Finally, proper receipts to cicatrize and skin a wound or sore.

THe rennet of any Deere or a Hare, vsed in vinegar, stancheth bloud. The ashes also of the haire of an hare: likewise of Asse dung: yea and the very ashes of their haire made into a liniment with any conuenient liquor, hath the same effect: but if you would haue it work
Ggg more

remedie, to the end, that afterward they might haue help again by the same in like cases) & ther-
upon (as our countryman *Varro* is persuaded) after that the said temple was burned, hee profes-
sed that course of Physick which is called * Clinice. Whereby Physitians found such sweetnes,
that afterwards there was no measure nor end of fees: inso much, as *Prodicus*, a discipule of *Hippo-
crates*, and borne in *Silymbria*, erecting that kind of practise in Physicke, which is called * *Iatra-
liptice*, opened by that meanes the way to enrich euen those, who vnder Physitians were employ-
ed in rubbing and anointing mens bodies, yea, and brought gaine to other base and seruile mi-
nisters attending vpon their cures. After them came *Chrysippus* in place: who through his much
babble and prating, wherewith he was well furnished, altered the Theoricke and speculative
Physicke of * *Hippocrates* and *Prodicus*, with all their principles: whom succeeded *Erasistratus*,
Aristotles sisters son, and he chaunged also many of *Chrysippus* his rules and receits, notwithstanding
he was a scholler of his and brought vp vnder him. This *Erasistratus* for curing king *Antiochus*,
receiued of his sonne *Ptolemaus* (king after him) one hundred talents: which to beginne
withall, I note by the way, that you may see how (euen in those daies) Physitians were well re-
warded for their pains and skill. But in proceesse of time one *Acro*, a citizen of *Agrigentum* in
Sicilie, much commended by the authority of *Empedocles* the famous naturall Philosopher, be-
gan in that Island to institute another faction and sect of Physitians, who grounding altogether
their worke and operation vpon experience, called themselues Empiriques. Thus there beeing
diuers schooles of Physick, the professors in euery one of them entred into contention and vari-
ance, some siding this way and others taking the contrary; vntill at length *Herophilus* entred the
stage, who reprobued and condemned as well the one as the other: and reduced the pulses or bea-
ting of the arteries vnto the times and measures in Musicke, according to the degrees of euery
age. Long after it was not, but this Philosophicall subtilty of his sect was giuen ouer and aban-
doned, because the profession thereof required of necessitie so much learning and literature: and
albeit that *Aesclepiades* when he began to profess Physick, brought with him an alteration of all
that was before, yet (as I haue already related) his Physick continued no longer than others: for
Themison (a scholler and auditor of his) so soon as euer his master was departed this life, altered
quite all that hee wrote and nored at first from his mouth, and betooke himselfe to a new pra-
ctise, according to his owne head and fantasie. But what became of it? Surely within a while af-
ter, *Antonius Musa*, Physitian to *Augustus* the Emperour, put downe that which *Themison* had set
vp: and that by the authority and warrant of the said Emperour his patient, whom he deliuered
from a dangerous disease, * vnto directly a contrary cure to that which had bin practised be-
foretime. Many other Physitians there were of great name, whom I ouerpasse: but the princi-
pall and most renowned of them all, were the *Cassij*, *Calpitanij*, *Aruntij*, *Albuij*, and *Rubrij*, who in
their time might dispend in fees allowed them out of the Princes and Emperours Exchequer,
vnder whom they liued, 250000 Sesterces apeece, by the yeare. And as for *Q. Sertinius* the
Physitian, he complained of the Emperours whom hee serued, and challenged them for that hee
had no greater reuenues than 50000 Sesterces by the yeare from them: whereas he was able
to make account, that by his practise in the city hee gained yearely 600000 Sesterces, being re-
tained Physitian to certain houses, which he could readily name at his fingers ends. A brother
of his receiued no lesse in fees from *Claudius Caesar* the emperor. And albeit these brethren spent
a great part of their wealth & substance in building sumptuously at Naples, wherby they adorn-
ed and beautified that city, yet they left behind them in goods vnto their heires after them, to
the worth of * thirty millions; which was such an estate, that vnlesse it were *Aruntius* only, there
was neuer any known before those daies to haue died so wealthy. After these men, there arose
one *Vettius Valens*, who ouer & besides his profession of Physicke and Rhetorick, which hee ear-
nestly followed, grew into a greater name, by reason of the familiar acquaintance hee had with
Messalina the Empreffe, wife to *Claudius Caesar*. This minion of hers taking his time, and seeing
how mighty he was, followed his fortunes and erected a new sect and practise of Physicke. But
within the compasse of that age, and namely in the daies of the Emperour *Nero*, in commeth
* *Thessalus*, who woon the name from all the Physitians of former times, and ouerthrew the pre-
cepts and doctrine of his predecessors, raging and faring as if he were mad, in open inuectiues
against all the professors of Physicke that euer were: and with what spirit, policie, wit, and dex-
terity he performed this, it may be gathered sufficiently by this one argument (if there were no
more) that vpon his sepulchre or tomb, which remaineth at this day to be seen in the high way

or

A or causey Appia, he triumphed ouer them all, and intituled himself by the name of * *Iatronices*.
And in very truth, neuer marched there player to the stage, or coachdriuer to the publick cirque
for to run a race, better attended and with a greater traine of followers, than hee when he passed
along the streets: and yet *Crimas* of Marfiles put him down and outwent him far in credit and au-
thoritie: and that by the means of a twofold skill and knowledge wherein he was seen: For be-
sides his ordinary profession of Physicke, he shewed himselfe more warie and ceremonious in
all his practise than any other before him, by reason of the deepe insight that he had in the Ma-
thematicks; obseruing the course of the starrs, chusing good daies and houres, and going euer
by his Almanakes and Ephemerides, whensoever he ministred vnto his patients, inso much, as
in their very diet he was so precise, that he would not allow them to eat or drink but with great
B regard of times and seasons. Whereby he grew to such wealth, that of late he bequeathed by his
last will & testament * ten millions of Sesterces vnto his natie citie Marfile toward the fortifi-
cations therof, besides the walls that he caused to be built and emmanteled about other townes,
which cost him little vnder the foresaid summe. Whiles this *Crimas*, with such other as himselfe,
seemed with their astrologie to command the course of the destinies, and to haue mens liues at
their own disposition, all on a suddain one *M. Charmis*, a Marfilian likewise, put himself forward
and entred the citie of Rome, who not onely condemned the former proceedings of the ancient
Physitians, but also put downe the baines and hot houses: hee brought in the bathing in cold
water, and persuaded folke to vse the same euen in the midst of Winter: nay, he feared not to
C giue direction vnto his sicke patients for to sit in tubs of cold water. And I assure you, my selfe
haue seen ancient Senatours, such as had been Consuls of Rome, all chilling and quaking, yea
and starke againe for cold, in these kind of baths: and yet they would seeme to endure the same,
to shew how hardy they were. And verily, there is a Treatise extant of *Annæus Seneca*, wherein
he approues highly of this course. Neither is it to be doubted, but such Physicians as these, who
hauing won credit and estimation once by such nouelties and strange deuises, (thoat at no other
marke but to make merchandise and enrich themselues euen with the hazard of our liues. And
hereupon come these lamentable and wofull consultations of theirs about their patients, when
in you shall see them ordinarily to argue and disagree in opinion, whiles one cannot abide that
another mans iudgment should take place, and seem to carry away the credit of the cure. From
hence also arose that Epitaph of his (whofoeuer he was) that caused these words to be engrauen
D vpon his vnhappy tombe, *Turba medicorum perij, i.* The variance of a sort of Physitians about me,
were the cause of my death. Thus you see how often this art from time to time hath been alte-
red, and daily still it is turned like a garment new dressed and translated: inso much, as wee are
carried away with the vain humor of the Greeks, & make sail as it were with the puffs of their
proud spirit: For euer as any of these new commers can venditat and vaunt his owne cunning
with braue words, straightwaies we put our selues into his hands, and giue him power to dispose
of our life and death at his pleasure; and without further regard, are as obedient to him as a
souldiour to his captaine and Generall of the field. A strang matter that we should so do, con-
sidering how many thousands of nations there be that liue in health wel ynough without these
Physicians, and yet I canot say altogether without Physicke. Like as the people of Rome also
E (notwithstanding the Romanes were euer knowne to be forward ynough to entertaine all good
arts and disciplines) continued for the space of six hundred yeares and above, after the founda-
tion of their citie, and knew not what a Physician meant, but afterwards they did cast a great
fancie to Physick also: howbeit vpon some little experience thereof, they were as ready to loath
and condemne it, as they were desirous before to haue a taste and triall of it. And here I thinke it
not amisse in this corrupt age of ours wherein we liue, to discouer and relate certain principall
examples of our ancessours, worthy to be noted in this behalfe.

And to begin withall, *Cassius Hemina*, an ancient Historiographer, doth report, That the first
Physician that euer came to Rome, was one *Archagathus*, the sonne of *Lysanias*, from out of
Peloponnesus, which was when *L. Amylius* and *M. Livius* were Consuls, and in the yeare after
the foundation of the citie of Rome 535. And this mine Author saith, that he was enfranchi-
sed free denizen of Rome, and had a shop provided for him, standing in the carrefour of *Acilium*,
bought at the charges of the citie for to entertaine his patients, and therein to exercise his cun-
ning. Called he was (by report) The vulnerarie Physician or Chirurgion: wonderfull much see-
king & running there was after him, and none more wealthie than he at his first comming. But
soone

* The master
and conqueror of all Phy-
sicians.

* Contes H. 3.

* Such as bath
in cold water,
be called by
Seneca, * *Hy-
crotolus*.

* Chamber-
Physicke. So
called, because
hee visited his
patients lying
sicke in bed.
* The manner
of maintain-
ing of health
and curing di-
seases by fric-
tions, and out-
ward applica-
tion of oiles &
ointments.
* Who wrought
by reason and
rules, & there-
upon were cal-
led *Rationalis*,
and *Dogmatici*.

* *Quia calida
fomenta non
proderat, frigi-
dis curas co-
clius, aut hore*
Antonius Musa,
Duxon, in vita
Octav. Augusti.

* *Sertorium*
reuenues, as
Vudam sea-
deth.

* He reduced
Physicke into
a Method and
from him de-
cended the
sect called
Methodici.

soon after, when hee was knowne once to carry a cruell hand vnder his poore patients, in cutting, lancing, dismembing, and cauterizing their bodies, they quickly began to alter his name, and to terme him the bloody Butcher or Slaughter-man: whereupon not onely all Physitians, but Physick also grew into a bad name and became odious; as may appeare euidently by the monuments and books of *M. Cato*, a worthy personage, and in regard of whose vertues and commendable parts, his triumph and Cenforship, as famous & honorable as they were, deserue the least part of his authority and reputation; so much was there in himselfe, about the gifts and graces of Fortune. I will therefore insert in this place, word for word, an Epistle of his vnto his sonne *Marcus*, touching this matter, wherein he thus writeth: Concerning these Greekes (*sonne Marcus*) I will write in place and time conuenient, what I haue found out and knowne by them in Athens: and namely, that it were good to looke into their books and readethem (as it were) by the way, but in no wise to study vpon them much and learn them thoroughly. I haue already giuen the attempt, and intend to conuince and put downe the wickedest race and most peruerse and obstinat kind of them. And learne this of mee, as from the mouth of a true Prophet, That whensoever this Greekish Nation shall bring into Rome their Philosophie, they will corrupt and marre all: but let them send once their Physitians hither, you shall see a greater wrecke and confusion thereby. For I assure thee, they haue plotted and sworne one to another for to murder all * Barbarians by means of their Physicke. And euen to effect and bring this about, they will be fed also and take money, to the end, that both we should trust them the rather, and they also haue the better meanes to worke the feat and dispatch folke with more facility. As for vs, it pleaseth them usually to name vs Barbarians; yea, and they giue vnto vs more filthy termes than any others, and mis-call vs * Opiques. Well, remember thou once for all, that I haue giuen thee warning of their Physitians, and forbidden thee to be acquainted with them. Now *Cato*, who wrote this letter, died in the six hundred and fifti yere after the foundation of our city, when himselfe was fourscore yeres old and fye: whereby a man may see that he wanted not grounded knowledge when he deliuered this speech vnto his sonne, for hee had both the practise of former times in publicke affaires, and age sufficient of his owne to furnish him with experience of priuat examples. What say we then to this resolution of his? Are wee to iudge and beleue that hee hath condemned thereby a thing so necessary and profitable as Physicke is? God forbid: for himselfe setteth downe a little after, what Physick, and what medicines both he and his wife were acquainted with, and by meanes whereof they came to be so aged as they were: and those were no other (verily) but the vse of simples, whereof wee now are in hand to treat. He saith moreover and professeth, that he hath made one Treatise expressly, containing certaine receipts for the cure of his son and seruants, and for the preseruatiue of their health: the which I haue not omitted, but disperfed here and there, according to the occurrences of accidents and diseases of sundry sorts, whereof I haue had some occasion to speak of, and still shall haue more, whereby it is plain, that our ancient forefathers blamed not the thing it self, I meane, Physicke, and medicines, but the Art and cunning of Physitians, who had the handling thereof. And most of all, they held off and were afraid to entertaine those amongst them, who fought such exceeding gaines for their handie worke, especially where they indangered their liues withall. And that they made some account of Physicke, may appeare by this, that when they receiued *Asculapius* as a canonized god into their Kalender, they built one temple for him without the city of Rome: yea, and the second which in his honour they erected, was situate within the Island apart from other buildings. Also at what time as by vertue of an edict all other Greekes were banished Italy, Physitians were excepted; and that was many a yere after *Cato* his time. And here by the way, one word will I speake to the honour of our Romanes for their singular wisdom and prouidence; namely, That howsoeuer they are growne to good prooffe and be accomplished in all other Arts and Professions of the Greekes, yet their grauity hitherto hath bin such, as they would not giue themselves to the practise of this only Science. And notwithstanding the exceeding wealth that accrueth by Physicke, yet very few or none of our naturall Roman citizens haue medled therewith. And those also that haue betaken themselves vnto it, presently haue forsaken their native language, and gone to the Greeke tongue. For this opinion verily there is of this Art, That if the Professors thereof handle it in their vulgar and mother tongue, or otherwise in any other than Greeke, all the authoritie, grace, and credit thereof is lost, euen with those that be altogether vnlearned and know not so much as the Greeke Alphabet. See the nature and foolish propertie of our Countrymen, to haue lesse confidence and trust in those things which concerne their life and health, if they be intellegible and deliue-

* That is to say
all nations but
themselves.

* Opici, were a
certain people
of Itali, infam-
ous for their
vnhonest life
and filthy lan-
guage, quasi
opini, opinio
opini.

* Why the temple of
Asculapius stood
without the
city of Rome?
See *Plutarch* 94
Questionum
Romanarum.

A deliuered to their capacity; than in others, which they vnderstand neuer a whit! And hereupon verily it is come to passe, that the art of Physicke hath this peculiar gift and priuiledge alone; That whosoever professeth himselfe a Physitian, is straightwaies beleueed, say what he wil; and yet to speake a truth, there are no lies dearer sold or more dangerous than those which proceed out of a Physitians mouth. Howbeit, we neuer once regard and looke to that, so blind we are in our deep perswasion of them, and feed our selues each one in a sweet hope and plausible conceit of our health by them. Moreover, this mischief there is besides, That there is no law or statute to punish the ignorance of blinde Physitians, though a man lost his life by them: neither was there euer any man known, who had reuenge or recompence for the euill intreating or misusage vnder their hands. They learne their skill by indangering our liues: and to make prooffe & experiments of their medicines, they care not to kill vs. In a word, the Physitian only is dispensed withal, if he murder a man: so cleare he goeth away without impunity, that none so hardy as once to twit or challenge him for it: but say that one be so bold as to charge them with any vntoward dealing; out they cry presently vpon the poor patients, at them they rail with open mouth, they are found fault with their vnruleinesse, distemperature, wilfulnesse, and I know not what: and thus the sillie soules that be dead and gone, are hent & bear away the blame. The decuries or bands at Rome of those knights which are deputed and called Iudges, are not chosen but by an ordinary triall and examination of their estate, quality, and person, and the same by the principal of that order and degree, both taken and approued: streight inquisition there is made of their demeanor from house to house: of their parentage also, yea and true information giuen to the electors before they can be chosen. Mint-masters, such as are to giue their judgement of mony, and the touch of coin, be not taken hand ouer head: but if any be more skilfull than others therein, they are sent for (rather than to faile) as far as from Calis and the straits of Gilbretar. And for to pronounce sentence as touching the banishment of a Roman citizen, the five deputed or elected delegats (named Quinquagiri) had no warrant or decree passed before 40 daies were expired. But for these Physitians, who are the judges themselves to determine of our liues, and who many times are not long about it, but giue vs a quick dispatch & send vs to heaven or hel, what regard is there had, what inquiry and examination is made of their quality and worthines? But surely, wel enough are we serued, and we may thank none but our selues, if we come by a shrewd turn, so long as there is not one of vs hath any care or desire to know that which is good for his life and health. We loue to * walk (forsooth) with other mens feet. * We read, we looke by the eyes of others: we trust the remembrance of another, when we salute any man and to conclud, in the very main point of all we commit our bodies and liues to the care and industry of others: No reckoning is there now made of the riches and treasure of Nature: but the most precious things indeed which serue for the maintenance and preseruatiue of health and life, are vtterly rejected and cast away: no account make we of any thing and think our owne, but to liue in pleasures and dainty delights. I will not leaue my hold of *M. Cato*, whom I haue opposed as a shield and buckler against the enuie and sight of this ambitious and vain-glorious Art: neither will I giue ouer the protection of that honorable Senat which hath judged no lesse; and that without catching aduantage of the sinfull pranks & lewd parts which are committed and practised vnder the pretence of this art, as some man haply would look that I should set them abroad: for to say a truth, is there any trade or occupation goeth beyond it for poisoning? what is the cause of more gaping and laying wait after wils and testaments, than this? What adulteries haue bene committed vnder the colour hereof, euen in Princes and Emperors palaces? as for example, *Eudemus* with *Livia* the Princeesse, & wife to *Drusus Caesar*: *Valens* likewise with the Queen or Emperesse about named, *Messalina*. But say that these crimes and odious offences are not to be imputed vnto the Art it selfe, but rather to be charged vpon the persons, I meane the corrupt and lewd professors thereof: yet surely I am of this beleefe, that in regard of these enormities, *Cato* was as much afraid of the entrance of Physicke, as of some Queene into the citie of Rome. For mine own part, I mean not to say ought of their extreme auarice, of the merchandise, spoile, and hauocke that they make when they see their patients in danger of death, and drawing to their end; nor how high they hold (as it were in open market) the easement and release of the sicke mans pains, whiles he is vnder their hands; ne yet what pawns and pledges they take as earnest of the bargaine, to dispatch the poore Patient out of the way at once; and lastly, of their hidden secrets and paradoxes, which forsooth they will not divulge abroad, but for some round

* In this place
he casteth in
the Romanes
teeth, their
Laziness, Auarice,
and other
vices, and
in the end
concludeth
the matter.

summe

funime of money. As for example, that a cataract or pearle in the eie is to be couched rather and driuen down by the needle, than quite to be plucked forth: wherby it is come to passe, that it is a very good turne & the best for vs (as the case standeth) that we haue so great a number of such murderers and theues in the commonwealt: for I assure you it is not long of any shame and honesty (whereof there is none in them) but their malicious emulation, being so many as they are, that the market is well fallen, and the prices come down of their workmanship. Notorious it is, that *Charmis* the abouenamed Physitian that came from Marfiles, bargained with one patient that he had, to haue 200000 Sesterces for his cure, and yet hee was but a stranger and a prouincial inhabitant. Also as well knowne it is, that *Claudius Cesar* vpon a condemnation and judgement, tooke at one time by way of confiscation, one hundred thousand sesterces from one *Alcometes*, who was no better than a Chirurgion or Wound-healer: who beeing confined into France, and afterwards restored, gathered vp his crums again & got as much within few yeares. I am content also, that these faults should be laid not vpon the art, but the men that professe it: Neither verily do I mean to shew and reprove the base, abject, and ignorant sort of that crew: nor how little order and regiment they obserue in the cure of diseases, or in the vse of baines and hot waters: how imperiously they prescribe otherwhiles to their patients most strait diet: and again, when they are ready many times to faint & die vnder their hands for want of sustenance, how they be forced to cram them as it were, and giue them meat vpon meat, oftentimes in one day, before they haue digested the former viands. Moreouer, how they do and vndo, altering the manner and course of their proceedings a thousand waies, misliking and bethinking themselves after they haue done a thing: making a mish mash and mingle mangle in the kitchen of those viuals which they ordain for their poore patients: besides a deal of mixtures and sophisticated compositions of drugs and ointments. For there is no superfluity tending vnto vain pleasures and wanton delights that hath ouerpassed their hands. And since I light vpon the mention of these drugs and spices, for mine owne part I am verily perswaded, that our ancestors and forefathers were nothing well pleased with the bringing in of such forraie wares, which beare so high prices and are extream deare: and that *Cato* neuer thought of these drugs and mixtures, nor foresaw these corruptions by them occasioned, when he blamed so much and condemned this art of Physick. Yet see what account there is made of a composition called * Theriacke, deuised onely for excesse and superfluity: composed it is of diuers ingredients far fetcht and deare bought: whereas Nature hath bestowed vpon vs and presented to oure eies so many wholesome simples, and euery one of them by it selfe medicinable and sufficient. Moreouer, another antidore and confection there is, consisting of no fewer than 54 fundrie sorts of drugs and ingredients, all of diuers weights, and some of them are prescribed to carrie the poyse precisely of the sixtieth part of one denarius or dram. Now would I gladly know what god he was (for surely it passeth the wit of man thus to dispense the ingredients, and calculat their vertues, to a single scruple) that taught first this subtil and intricat composition? By which it appears manifestly, that this geere bewraith onely a vaine ostentation, and all to giue a glorious and wonderful lustre to the art, for to make it better accepted and more vendible. And yet the very Artists themselves are not ywis so skilfull, as to know that whereof they make profession. For I my selfe haue seene these that goe for Physitians, put commonly into their medicines and receipts *quid pro quo*, and namely, in stead of the Lidian * Cinnabaris, * Minium; which is no better than a very poyson, as I will proue and shew hereafter in my Treatise of Painters colours: which error proceedeth only from this, that they are not wel seen in Grammar, nor in the proper signification of words. But these and such like errors touch and concerne the health of euery one in particular. As for those abuses in the art of Physick, which *Cato* feared, foresaw, and would haue preuented, they be such as are nothing so hurtfull and dangerous as the rest, and indeed small matters in the opinion of man: and such as the principall Professors and Masters of this Art do auow and confesse among themselves. Howbeit, euery one of these deuises, as harmlesse as they seem to be, haue been the ouerthrow of all vertue and good manners in our Romane State, I mean those things which we doe and suffer in our health: our exercise of wrestling, our greasing and anointing with oile for that purpose, brought in forsooth and ordayned by these Physitians for to preserve our health. And what should I speak of their drie stouues, hot houses, and ardent bayns, which they would beare men in hand to be so good for digestion of meat in their stomackes? Yet could I neuer see any, when he came forth of them vpon his own feet, but he was more heauy, & found himselfe

¶ Treaclic.

¶ Sanguis Draconis Sang- dragon Lacryma species, a kind of gum
¶ Metallicum, a minicall Vermilion.

A himselfe feeblere than before he went in: and as for those who haue bin more obseruant of their rules than the rest, and wholly gouerned by them, I haue known many such caried out for dead, or else extream sicke. To say nothing moreouer of the potions and drinks ordained by them, to be taken in a morning fasting, for to vomit and scour the stomack therby, and all to make way for to quaffe and carouse again vpon it more lustily. I forbear also to write of their rofins and pitch-plaisters deuised by them for to pluck away and fetch off the haire where Nature hath ordained it to grow, wherby they would seem to effeminate our men. I bath also to speak how euery our women haue prostituted their nakednes and priuities vnto them, by occasion of these their wanton deuises. In sum, conclude we may, that considering these enormities and corruptions which haue crept into our life, by nothing more than by the meanes of Physick, *Cato* was a true prophet indeed, and his oracle is verified & fulfilled euery day, when he said, That it was sufficient to look cursorily into the writings and witty deuises of the Greeks, without farther studying therupon and learning them thoroughly. Thus much I thought good to speak in iustificati- on of that Senat and people of Rome, who not without great reason continued 600 yeares without the entertainment of Physicians; and against that Art which of all others is most dangerous and fullest of deceit: in regard wherof, it hath bleeared the eies of good men, and they be those who haue giuen credit & authority thereto. And withall, thus much may suffice to meet with the fond opinion and foolish persuasion of those, who are rauished and caried away with a conceit, esteeming nothing good for the health of man, but that which is costly and pretious. For certes I doubt not, but some there be who will loath these receipts taken from diuers beasts, wherof I shall haue occasion to speak hereafter. But I comfort my selfe again herein, That *Virgil* disdained not to name the very pismires and the weevils; * blind beetles also delighting in darknesse, and their nests wherein they keep; of which he wrote, notwithstanding he was not vrged thereto vpon necessitie. Neither did *Homer* think it improper, to mingle the description of a shrewd and vnhappy flie, euen with the heroicke battailes of the gods: ne yet dame Nature, who hath brought forth and made man, thought it any disparagement to her maiestie for to engender also these sillie and small creatures. And therefore let euery man consider their vertues, properties, and effects, and not regard so much themselves. To come then to those things that are most common and known, begin I will at sheeps wooll, and birds eggs, to the end that by that means due honour may be yeilded to the chiefe and principall of all others, as it doth appertain. Howbeit, I must of necessitie speak of some other things by the way as occasion shall be offered, notwithstanding the place be not so proper & fit for them. Neither wanted I means sufficient to furnish this worke of mine with many gallant matters and pleasant discourses, if my delight and mind had been to looke after any thing else but a plaine and true narration, according to my first desseine and intention: For well I wot, that I might haue inserted here and there, the rare receipts which are reported to be of the ashes of the bird Phoenix, and her nest; but that I know all to be meere fabulous, howsoeuer they make a pretence of truth. Besides, I count it a very mockerie and no better, to deliuer vnto the world those medicins which are not to be but once in the reuolution of a thousand yeares.

* Lucifugie congeffa cubi- lia blattis.
* Liados.

CHAP. II. ¶ The vertues and properties of Wooll.

E The ancient Romans attributed vnto Wool great authority, & had therein a certain religious and reuerent opinion of holines: in so much as new wedded wiues by an old custom and ordinance at Rome, were wont with great ceremonie to adorn and bedeck with wooll the side-polls of the dore or entrie into their husbands house, on the marriage day. Now besides the vse of wooll for decent apparel, & defence against cold weather, that which is vnwashed and full of the sheeps sweet serueth in Physick, and is a soueraign remedy for sundry accidents, being applied with oile, wine, or vinegre, according as need requireth, either in mitigation of pain, or mordication and coriotion, and according as our purpose is, to bind, or to enlarge and open any part: and namely, it is imploied in dislocations of members, and grieue of sinues, if it be laid to the affected place, well sprinkled & wetted with the said liquors, that it might be alwaies moist. But more particularly, for disjointed members, some put thereto a little salt: others take rue, & when they haue stamped it, incorporate the same with some conuenient grease, & so apply it in manner of a cataplasme vpon sweate wooll: after which manner, it is good for contusions or bruises & swellings. Also it is said, that if the teeth & gums be well rubbed with such wooll and

H h

honey

hony mingled together, it will cause the breath to be the sweeter: a suffumigation or perfume therof is singular for the frensie: applied with the oile of roses, it stanches bleeding at the nose: or otherwise if the ears be well stopped therewith, and a little garlick conueied withal therinto. Moreouer, it is laid to inueterat sores with good successe, so that hony be put thereto. Soake wooll in wine, vinegre, or cold water and oile, and then wring and presse the same forth, it heales any wound. The wooll of a ram well washed in cold water, & afterwards steeped in oile, is singular for womens infirmities, and particularly allaieth the inflammation of the matrice: but in case it be faln downward and readie to slip out of the bodie, a perfume therof receiued beneath, staiteth the same and keepe it vp. The fattie wooll of a sheep being either applied, or put vp in manner of a pessarie, drawes down the dead infant out of the mothers belly: and yet the same otherwise represseth the immoderat flux of womens fleurs. If it be couched hard & close within the wound occasioned by the biting of a mad dog, it serueth to great purpose; but with this charge That it be kept bound thereto & not remoued vntill the seuenth day be past: applied vnto whit-flaws and impostimations about the naile-roots, with cold water, it cureth them: the same, if it be dipped & foked in a medly made of salnitre, brimstone, oile, vinegre, and tar, all dissolved together and ready to boile, and so laid as a cataplasme to the loins as hot as the patient can abide it, changing it twice a day, appeaseth the paine of those parts. Take the greasie wooll of a ram, bind therewith very hard the joints of the extreame parts, as namely the fingers and toes, you shall see how it will stanch bleeding. [Howbeit, note this, that the wooll growing vpon the sheeps neck is euer best and most medicinable: and if we regard the country from whence it comes, that of Galatia, Tarentum, Attica, and Miletum, is alwaies reputed better than any other.] Furthermore, the greasie or sweatie wooll of a sheepe, is proper to be applied to any raw places where the skin is fretted off, to contusions, bruises looking black and blew, strokes, cruishes, rushes, rubs, and gals; as also from them who are tumbled down from some high place, for the head-ach and other pains; and lastly, for the inflammation or heat of the stomack, being decently applied with vinegre and oile rosat. Reduced into ashes and vsed as a liniment, it is singular for them that be crushed or squeezed, wounded, burnt, and scalded. This ashes entrench also into collyries and cie-salues: it serueth for hollow vlcers & fistuloes: like as for the ears when they run filthie matter. For these purposes aboue specified, some sheare it from the sheeps back: others chuse rather to plucke it: and when they haue clipped off the vpmost parts, or forced it lay the same forth to dry: they toze & card it also, and then bestow it in an earthen pot not fully baked, which they besmeare all ouer with hony, and so burn & calcine it to ashes: others put vnder, smal chips or slices of torchwood, and lay certain beds or courses thereof between the locks of wooll; and after they haue besprinkled the same with oile, set all one fire: which done, the ashes that come therof they put into little pans or vessels, & poure water thereon: and after they haue well stirred the said ashes with their hands, they suffer it to settle downe to the bottom, which they do oftentimes, alwaies changing the water till such time as a man may perceiue the ashes at the tongues end to be somewhat astrigent, but not biting: and they lay vp their ashes for their vse. A great * scourer and cleanser this is, and therefore most effectually to mundifie the eye-lids.

* *Ystus sme-
lica* is out of
Dios. not sep-
arata, as is com-
monly read:
for how can it
be corrosiue if
it bite not at
all.

* *Siccatur*, or
rather *Sacca-
tuz*. I. streine it
through a lin-
nen bag.

Moreover, the very filthie excrements of sheep, & the sweat sticking to the wooll of their flanks, between their legs & the concavities thereabout (which they call Oesypum) is thought to haue infinit number of medicinable properties: but the best Oesypum simply is that which comes from the sheep bred about Athens. This sweet or filthie excrement, call it what you wil, is prepared and ordered many waies; but the principall is that which is gathered from the wooll newly taken from between the legs & shoulders of the sheep, and presently tozed ready for to be carded: others are content to take the sweatie filth of any wooll, so it be fresh plucked or clipped from the sheep, and whether it be the one sort or the other, they let it dissolve over a soft fire in a pan of brasse: which done, they set it a cooling, and take off the fat that swims aloft, & gather it into an earthen vessell. As for the rest which remained behind of the first stuffe, they set it on the fire again, that the fumes may boile forth of it: after this the fat that floated aboue, as well the former as the later, they wash in cold water, & let * it drie in a linnen cloth, expose it to the heat of the Sun, that it may frie therein vntill it be blanchd white and look pure and cleare: then is it put vp in tin boxes or peuter pots, and referred for vse. The true mark to know which is good Oesypum, after it is thus tried & putrified, is thus: if it haue a rank smel still of the first filthines which it had from the sheep: also, if when you rub it with your hand in water, it melt not, but in

L

M

A the working look whitish like vnto cruse or white lead: a soueraigne thing it is for the inflammation of the eies: for the hard callosities also that grow vpon the eye-lids. Some there be who yeeldeth forth all the sweet and fattinesse; the which they suppose to be the best Oesypum that watering of the angles of the eies. Well, this fatty excrement thus clarified, incorporat with ration: the same tempered with Melior and Butyr, maketh an excellent liniment for all inflammations of the matrice: the chaps also and swelling piles or biggs in the fundament. Many other vertues it hath, which I will digest into their seuerall places, and speake of them accordingly. B As touching the filthie excrements hanging to sheeps tails, and baltered together into round shooke in the head, if they be rubbed therewith, also for the gums, though there were gotten into alone, or else with sulphur vif, it is passing good to be applied to any place in paine, whereof the dents which happen vnto the priue parts. In sum, of such vertue is wooll, that there is no cataplasme, pulstesse, or plaister, in manner applied to a grieved place, but the same hath wooll laid in the very sheep that beare it, in case they haue lost their stomacks and feed not: for pluck the wooll that groweth to their tails, and therewith tie the same as hard as is possible, you shall see them presently fall to their meat: But it is said withall, that the rest of the taile which is vnderneath the said knot where it was bound, will quickly become mortified, and die.

* *Dalidium* can-
cin.

CHAP. XIII.

¶ The nature and properties medicinable of Eggs.

Great societic and affinitie there is between wooll & eggs; in this regard, That if they be applied both together in a frontall to the forehead, they repress all violent fluxes & rheums falling into the eies: but you need not take for this purpose any wooll that hath bin dressed or clenched with the * Fullers scouring weed: neither is it required, that in this case there should be vsed any more but the white of an egg, and the same ought to be infused or spread vpon the fore said wooll, with the pouder of Frankincense: & in very truth, the white of an egg alone, if it be infused or dropped into the eies, is sufficient to restraine the flux of humors thither, yea and saffron thereto, and vse this gleere or white of the egg beaten, in stead of water, for all collyries or medecins appropriat to the eies. The white of an egg incorporat with fresh butyr, is so soueraigne for the red and bloudshoten eies which put little children to pain, as none in this world better; nay there is not in a maner any other vsed in that case. The same beaten and tempered with oile, assuageth the heat of *S. Anthonies* fire, if there be leaues of beets laid vpon the place and kept bound thereto. The white of an egg incorporat with salhormoniacke finely puluerized, doth extend and turn backward, the haire of the eyelids which grow inward into the eies: the same with pine nut-kernels, & a little hony mingled withall, and so reduced into a liniment, takes away the pimples that arise in the face: annoint the visage therewith, it will keep it from being sun-burnt. If one be scalded with hot water, lay quickly an egg to the place, yelke, white, and altogether, it will take out the fire and preserue it from blistering: some put thereto barley meale and a little salt: but say the place be blistered & exulcerat with any burne or scald, parched barley with the white of an egg and swines greafe, is an excellent medicine to heale the sore: and the same cataplasme is much vsed in the cure of the hamorroids, piles, and chaps of the fundament; and especially in children, for to reduce the tiwill into the right place, if it hang forth, for the rifts and chaps which appeare in the feet, take the white of an egg sodden or roasted, the weight of two deniers of ceruse, as much of lecharge of siluer, and myrrhe, with a little quantitie of wine; incorporat all together into a cataplasme, there is not a better medicine for them: and for the inflammation called *S. Anthonies* fire, the white of an egg beaten together with Amydum or starch-floure, is right soueraigne. It is said moreover, that the white of an egg is very good to conglutinat or sowder any wound, yea and two expell the stone and grauell out of the body.

* *Radicula*,
called before
Struthium.

The yelke of an egg sodden vntill it be hard, and tempered with a little saffron, with hony also G
and breft-milke, and so reduced into a liniment, allaieth the pain of the eies, if they be anointed
or fomented therewith: or if the same be incorporat with oile rofat & honied wine, and so spread
vpon a quilt of wooll and applied, it workes the same effect. Others there be who take the yelke
or an hard egg, mix therewith the powder of persley seed, adding thereto fried barley meale dried,
and honied wine, with which composition they annoint the sore eies. Also the yelk of a soft egg
alone, supped off and swallowed down cleare that it touch not the teeth by the way, is singular
good for those that be troubled with the cough, with the rheume or catarrhe that hath taken a
good way to the breft or pectorall parts; yea and the roughnesse of the throat & pipes which causeth
hoarsenesse: but principally if one be bitten with a worme or serpent called * Hæmorrhoids, let
him both sup off the yelke of an egg raw or soft, and apply it also to the wounded place. It hel- H
peth the infirmities of the reins; it healeth the fretting, excoriation, and vlcers of the bladder;
yea and cureth those that reach & cast vp blood. Fiue yelks of eggs supped off raw in one hemin
of wine, are singular good for the dysenterie or bloody flux, and namely, with the powder of
the shels from whence they came, the juice of Poppie, and a little wine withall. For the flux of
the belly proceeding from a feeble stomacke, they vse to giue the said yelks of eggs raw, with as
much in weight of good and full raisins, and the rind of a pomegranat, with direction to the pa-
tient, for to take this medicine three daies together by euen portions, and no more one day than
another: for which purpose also, there is another way to vse them, namely, to take three yelks of
an egg, to incorporat the same in as many onces of hony and old lard, putting thereto three I
cyath, also of good old wine, and stamped all together into one composition vntill such time
as it be reduced to the consistence or thicknesse of hony, of which the patient must drinke as
need requires, with water, the quantity of an hazle nut at a time. Also it is good to lay three eggs
in vinegre for three daies together, and vpon the fourth day to eat them, for the foresaid flux of
the stomacke: after which maner it auaieth much to take them against the oppilations & hard-
nesse of the spleene: but to such as are subiect to casting and reaching blood vpward, Physicians
prescribe to take them in three cyaths of new wine. Some vse the yelks of eggs that haue bin old
kept, for to reduce the skin that is blacke and blew to the fresh and liuely colour again; but they
incorporat the same in hony with bulbe roots: the same sodden and drunk in wine, doe repress
the immoderat flux of womens months: but applied raw with oile and wine, they discurse & re- K
solve the ventosities within the matrice. Incorporat with oile rofat and goose grease, they are
good to be applied to the nape of the neck for the cricke and pain thereof: being roasted against
the fire hard, and so presently applied hot to the seat, they are good for the griefs and accidents
of the fundament: but more particularly for the swelling piles and bigs rising in those parts,
they would be laid too with oile of roses. Being sodden in water vntill they be hard, they serue
very well for any burne or scald; with this charge, That presently the ashes of the same egg-shels
calced upon burning coales, be applied to the place, and then to annoint the same with the
foresaid yelks and oile rofat mixed together. Now it falleth out sometime, that eggs be all yelke
within, & haue no white at all; namely, when the hen hath coued & sitten ouer them three daies
together, and then be taken away from vnder her; and such kind of eggs the Greeks call Schista,

*Daletampius
would haue
the same eggs to
be dried and
reduced into
pouder, &c.*

Take the eggs from vnder the hen when they be full of chicken, a little before they spring and
the chicke be hatched, together with halfe as much of gal nuts, and giue the same for to streng-
then a feeble and weak stomack; with this caution, That the patient haue eate nothing in two
hours before. And so me doe aduise for the dysenterie or bloody flux, to giue the said chickens
sodden egg and all together, putting thereto one hemine of austere or sharpe wine, and an equall
quantitie of oile and parched barley groats drie. The fine pellicle or skin that is within the egg-
shell, being taken from it (whether the egg be raw or sodden it skilth not) healeth the chaps
that are in the lips, if it be applied thereto. The ashes of an egg-shell drunke in wine, stoppeth
the issue of blood gushing out at any part: but the same ought to be burnt, or calced without
the pellicle or skin aforesaid; and so it makes an excellent dentifrice also to cleanse and scoure
the teeth white: a liniment made with the said ashes and myrrhe together, staies the superfluous M
flux of womens terms. And here I cannot chuse but note vnto you by the way, the strange pro-
prie and wonderfull nature that egg-shels haue: for so hard compact and strong they be, that
if you hold or set an egg endlong, no force nor weight whatsoever is able to break and crush it,
so long as it standeth freight and plumbe vpright, vntill such time as the head incline to a side
and

A and bend one way more than another. Eggs entire and all whole as they be [i. white, yelke, shell
and skin] taken in wine with rue, dill, and curmin, helpe women in hard trauell to speedie and ea-
sie deliuerance. Eggs incorporat with oile & rosin of the cedar mixed together, are singular good
for to heale scabs and to kill the itch: put thereto the root of Cyclamin, [i. Sow-bread] it hea-
leth the running skalls of the head: for those that reach vp purulent matter out of the chest,
or spit blood, it is good to sup off a raw egg together with the juice of vnser leeks, and an equall
quantitie of Greekish wine; but first all must be warmed, before that it be giuen to the patient.
Against a cough, they ordaine eggs sodden and stamped together with hony, and so to eat them;
or else to sup them off raw, with wine cuit & oile, of each a like quantity. If a man haue any sore
or vlcer in his secret parts seruing for generation, it were very good to inject one egg tempered
B with three cyaths of wine cuit, and halfe an ounce of Amylum or starch-floure, presently vpon
his coming forth of the baine or hothouse. An excellent liniment there is made of sodden eggs
stamped together with cresses, for the sting or biting of serpents. How many means there be
whereby eggs doe good as meat, there is not one but knoweth: for euen in their going downe,
they passe through any tumor or swelling of the throat, and with their kind heat foment those
parts by the way. There is not any kind of viand in the world besides it, that nourisheth a sicke
man, without any offence or burden at all to the stomacke; and it may go well enough for meat
and drinke both. As touching eggs sodden in vinegre, and how their shels may be made soft and
tender thereby, I haue already shewed; such eggs if they be wrought and knead with meale into a
dough or past, do make a kind of bread which is soueraigne for all fluxes of the stomack. Some
C there be who think it better to take these eggs thus mollified & resolved in vinegre, and to torri-
fie the same betwene two platters of earth, supposing that being thus prepared, they serued not
only to stop a lask, but also to repress the immoderat flux of womens monthly tears: but in case
the said fluxions be excessive and beyond all measure vehement, they are to be supped off raw,
with water and meale in maner of a grewell or pottage: or else the yelks may be boiled by them-
selves in vinegre, vntill they be hard, and then a second time be fried & torried afterwards with them-
grosse pepper, and in this sort they will die any loosenesse of the bellie. And yet there is another
singular remedie for the bloody flux, namely, to put the meat of a raw egg in a little earthen pot
that neuer was occupied, and to add thereto as much hony as may amount to the quantitie of the
egg, to the end that all be of equall proportion; then, within a while after to temper therewith
D the like measure of vinegre & oile both, and to beat them all together oftentimes, that they may
be well conccorporat and vnited in one. In which composition, this is to be obserued, That the
better that every one of these ingredients is that enter into this confection, the more excellent
operation and speedier remedie will ensue therupon. Others there are, who in stead of oile and vi-
negre, put in red rosin and wine, according to the former rate and proportion: howbeit they tem-
per the said medicine after another sort, for they put in of oile, only as much as the egg comes
to, adding thereto of the pine-tree barked * two sixtie parts of a Romane denier, and one sixtie
part of Sumach, which I called Rus, and fiue oboli weight of hony, with this charge, That they
be all boiled together; and that the patient eat no other meat whatsoever for the space of foure
hours after. Many there be, who to cure and ease the wringing gripes and torments of the belly,
E take two eggs and foure cloues of Garlick, which they pun and stamp together; then they heat
them ouer the fire in one hemine of wine, and giue this mash vnto the patient to drinke. To
conclude, because I would not willingly omit any thing that may commend eggs and giue grace
vnto them, know thus much moreover, That the gleere or liquid white of an egg with quicke-
lime, maketh an excellent sement to soudre or vnite any broken pieces of a glasse together: be-
sides, of such strength and efficacie they are, that neither a piece of wood no nor so much as any
parcell of cloath wet or dipped in the white of an egg will burn, but check the violence of the fire.
Howbeit, note that all which I haue spoken of eggs, is to be meant those that hens only do lay: for
as touching other birds eggs, I will write in their due places, for as much as they are not destitute
of many peculier vertues and singular properties of their own.ouer & besides, I will not ouer-
F passe one kind of eggs besides which is in great name and request in France, and whereof the
Greeke authors haue not written a word: and this is the serpents egg, which the Latins call An-
guinum. For in Summer time yerey, you shall see an infinit number of snakes, gather round to-
gether into an hpape, entangled and enwrapped one within another so artificially, as I am not
able to expresse the manner thereof: by the means therefore, of the froth or saluation which they
yeeld

considering that all our medicins proceed from that conuenience and repugnancie which is in the nature of all things, whereof we haue so much spoken. As we may see for example in these punies or wall lice (the most ilfavoured and filthy vermine of all other, and which we loth and abhor at the very naming of them) for naturally they are said to be aduersatiue to the sting of all serpents, and principally of the Aspis: nay they are thought to be a counterpoysion against any venomous thing whatsoever: and folke ground their reason hereupon, because looke what day that Hens do eat a wal-louche, the same day there shall no Aspis haue power to kill them. And it is said moreover, That the very flesh of such hens as haue eaten such punies, is singular good for those that be stung alreadie by the said serpents. Other receipts there be set downe by our great masters in Physicke, as touching this foule vermine: but those which carie most modestie with them and haue greatest respect vnto manhood & humanity, are these, namely, to rub or annoint the place which is stung, with the said wal-lice and the blood of a Tortoise together: also to chase away serpents, with the smoak or perfume of them: likewise if any beast which hath swallowed down horse-leeches, do take them in drink, they will either kill them or driue them out, yea, and in what part soeuer they are fettled and sticked fast, they will remoue them and make them to fall off. And yet some there be who vse this naftie and stinking creature in eie-salues, for they incorporat them in salt & womans milk, and therewith annoint their eies: yea, and drop for them into the eares with honey and oile of rose mingled together. Others there be who vse to burne these punaifes or wal-lice, such especially as be of a wild kind, and instill them into the eares. Touching other medicines and incorporat their ashes in oile of Roses, and instill them into the eares. Touching other medicinal properties which they attribute vnto them, namely for impostumes and bitches that are broken and run, for the Quartan agne and many more maladies: although they giue direction to swallow them down in an egge, or else enclosed within wax or a beane, I hold them for lies, and therefore not worthy to be related in sadnesse. Marie I will not say but there is some probability and apparence of reason why they should put them in those medicines which are ordained for the lethargie: for surely they are knowne to be very proper against that drowlines, which is occasioned by the venom of the Aspis: to which effect seuen of them be ordinarily giuen in a cyath of water, or but foure, if the patient be a child. In case of strangurie also, when a man pisseth dropmeale, they vse to put wall-lice into a syring, and so conueigh them into the passage of the yard. See the goodnesse and industrie of dame Nature, the mother of all, how she hath produced nothing in the world but to good purpose and with great reason. And yet here is not all that they report of these lice called punaifes: For they say, that whosoever carie two of them in a bracelet about his left arme, within a lock of wooll (but the same forsooth must be stollen from some shepheard) he shall be secured against those agues that come ordinarily in the night season: but say their fits vse to returne by day time, then the said punices ought to be lapped in a reddish elout of a carnation colour. Contrariwise, the worme called Scolopendra is an enemy vnto these wall-lice, and killeth them.

As for the Aspides, look whomsoever they haue stung, they die vpon it with a kind of deadly sleepinesse and benumbednesse in all their lims: and to say a truth, of all serpents that creep vpon the ground, they are most mortall, and their wounds least curable. Their venom if it enter once so farre, that it come to bloud, or doe but touch a greene wound, there is no remedie but present death: marie if it light vpon an old sore, the danger is not so speedie, nor the force so quick. Otherwise let the same be taken in drinke to what quantitie soeuer, it is harmelesse and doth no hurt at all: for setting aside that senselesse drowlines which it influcth, putrefaction and infection it causeth none: which is the reason, that the flesh of those beasts which die of their sting is meat good enough. I would pause and make some stay in reporting a remedie that these Aspides do yeeld, but that I haue my warrant from *M. Varro*, whom I know to haue deliuered the same, euen when he was fourescore yeeres old and eight: namely, That there is not in the world so good a thing to cure the bitings of the Aspides, as to giue the party who is wounded thereby, some of their vrine to drinke.

To come now vnto the Basiliske, whom all other serpents do flie from and are afraid of: albeit he killeth them with his very breath and smel that passeth from him; yea, and (by report) if he do but set his eie on a man, it is enough to take away his life: yet the Magicians set great store by his bloud, and tell wonders thereof: and namely that being of it selfe as blacke and as thick congealed as pitch, yet when it is washed and dissolued, it looketh more cleare and pure than

* At which
yershe would
haue bene
ashamed to
tell alle.

* Cinna-

*Cinnabaris. Vnto it they attribute strange and admirable effects: For whosoever (say they) carie it about them shall & gracious with princes or great potentats, yea, and at their hands obtaine a grant of all their petitions: they shall find fauour with the gods above, and speed in all their praiers: remedie they shall haue of all diseases: and no forcerie or witchcraft shall take hold of them. And some of them there be who call it the bloud of *Saturne*.

As for Dragons, they haue no venome in them. And if it be true that our Magicians say, if a Dragons head be laid vnder the threshold of a dore, after due worship and adoration of the gods, with praiers & supplications vnto them for their fauourable grace, that house shall surely be fortunat. The eies of a Dragon preserued drie, pulverised and incorporat with honey into a liniment, cause (by their saying) those who be annointed all ouer therewith to sleepe securely, without any dread of night-spirits, though otherwise they were fearfull & timorous by nature. Moreouer, if we may beleue them, the fat growing about the heart of a Dragon, lapped within a peece of a Buckes or Does skin, and so tied fast to the arme with the nerues or sinues of a red Deere, is very auailable, and assurth a man good successe in all sutes of law. The first spondyle or turning joint in the chine of a Dragon, doth promise an easie and fauourable access vnto the presence of princes & great states. The teeth of a Dragon lapped within the skin of a roe buck or wild Goat, and so bound fast with the sinewes of a Stag or Hind, do mitigat the rigor of great lords and potentats, causing them to incline to their petitions and requests, who present themselves before them. But about all other receipts, one composition there is which bewraith the impudent and lying humor of these Magicians, who promise vndoubted and infallible victory, to those that haue it about them, and this it is: Take (say they) the taile and head both of a Dragon, the haire growing vpon the forehead of a Lion, with a little also of his marrow, the froth moreouer that an Horse someth at the mouth, who hath woon the victory and prife in running a race, and the nailes besides of a dogs feet: bind all these together with a peece of leather made of a red Deere skin, with the sinues partly of a Stag and partly of a fallow Deere, one with another in alternatiue course: carrie this about you and it will worke wonders. Impostures all, and loud lies. And verily, it is as gracious a deed to discouer and lay abroad these impudencies of theirs, as to shew the remedies for the sting of serpents, considering how these deuices be no better than meere mischiefes and forceries, which hurt and bewitch poore patients, and such as trust in them. True it is, that all venomous beasts flie from those that be annointed with Dragons greafe. Likewise they cannot abide the strong & virulent sauour of the rat of India called Ichneumon: in so much as they stand in dread of them who are annointed with a liniment made of the ashes of their skin incorporat in vinegre. Moreouer, lay the head of a Viper to the place where she hath wounded one, it is a soueraign remedie: yea, though it were the head of any other Viper than it which inflicted the wound, it is infinitely good. Likewise if a man do hold vp the same Viper that inflicted the sting, at a staues end ouer the smoak of wood burning, or the vapor of seething water (and yet, say they, warie enough they be thereof, and will auoid it) or annoint the place with a liniment made of her ashes burnt, it is sufficient to heal the sore. *Nigidius* mine Author affirmeth, That serpents after they haue stung one, are forced by a certain necessitie and instinct of Nature to returne vnto the party whom they haue hurt. The Scythians yerey vse to slit a vipers head between the eares for to take forth a little stone, which she is wont to swallow when she is affrighted. Others make vse of the whole head as it is. Certaine trochisks there be, made of a Viper, called by the Greeks Theriaci: for which purpose they cut away at both ends as well toward the head as the taile the breadth of foure fingers, they rip her belly also, and take out the garbidge within: but especially they rid away the blew string or vein that sticketh close to the ridge bone. Which done, the rest of the bodie they seeth in a pan, with water and dill seed, vntill such time as all the flesh is gon from the chine: which being taken away, and all the prickie bones therto belonging, the flesh remaining they incorporat with fine flour, & reduce into trochisks, which being dried in the shade, are reserued for diuerse vses, and enter into many foueraigne antidotes and confections. But here is to be noted, that although these trochisks be called * Theriaci, yet are they made of vipers flesh onely. Some there be, who after a Viper is cleansed as abovesaid, take out the fat, and seeth it with a sextar of oile vntill the one halfe be consumed: which serueth to driue away all venomous beasts, if three drops of this ointment be put into oile, and therewith the body be annointed all ouer. Moreouer, this is held for certaine, that there is no sting or bit of serpents so mortall and incurable otherwise, but the entrailles of

* A kind of
gum, called
Sanguis Dra-
conis.

* Theriaci. For
the trochisci in the
primitive and
naturall signifi-
cation is more
general of the
bit of vipers, which
is any wild or
venomous
beast.

the

counter charme against all forceries and witchcrafts : and more particularly, if a Bat be borne G thrice round about a sheepe-coat, and then hanged vpon the lintell of the dore, with the heeles upward, it will serue for a singular preservative to defend the sheep from all such harmes. As for the bloud of a Bat, they commend it highly for healing the sting of serpents : if together with the leaues or seeds of a thistle it be applied to the place.

Touching the venomous spider called *Phalangia, they know not in Italy what it is, for all there be many kinds thereof: for some are like vnto Pismires, but that they be far bigger; their heads be reddish, the rest of their body black, howbeit here and there marked with white spots. The sting of this spider is more keene and sharpe than that of the waspe. It liueth ordinarily about ouens and mils. The best remedie against the prick of their sting, is to present before the eyes of the patient, another spider of the same kind: for which purpose folke vse to keepe them in store, when they find any of them dead. Their cascs or skins brought into powder and taken in drink, haue the like effect to young weazils or kitlings, as I haue declared before. A second sort there is of these venomous spiders Phalangia, which the Greeks distinguish from others by the name of Lupus. Those that be of a third kind, and yet named Phalangia, are the spiders which be couered all ouer with a certain downe, and of all the rest haue the biggest heads. Cut one of them and rip the bellie, you shall find within two little wormes or grubs, which (if it be true that *Cecilius* hath left in writing) hinder women from conception in case they be knit within a peece of leather of a red deere skin, and tied to their armes or other parts of their bodie before the sunne rising; but this vertue continueth not about one year. Thus haue I shewed one receipt only, of all those that *keepe women from conceiuing; which I may be allowed to do in regard of some wiues, who being too fruitfull and ouercharged with child bearing, haue some reason to play them a while and rest from teeming: and therefore may be pardoned, if they vse some such meanes therefore.

There is another kind of spiders, which the Greeks call Rhagion, for that it resembles a black grape kernill: these haue a very little mouth vnder their belly, and as short legs, as if they were vnperfect and not fully made. Look where they bite, the pain that ensueth is much like to that which is occasioned by the sting of a scorpion: and their vrine who are hurt by them, seemes to shew to the eye, cobwebs stiring aloft. I would say, that this spider were the same that *Asterion*, another kind of them, but that these haue certaine raies or streakes of white. Their sting or prick causeth loosensse and feebleness of the knees. As for the blew spider, which carrieth a blacke downe or cotton, it is worse than both the former, causeth trouble and dimness of the eyes by their pricking, yea, and vomiting of matter resembling cobwebs. And yet there is another Phalangium worse than it, which commeth neare in shape to the Hornet, but that it hath no wings at all, and look whomsoever it biteth, they are sure to become leane and pine away. The venomous spider, called by the Greeks Myrmecion, is headed like vnto an Emmet: the bellie is blacke, howbeit marked with certain white spots: their sting is as painefull as that of Wasps. But as touching that kind of Phalangium which is called *Tetragnatum, there be two sorts thereof: The one, which is the worst of the twaine, hath the head diuided directly in the midst with a white line; whereas in the other, the said line or seame runneth crosse ouerthwart. These make the mouths to swell whom they haue bitten. But those that be of a dead asht colour, and yet whitish behind, are not so quicke with their prick as the rest: Of which colour there is another sort that be altogether harmlesse: and these be our common spiders or spinners which against wals vse to stretch out their large webs as nets to catch poore flies. Now concerning the remedies appropiart to any prick or biting of the foresaid Phalangia, there is not a better thing than to drink in oxycrat, water and vinegre mingled together, the braines of a Cock or Hen with a little pepper. Also to take in drink siue Pismires, is thought to be a singular medicine: and withall to make a liniment of sheeps mucke ashes, tempered in vinegre, and therewith to annoint the grieved place. Moreouer, the said spiders themselves (of any kind whatsoeuer) resolued and putrified in oile, serue for the said purpose.

As for the mischeuous mouse called the Hardishrew, the runner found in a lambes maw taken in wine, healeth the hurt that commeth by her biting: also the application of a salve made with the ashes of a Rams cley incorporat with hony, worketh the same effect: so doth a young weazill or kitling, prepared and vsed in manner aforesaid in the Treatise of serpents. If one of these shrewes haue bitten a horse or other beast, it is good to lay vnto the place a mouse or rat

A new killed, with some salt, or else the gall of a Bat with vineger. The shrew it selfe being burst, and so laid fresh and warm to the sore, cureth the same: for this is obserued, That if one of them be with yong when she doth bite, presently she cleaueth in sunder. And in truth, the best & surest means to cure the hurt, is to apply vnto the wound the very shrew it selfe that did the deed, if possibly shee may be had; and yet the rest are very good: for which purpose they vse to be kept in oile, or els to be dawbed ouer with clay, to serue in time of need: also the earth taken from a cart-rut where a wheele hath gon, is thought to be a proper remedie for the said biting of a shrew, if it be applied thereto: for it is said, that this creature is by nature so benumbed or dull of mouing, that it will neuer go ouer a cart-track.

As touching Scorpions, the lizard named Stellio (by way of a reciprocall counterchange) is the greatest enemy they haue; inso much as at the very sight only of the said lizard, they will be affrighted and astonied and fall into cold sweats: and therefore people vse to putrifie & resoluue Stelliona in oile, and therewith anoint the wounds that Scorpions haue made. Some there be who make a kind of plaistre of the said oile and litharge of siluer boiled both together, wherewith they rub and anoint the grieved place. This lizard, which we name Stellio, the Greeks call Colotes, A scalabotes, and Galeotes: * it breeds not in Italy: but call it what you will, & wher-soeuer it is to be found, full it is of little red spots like lentils; a shrill noise it maketh, that pierceth the eares and goeth through ones head; it doth eat and graze like other beasts, which be marks all contrary to our Stellions or starre-lizards here in Italy. But to come againe vnto the prick of scorpions: it is thought good to rub the same with the ashes of hens dung, mixt with the liuer of a dragon: or to take a lizard that is bursten, and the same to apply vnto the affected place; or a mouse likewise which is clouen in sunder, also to lay to the sore the very same scorpion that did the harm; or to eat him roasted: and last of all, to drinke it in two cyaths of pure wine of the grape. Moreouer, this proper qualitie haue scorpions alone by themselves, That they neuer prick the ball of ones hand, nor sting at all vnlesse they may touch some haire. Furthermore, take any little stone whatsoeuer, and apply that side which lay next the ground vnto the wound, it will ease the paine: likewise any shell or potsherd which lieth with some part of it couered with earth, if it be taken vp and laid vnto the sore, with earth and all vpon it as it was found lying, is said to heale the same perfectly: but in nowise they that haue the applying of it must looke behind them: they ought also to take heed and be very carefull that the Sun shine not vpon them when they are about this businesse. Earth-worms or mads stamped and laid to, are very good to cure the biting of scorpions: and yet they serue besides for many other remedies; in which regard they be ordinarily preferred in hony.

For the sting of Bees, Wasps, and Hornets; for the biting also of those Horseleeches called Bloudsuckers, the Howlat is counted a soueraigne remedie, by a certaine antipathy in nature: also whosoever carry about them the bill of a Woodpecker or Hickway, shall neuer be annoyed with any of the foresaid vermin. The smallest kind of locusts likewise, which are without wings and be called Attelabi, be aduerses and contrarie vnto them all.

ouer & besides the Insects aboue named, there be in some places certain pismires also very venomous, which *Cicero* calleth Solpugæ: but they of Grenado in Spain, Salpugæ: howbeit few or none of them are to be found throughout all Italy. But what help is there for them and their poison? Surely the heart of a Reremouse, otherwise called a bat, hath an operation which is aduerses not only to them, but to all Ants besides.

As for the flies named Cantharides, I haue shewed before how contrarie they be to the venom of the Salamander: and yet considering how hurtful they be themselves, and a very poison to the bladder, causing intollerable pain if they be drunk down, much dispute & question there is among physitians, * how they should be taken and vsed; for how venomous they be, it may appeare by the practise of a certaine Egyptian physitian, whom by occasion that one *Cosinus* a knight of Rome, a great fauorite of the Emperor *Nero*, was infected with the foule tetra called Lichene, the said prince sent for out of Egypt to cure of that disease: but he prepared such a drink of Cantharides for his patient *Cosinus*, that it quickly cost him his life and brought him to his graue. Howbeit there is no doubt, but being applied outwardly they are not only harmlesse, but also very good, especially if they be incorporate in the juice of the blacke wilde Vine called *Vva* Taminia, and sheeps suet or goats tallow. Moreouer, albeit well knowne it is that these Cantharides be venomous, yet those Authors that write of them be not agreed and resol-

* And yet *Matthiolus* vpon *Diocorides* saith it is the *Tarantula* which is common in Tuscany.

* Namely, whether they are to be vsed inwardly at all? whether with their wings, head & feet, or without them.

ued, in what part that venom lieth: for some there be who are of opinion, that their feet are poisoned, others thinke their mischief is all in their head; and there be againe who deny both: but wherefoever the said poison lieth, all conclude jointly vpon this point, that their wings be medicinalable therefore, and do cure the same. As for the generation of these dangerous flies, they be ingendred of certaine little grubs or wormes; and most commonly vpon the spongyous baile which wee see to grow vpon the stalke or stem of the Eglantine: but surely the greatest plenty of them breed in an Ash tree. As for others that come of a white Rose bush, they are not so vehement in operation as the rest: and of them all, those worke most violently which are spotted and of diuers colours, streaked with yellow lines ouerthwart their wings, and besides are very plumpe and fat. The smaller sort, which also are broad and hairy, are nothing so powerful and speedy in their operation. But the worst of all, and least effectually in physicke, be those which are of one entire colour, and leane withall. Now for the manner of preparing and ordering of them for physical vses; they would be gotten when Roses be fully out: heaped vp together in one masse, and so bestowed in an earthen pot not pitched, varnished or nealed, the mouth wherof is close stopped with a linnen cloth: then are they to be hanged vp with the mouth of the said pot downward ouer some vinegre boiling with salt, vntill such time as by the fume or vapour thereof steeming through the said linnen clout, they be choked and killed: and afterward they be layd vp and reserued for vse. Of a causticke and burning nature they are, in so much as they will raise blisters, yea and leaue an eschar vpon the exulcerat place.

Of the like force be the wormes *Pityocampæ*, breeding in pitch trees: so is the venomous flie or beetle called *Buprestis*: and after the same maner be they prepared as the *Cantharides*: All the sort of them in generall be most effectually to kill the leprosie, and ilfaured tetter, called *Lichen*. Besides, they haue the name to prouoke womens monethly termes, and vrine, which is the cause that *Hippocrates* prescribed them to be vsed in a dropsie. To conclude with these *Cantharides*, I thinke it not amisse to note, That *Cato* synamed *Vticensis*, was accused and endited for selling of poison; because in the generall portsale of the kings goods, amongst other moueables, he held *Cantharides* at threescore sesterces a pound, and made so much money of them.

CHAP. V.

¶ Of the Ostrich greace, and of a mad Dog: of Lizards, Geese, Doves, and Weazils, with the medicines that they do yeeld.

* Some readeth
thirry.

I Cannot chuse but relate also by the way, vpon this occasion ministred, that at the same time Ostrich greace was sold for * eighty Sesterces the pound: and in truth it is much better for any vse it shall be put vnto, than goose greace.

As touching diuers sorts of venomous hony I haue written already: but for to repress the poison thereof, it is good to vse other hony wherein a number of bees haue been forced to die: and such hony so prepared and taken in wine, is a foueraign remedie for all those accidents that may come by eating or surfeiting vpon fish.

For the biting of a mad dog take the ashes of a dogs head burnt, and apply it to the fore, it wil saue the Patient from that symptome of being afraid of water, which is incident to such as be so bitten. [And now by occasion of speech know thus much once for all, That all things which are to be calcined require one and the same manner of burning, that is to say, within a new earthen pot neuer occupied before, well luted all ouer with strong cley, and so set into an oven or furnace vntill such time as the contents be calcined.] The said ashes made of a Dogs head is singular good likewise to be drunke in the same case: wherefore some haue giuen counsell to eat also a dogs head. Others seeke after the wormes that breed in the carcase of a dead dog, and hang the same fast about the necke or arme of the party that is bitten: or els they lap within a cloath some of the mensrual bloud of a woman, and put it vnder the cup or pots bottom out of which the patient drinketh. And there be some againe who burn the haire of the same mad dogs taile, and conueigh the ashes handsomely in some tent of lint into the wound. Moreouer it is commonly said, That as many as haue a Dogges head about them, no other Dogges will come neere to do them any harme. In like manner, if a man carry a dogs tongue in his Shooe vnder his great toe, there will no Dogges bay or barked at him. If hee haue

about

A about him a weazils taile, which hath bene let goe againe after it was cut away. There is to be found under the tongue of a mad dog, a certaine slimy and grosse spittle, which being giuen in drinks to those that are bitten, keep them from the feare of water, which symptome the Greeks call *Hydrophobia*: but the best and most soveraigne remedie of all other, is the liuer of the same dog that in his madnesse bit any body, eaten raw, if possibly it may be; if not, yet sodden or boiled any way; or else to cause the Patient for to sup the broth that is made of the same dogs flesh. There is a certaine little worke in dogs tongues, called by a Greeke name *Lytta* which if it be taken out when they be young whelpes, they will never after proue mad, nor lose their appetite to meat. The same worke giuen to such as are bitten with a mad dog, proueth them from beeing mad; but with this charge, that before they take the same, it must be carried three

B times about the fire. Also the braines of a Cocke, Capon, or Hen, is singular good against the biting of a mad dog: but if one haue eaten the same, the vertue thereof indureth but for that yeare onely, and no longer. It is commonly said, that the crest or combe of a Cocke well bruised and stamped, and so laid in manner of a cataplasme to the place bitten, is very effectually to cure it: as also the greafe of a goose incorporate with honey. Furthermore, some there be who vse to salt the flesh of dogs which haue bin mad, and so keepe it to giue in meat vnto those who chance to be bitten by others. There be, who take some young whelpes, male or female according to the sex of dog or bitch that hath bitten any one, and presently drowne them in water, causing the Patient to eat their liuers raw. The yellow or reddish dounge of a cock or a hen, dissolved in vineger, and applied to the sore, is singular good. The ashes also of an hardy shrewes taile, provided alwaies, that the shrew were let goe alieue, so soone as she was curt-tailed. Moreover, a piece of clay taken from a swallows nest, made into a liniment with vineger: or the ashes of young swallows newly hatched and burnt: the old skin alio or slough which a snake vseth to cast off in the spring time, stamped with a male crab-fish, and with wine brought into a Cataplasme, be all especiall remedies for the biting of a mad dog. As for the skinn or spoile of a snake, if it be put alone in a chist, presse, or wardrobe, among cloaths, it will kil the moth. But to come againe vnto a mad dog: his poison is so strong, that whosoever do but tread upon his vrine, especially if they have any sore or vlcere about them, they shall sensibly feelee hurt thereby. Now what remedie is there for such? None better than the dung of a caple, well wet and tempered with vineger, and the same laid very hot within a fig to the foresaid sore. These may seeme to

C some men strange things & monstrous; but lesse will they wonder hereat, when they shall heare and consider, that a stone which a * dog hath taken vp with his mouth and bitten, wil cause debate and dissention in the company where it is: and yet this is held for a certain truth, in so much as it is growne into a common prouerbe and by-word, when we perceiue those that dwell in one house together to be euermore jarring and at variance one with another, to say, You haue a dog-bitten stone here among you. Again, whosoever maketh water in the same place where a dog hath newly pissed, so as both vrines be mingled together, shall immediatly find a coldnesse and astonishment in his loines, as folke say.

That kinde of Lizard, which of some Greeks is called *Seps*, of others *Chalidicum*, hath a venomous tooth: howbeit, the same worke or serpent taken in drinke, cureth the bit which it selfe inflicted.

E If wilde Weazils haue empoisoned any body, let the patient take a large draught of the broth of an old Cocke, he shall finde it to be a very foueraign remedie therefore: but about all, it is most effectually against the poison of the herbe *Aconitum*; but then it must be giuen with a little salt among.

Against the poison of venomous Tadstoles and hurtfull Mushromes, hens dounge (I meane that part alone which is white) sodden with * Hyssope or honied wine, is singular good, for it represseth and killeth the malice thereof. And the same otherwise keepeth downe ventosities and stuffing of the stomacke, ready to choke one. Whereat I cannot chuse but maruell much, considering that if any other living creatures do tast never so little of the said dung (but man or woman onely) they shall be exceedingly vexed with winde in the belly, and other grievous wrings and torments.

F The Sea-hare is knowne to be venomous; but goose bloud taken with an equall quantity of oile is a foueraign counterpoison for it. Of this bloud, incorporat with the best *Terra Sigillata* of the Island *Lemnos*, and the iuice of the *S. Mary* thistle called *Bedegnar*, there be excellent trochisks

* For the maner of a dog is to be angry with the stone that is thrown at him, with our regard of the party that slung it: whereupon groweth the Prouerbe in Greeke, *οτι ο κυνς οτι ο βουλος*

* In hyssope de: collis, aut mul: some readeth, *collis aut mul: cum asyno de: collis in mul: i. Boiled with tried greafe of sheeps wool, in honied wine.*

trochifchs made weighing five drams apeece, which are vsually kept in a readineffe for to bee drunke in three cyails of water as a counterpoison and countercharme, against all venomous confectiōns and diuelliſh forceries: for which purpose ſerveth alſo a yong ſucking Weazill prepared in manner aforeſaid. The rennet in a lambs maw likewiſe, is paſſing good for any ſuch in- direct means wrought by poiſon or witchcraft: like as the blood of ducks and mallards bred in the realm of Pontus, and therefore their blood is ordinarily kept dry in a thicke maſſe, and as need requireth is diſſolved and giuen in wine: but ſome think, that the blood of the female duck is better than that of the mallard or drake. Semblably, the geſier of a ſtorke, and the rennet or read of a ſheep, is thought to be ſingular good for any poiſons whatſoeuer. The broth or deco- ction of Coleworts boiled with Rams mutton, hath a peculiar vertue againſt the Cantharides. Ewes milke alſo drunke warm, availeth much againſt all poiſons, vnleſſe it be the venomous flie Bupreſtis, or the deadly herb Aconitum. The dung of wild quois or ſtockdoves taken in drink, hath a ſpecial vertue to helpe thoſe that haue drunke quicke-ſilver. Finally, the fleſh of the or- dinary or common houſe weazill kept in ſalt, is a preſent counterpoison againſt all venome that goeth vnder the name of Toxicum, if one drinke of it the weight of two drams.

CHAP. VI.

¶ Medicines to bring haire againe in places that by ſome diſeaſe are bald: alſo to rid away nits: for to rectifie and keepe in order the Eye-lids, and the haire growing thereupon: for to cure the pearle in the Eye: and generally for all the accidents befalling to the Eyes: laſt- ly, for the impoſumet kernels behind the eares.

* The Latines in o d time af- ter the ſame analogie cal- led the dung offwine, Sa- cerda, of kine and oxen, Bu- cerda, like as the nature of men, Homerda

* This Idoll of the Panims, I take to be cal- led in the ho- ly Scripture, Beel-zub.

THe naked places in head or beard, are replenished again with haire by a liniment made of the aſhes of ſheeps dung incorporat in Cyprin oile & hony: alſo with the aſhes of mules or mullets houſes, applied with oile of Myrtles. Our countryman and Latine writer Varro affirmeth moreouer, That the dung of mice (which he by a proper name calleth * Muscerda) is a convenient medicine for the ſaid infirmity and defect: he attributeth alſo the ſame operation to the heads of flies applied freſh to the bald place, if ſo be the ſame were before rubbed hard, and in ſome ſort fretted with a figtree leafe. Some vſe in this caſe the blood of flies: others min- gle their aſhes with the aſhes of paper vſed in old time, or els of nuts, with this proportion, that there be a third part only of the aſhes of flies to the reſt, and herewith for 10 daies together rub the bare places where the haire is gone. Some there be again, who temper and incorporat toge- ther the ſaid aſhes of flies with the juce of the Colewort and breſt-milk: others take nothing thereto but hony. Certes, a ſtrange thing it is of theſe flies, which are taken to be as ſenſeleſſe and witteſſe creatures, yea, and of as little capacity and vnderſtanding as any other whatſoeuer: and yet at the ſolemne games and plaies holden every fifth yeare at Olympia, no ſooner is the bull ſacrificed there to the Idoll or god of Flies called * Myiodes, but a man ſhall ſee (a won- derfull thing to tell) infinit thouſands of flies depart out of that territory by flights, as it were thicke clouds. But to come again to the aforeſaid infirmity of haire-ſhedding: the aſhes of the heads, tails, yea and the whole bodies of mice burnt, are very good to make it come again; eſpe- cially if the haire went off by occaſion of ſome venomous matter or poiſon: ſo are the aſhes of an vrchin or hedgehog medled with hony: or the ſkin therof burnt and applied with tar. As for the head alone of an vrchin conſumed into aſhes, it is thought to be effectual for this purpoſe, that it will cauſe haire to grow again vpon a ſkar: but for the cure of the aforeſaid defect of haire, cal- led Alopecia, the places ought before the application of thoſe topicke medicines, to be wel pre- pared with the razor, and a ſnap ſme or rubificatiue made of muſtard-feed, vntill the place look red: howbeit, ſome chuſe rather to take vinegar vnto it. Here note by the way, that whatſo- ever vertue we attribute vnto hedgehogs, the ſame is more effectual in the porkeſpine. Moreo- ver, Lizards torried yea and calcined as I haue ſhewed before, with the root of reeds or canes that be green and new drawn (which that it may burne the better with the Lizards, ought to be ſliced ſmall) yeeld aſhes, which being incorporat well in oile of myrtles, doe retaine the haire and keep it from ſhedding, if the place be annointed therewith: and the green lizards in this cure and operation be ſimply the beſt: but if you would haue this medicine to work more effectual- ly, put thereto ſalt, Bears greaſe, and Onions ſtamped. Some there be, who in ten ſextars of old oile ſeeth ten greene Lizards, and therewith make a liniment, thinking it ſufficient therewith

A to annoint the place once a moneth, and no oftener. The aſhes of vipets skins doth raiſe haire quickly againe and make it grow apace, where it was ſhed: ſo doth Hens dung that is freſh and new, if the place be plied with annointing. Take a rauens egge, and mix it with the dung afore- ſaid in a veſſell of braſſe, and therewith rub and annoint the head (ſo that it were ſhauen before) it will cauſe the new haire to come vp blacke: but vntill this vnguent be dried vpon the head, the patient muſt hold oile in his mouth, for feare leſt the teeth alſo by this means turn blacke: and withall, this ought to be done in the ſhade or within houſe: and the aforeſaid ointment not to be waſhed off in 4 daies ſpace. Others in this cure, vſe the blood and brains of a raven, toge- ther with ſome thicke and deep coloured wine. Some boile a raven thoroughly, vntill the fleſh be parted from the bones, and in the dead time of the night when euery body is found aſleepe, put him vp into ſome pot or veſſell of lead. There be again, who hauing prepared and rubified the ſkin with ſalnitre, doe annoint the place where the haire is gone or groweth thin, with a liniment made of Cantharides and tar punned & incorporat together. Now for as much as Cantharides be of a cauſtick quality and corroſiue, great heed would be taken that they doe not fret and eat into the ſkin over deep. Now when the place is thus prepared, and lightly exulcerat, they ordain to apply thereto a liniment made of mice heads and their galls, incorporat and wrought toge- ther with their dung, putting thereto Ellebore and Pepper.

The head many times is peſtered with nits, but for to rid them away, there is not a better thing than dogs greaſe. Some for this purpoſe make a diſh of meat with ſnakes, dreſſing and ordering them as eels and ſo eat them; or els they take their ſlough which they ſlip off in the ſpring time, and drinke the ſame.

C Otherwhiles there be certaine branny ſcales called dandruffe, which ouer-ſpread the head: to clenſe it from this ſcurfe and deformity, it were not amiſſe to annoint the head with ſheeps gal tempered with fullers * ſcouring clay, and let it remaine on the head vntill it be drie.

For the painfull head-ache, it is commonly thought, that the heads of naked ſnails (I meane thoſe that be found without ſhells, and are vnperfect yet and not fully made) plucked from their bodies are a ſingular remedy to be hung about the neck or tied to the head; with this charge, that there be taken forth of their heads firſt a certain ſtony hard ſubſtance, which is made flat and broad like a thin grauell ſtone; and if the ſaid ſnails be but yong and ſmall, they vſe to ſtamp them, and in manner of a frontall apply them to the forehead. In like manner, the bones of a Vultures head, whether it be the common Geire, or that which the Greeks call *Ægyptios*, han- ged about the neck or faſtned to the arms: alſo the brains of the ſaid ſoule tempered with the oile of Cedar-roſin, driueth away the head-ache, if either the head be thoroughly annointed, or the noſtrils within forth, therewith. The brains of a crow or of an owle, being ſodden and eaten wil do as much. Some think it good in this caſe, to lap the head and forehead with the feathers or plume plucked from about the neck of a cocke, or with his creſted combe, but it muſt bee of ſuch a cock as hath bin cloſe ſhut vp as a priſoner and kept from meat and drinke a whole day and a night; but take this withall, the patient who is troubled with the head-ach, muſt faſt as long from all meat and drink. The aſhes of a rat or weazill applied to the forehead, eaſeth the pain, ſo doth a twig or ſtick taken from a purtocks neſt, laid under the pillow of the ſick perſon; yea and a liniment made of a mouſe ſkin burnt to aſhes, mixed with vinegar, & ſo applied.

E Many do ſay, that the little hard bone in the head of ſnails (ſuch eſpecially as are found betwixt two cart-tracks) if it be put through the eare, and hanged thereto within a little box of Iuorie, or otherwiſe tied faſt and carried about one within a piece of a dogs ſkin, is a remedy for the head ach that neuer fail-eth, and may ſerue to do many good. If the head be hurt, or the crown crackt, lay to the wound a copweb with oile and vinegar, and ſo let it lie, it will not lightly goe off vntill ſuch time as it be perfectly healed: this copweb is very good alſo to ſtaunch the blood * of wounds in a Barbers ſhon. But ſay that the blood gush out of the head, and from the brain, what is to be done in that caſe? Surely there is not a better thing to ſtay the flux thereof, than to in- ſtill and drop thereupon the blood of a goſe or ducke, with the greaſe of the ſaid ſouls, ſodden together with the oile of Roſes. And to returne once againe to the cure of the head-ach: Take a ſwallow feeding in a morning betimes, cut off his head (but let this bee done if poſſibly you can in the ful of the Moon) wrap it within a linnen cloth, and binde it to the head of the patient with the yarn that goeth to the ſelf edge or liſt of a piece of cloth: and ver ſome there be, who in- corporat the ſaid head within white wax, and therewith annoint the forehead, and withall, baſt

* *Creta cimolia* Tuckers earth.

* *Paludibus sanguine fillis* Either when the Barber would ſtop the or ſice of a vaine after blood letting; or when one that is newly wounded, cometh ſtraight bleeding to be dreſſed; or if his own raſor chance to go awry & ſhauo the quicke, while he hath a new blade ſhined to trim.

dogs haire downe to a bend or peece of cloth, and fasten the same close to the said forehead.

dogs haire downe to a bend or peece of cloth, and fasten the same close to the said forehead.
Let vs come lower to the eielids: it is said, that if one do eat the brains of a crow with meat, it will make the haire there to grow: so doth the tried greafe of sweatie wooll called Oesypum, if the edges or brims of the eielids be annointed with it and myrrh hot, with a fine penfill. Many promise the same effect, if there be taken the ashes of flies and mice dung, of each an equal portion; so as they both together amount to the weight of halfe a dram or denier Romane; adding thereto of Stibi or Antimonium * two six parts of a denier; so as they be all incorporat with Oesypum aforesaid, and therewith the eielids be annointed. Likewise young mice are imployed to the same purpose, being braied in a mortar with old wine to the consistence of those medicines which be called Acopa, and prepared to dissolue lassitudes. If any haire grow in the eielids vntowardly and be offensive to the eyes, or otherwise, pluck them forth, and annoint the place with the gall of an vrinch, they will neuer grow againe to trouble you: of the same operation and effect, is the humor or liquor that the eggs of the Star-lizard called Stellio, doe yeeld from them: the ashes of a Salamander: the gall of a green lizard, tempered with white wine and permitted in the Sun to thicken and dry vntill it haue gotten the consistence of hony, lying all the while in some bason or vessell of brasse: the ashes of young swallows with the milky iuice of the Tithymall: and last of all, the slime or froth that issueth from shel-snails.

the Thymall: and last of all, the flime or froth that issueth from their-nails: To come nearer to the very eies; the fiery red spots or pearles appearing in the chrySTALLINE humor, which the Greeks call Glaucōmata, may be cured (as our Magicians say) with the brains of a yong whelp or puppie that is but 7 daies old; so as the Chyrurgian with his probe or instrument, do conuey the same gainly on the right side, if the right eye be amiss; and contrariwise on the left side, if the other eie be affected. And some of them affirme, that the fresh gall of a foule called Asio will do as much: this Asio, is of the biggest kind of owls, who haue certaine feathers pricking vp like ears. *Apollonius Pitaneus* was of opinion, that for to cure the cataract in the eie, the gall of a dog was better than that of the Hyæna, so that it were applied thereto with hony: and he was pertuaded, that the same would take away the white spots or pearles of the eie, called Albugines. It is a generall speech, that to clarifie & quicken the eiesight that is dim and ouercast with a mist or cloud, a collyrie or eiesalve made with the ashes of mice heads and their tails, mixt with hony, is a singular medicine: but the same would bee much better in case the said salve were made vp with the brains or gall of an Ægle. The greafe and ashes of a rat burnt field mice: or at leastwise with the brains or gall of an Ægle. The greafe and ashes of a rat burnt and well incorporat in a mortar with the best Attick hony, is a soveraigne remedy for weeping and watery eies: so is Antimonium, otherwise called Strij, but what it this, I meane to declare in my treatise of Minerals. The ashes of a weazil is good for the cataract: so are the brains of a lizard or swallow: and if the same lizards & swallows be either braied in a mortar or foddend, and so applied to the forehead in manner of a liniment, they do repress the violent rheume that takerh to the eies: which effect they worke either alone by themselves, or els with fine floure of meale, or with Frankincense: and in this wise they help the eies and face * blasted and blistered with sun-burning. Moreover, there is not of all others a better medicine to cleare the eie and to rid away all thick flimes and mists that trouble the sight, than to burn the said lizards & swallows alive, and with an eie-salve made of their ashes and hony of Candy, to anoint them. The slough or skin of an Aspis, which she likewise somtyme casteth, tempered with the own greafe, mundifieth the eies of horses and such labouring beasts, if they be annointed therewith. Also, there is not a more soveraigne thing in the world for to remove the cataract, and dispatch the mists and cloudy films that dim the eies, than to burne and calcine a viper alive in a new earthen pot neuer occupied before, putting thereto of the juice of fenell the measure of one cyath, and some corns or crums of Olibanum or frankincense: and this medicine is commonly called * E-chion. Moreover, There is a collyrie or speciall eie-salve made of a viper suffered to putrifie in a pot of earth, so as the grubs or worms that come of the said carrion be stamped and incorporat in Saffron. Some burn a viper with salt in an earthen pot; and they are of opinion, that whosoever do lick the same salt, or let it melt at the tongues end, it clarieth the eies: and that they shall * keep the stomacke and all the body besides in good temper, yea, and liue long by that meanes. They vse to giue also of this salt vnto sheepe when they are not well at ease, and it is thought to be very wholsome for their health: yea, & it entereth into many antidotes & counterpoisons deuised against the venome of serpents. Some there be who vse to eat vipers ordinarily

of Plinie's Naturall Historie.

A rily at their table, for to preferre their eiesight. But for meat they prepare & order them in this wife: first, so soon as they haue killed a viper, they giue order to put salt into the mouth, vntill such time as it hath sucked out the venomous humor that lieth at the root of the teeth, and dissolved or consumed it: afterwards, when they haue cut away to the bredth of foure fingers from vnder the top of the head, and withall taken forth the intraines and garbage out of the belly, they seeth the rest of the body in water, or oile, together with oile and dill seed: and this flesh either they eat out of hand thus dressed, or els working it with some paste, they reduce the same into troches, that they may be preferred for their vie at sundry times. As touching the broth that is made of this decoction,ouer & besides that it is good in those cases before specified, this quality it hath namely to rid and cleanse the

B kill the itch that runnes aloft in the skin. The ashes of a vipers head calcined, are by themselves very effectuell without any thing els; but principally in clearing the sight, if the eyes be annointed therewith in some conuenient liquor: so is the grease also of the viper. As for their gall, I dare not be so bold as to approve that which others confidently haue aduised & prescribed: because (as I haue already shewed) the venome of serpents is nothing els but their gall. The grease of a snake mixed with verdegreece, healeth any part of the eye that is broken: but the slough or old skin which they cast off in the spring, doth clarify the eye-sight, if the eyes bee gently rubbed therewith. The gall of an Hulat likewise is highly commended for the white pearles, the cataracts and thick films which trouble the sight: the fat also of the said bird is as much praised for the clearing of the same. Moreover it is said that the gall of a viper is good for the clearing of the sight.

C for, to proue and trie her yong birds, vseth to force them for to lookedirectly vpon the Sunne) mingled with the best hony of Athens, serueth to annoint the eies, for the webs, filmes, & cataracts which trouble the eiesight. Of the same operation is the gall of a Vulture or Geire, incorporat with the iuice of Porret and a little hony. The like vertue also there is in the gall of a cock or capon, for the pin and web, and for the pearle in the eie, if the same be dissolued in water, yea and for the cataract, especially if the said Cock or Capon be all white. The dung likewise of cocks and capons, I mean that part only thereof which is ruddy and browne, they say, is singular good for those that be pore-blind or short sighted, such also as see not wel but about noon tide. They commend moreover the gal of an hen (but the fat especially) for the little blisters or spots that otherwise arise in the apple of the eie, and for the same purpose.

D them far, and forno cause els. But if there be put thereto the poudre of the red bloud-stone Hematites, and the yellow saffron-coloured Schistos, it is wonderfull how much better it will be for that purpose; yea, and to heale the tunicles of the eyes that be broken. Moreover, Hennes dung, as much only of it I meane, as is white, many vsē to keep in old oile within certaine boxes of horne, for to cure the white pearles that grow in the apple of the eye. And since I am entered thus farre into the dung of Pyllaine, I must aduertise you what is reported of Peacocks. That they doe eat and swallow downe againe the same dung which themselves haue meured for very enuie that they haue vnto mankind, knowing by a secret infinit of Nature how good it is for many vses. Furthermore, it is an opinion commonly receiued, that all the race of Faulcons, if they be boiled in oile Rose and Frankincense, will be good for the cure of the same.

¶ they be boiled in Oile Rolat, are soueraigne for any accidents of the eyes whatsoever, if they be bathed with that decoction. Semblably, it is said, that their dung reduced into a shes and incorporat in the best hony of Athens, is very good therefore: as also the liuer of a Gledé or Kite is much commended in those cases. Pigeons dung tempered in vineger, cureth the fistulae which are between the lachrymall corners of the eyes and the nose: and otherwise is singular for the white pearls and the cicatrices or films growing in the eyes. Goose dung and duckes blood be both of them very soueraigne for to soake out the blacke blood in the eyes, occasioned by some contusion or bruise, with this regard, that they be afterwards annointed with * Hyssöpe and Honey. The gall of a Partridge mixed with honey, of each a like weight, mightly cleareth the eyesight: so doth the gall of a fallow Deere applied simply alone, without any mixture or addition at all. But these galls cureth but the eyesight.

"Haliartos, i.
the sea Ægle
or Orfray.

* *Hysso*, vn-
lesse we reade
Oesypo, which
is the tried
grease of vn-
washed woolle.

pinion, because that blood is hotter, and therefore by so much the better. But when the eyes be dressed with this blood, it would not be forgotten, that there be a thin bolster boiled in honey, laid aloft, yea, and a lock of greafe wooll vpon it, which had bin soaked either in oile or wine. The blood of the fowls abouenamed helpeth those that cannot see toward a night: the liuer also of a sheep doth the same: but if the said sheep be of a russet or browne colour, the medicine will do the better: for as I obserued before in Goats, those that carry such a coat, bee alwaies esteemed best. Many giue counsell to foment and wash the eyes with the decoction of the said liuer: and if they be in pain and swollen withall, they aduise to annoint them with the marrow of a Mutton. They promise also, That the ashes of scrich-owles eyes put into a collyrie, will clarify the sight. Indeed the dung of Turtles consumeth the white pearles in the eyes; so doth the ashes of shell-snailles or hoddidods: as also the meuting of the kestrell Cenchris, which the Greeke writers will haue to be a kind of Hawke. As for the spot or pearle in the eye called Argema, it may be cured by all those medicines aboue rehearsed, so that they be applied thereto with hony. But the best hony simply for the eyes, is that wherein a number of Bees were forced to die. Whosoever hath eaten a young storke out of the nest, he shall (they say) continue many yeares together, and neuer be troubled with inflamed or bleared eyes: like as they that carrie about them a Dragons head. It is said moreover, That the Dragons greafe incorporat in honey and old oile, dispatcheth and scattereth the filmes and webs that trouble the sight, if they be taken betimes before they be grown too thicke. Some there be who at the full of a Moone put out the eyes of yong swallowes, marking the time when they haue recovered their sight againe: for then they pluck off their heads and burne them to ashes, which being tempered with hony, they vse for to cleare their owne sight, to ease the pains, and discusse the blearednesse of eyes, yea and to heale them, if they haue caught a blow or rush. As for Lizards, they vse to prepare them many and sundry waies for the infirmities incident to the eyes. Some take the green Lizard and put her close within a new earthen pot that neuer was occupied; and therewith of those little stones which the Greeks call * Cinadia, (and these are usually applied vnto the shere for the swelling glandules and tumors that many times rise there) marking euery one of them respectively by themselves: which being done, they take forth of the pot euery day one; & when the ninth day is come, they let out the Lizard, and then they keepe the said stones thus ordered and prepared, as soueraigne remedies to allay the pain and griefe of the eyes. Others get a green Lizard and put out her eyes, and bestow her in a glasse with a bed of earth vnder her in the bottom thereof, and withall, inclose within the said glasse certaine rings, either of solid yron or masse gold: and so soon as they perceine through the glasse, that the Lizard hath recovered her sight againe, they let her forth: but the said rings they keepe with great care and regard, as a speciall meanes for to helpe any bleared eyes. There be moreover who vse the ashes of a Lizards head in stead of Stibium or Antimonium; for to make smooth the roughnesse of the eye-lids. Some hunt after green Lizards with long neckes, which breed in sandy and gravelly grounds, and when they be gotten, burne them to ashes, with which they vse to repress the flux of waterish humors which begin to fall into the eyes, yea, and therewith consume the red pearls growing therein. It is said moreover, That if a Weasels eyes be pecked or plucked out of the head, they will come againe, and shew will recouer her sight: and therefore they practise the like with rings and them together, as I obserued before in Lizards. Furthermore, it is said, That as many as carry about them the right eye of a serpent tied vnto any part, it is very good for to stay the violent rheumes that haue taken to the eyes, but then in any wise the serpent must be let goe aliove after that she hath lost her eye. As touching those eyes which be euermore weeping, and do stand full of water continually, the ashes of the star-lizards head called Stellio, together with Antimonium, helpeth them exceeding much. The copweb which the common Spider maketh, that vseth to catch flies; but especially that which shee hath woven for her nest or hole wherein the lieth her selfe, is soueraigne good for the flux of humours into the eyes, if the same be applied all ouer the forehead, so as it meet with the temples on both sides: but wot you what, none must haue the doing hereof, either to get the said copwebs, or to lay it vnto the place, but a young lad not as yet vndergrowne, nor foureteene yeares of age: neither must he be seene of the partie whom hee cureth, in three daies after: ne yet during the space of those three daies must either hee or his Patient touch the ground with their bare feet: Which circumstances and ceremonies being duely obserued, it is wonderfull to see what a cure will follow

* Because they be found in the fish called Cinadia.

- A follow thereupon. Furthermore, it is said, That these white spiders with the long and slender legs, being punned and incorporat in old oile, be singular for to consume the white pearle in the eye, if the same be dressed with that composition. Also thote spiders that worke ordinarily vnder roofes, rafters, and boarded floores of houses, and weaue the thickest webs, if any of them be inwrapped within a piece of cloth and kept bound to the eyes or forehead, do retrain for euer the said rheumes and catarrhes that haue found a way to the eyes. The greene Beetle hath a property naturally to quicken their sight who do but behold them: and therefore these lapidaries and cutters or grauers in precious stones, if they may haue an eye of them once & looke vpon them, take no more care for their eye-sight, how it should serue their turnes when they are at their worke. Thus much of eyes.
- B As concerning the ears and the infirmities incident vnto them, there is not a better thing to mundifie and cleanse them than a sheepes gall with hony: and a bitches milke if it be dropped into them, easeth their paine. Dogs greafe tempered with Wormewood and old oile, helpeth those that be hard of hearing, so doth Goose greafe: howbeit, some put thereto the iuice of an Onion & Garlick, of each a like quantity. In this case also there is much vse of Ants eggs alone without any thing els: for as little and silly a creature as it is, yet it is not without some medicinal vertues: in so much, as Beares, when they feele themselves sickish or not well at ease, cure themselves with eating Pistmires. As for the manner of preparing as well the greafe of a goose as of all other fowls, this it is: first the fat ought to be clenfed and rid from all the skins, veines, and strings that are among it, and then to be laid abroad to the Sun in an earthen pan, couered ouer with a new lid of earth likewise which had neuer bin vsed: this done, the forehead pan must be set ouer seething water, that the said greafe may melt: and then it is to passe through linnen bags that it may be tried from all the grosse cratchens: and so they put it vp in a new earthen pot, & set it in some cold place against the time that it is to be vsed: howbeit, this is wel known, That if some hony be put thereto, it is lesse subiect to corruption or putrifaction. Moreover, the ashes of burnt mice incorporat in hony, or els sodden with oile of Roses, allaieth the pain in the eares if it be intilled into them. But in case some earwig or such like vermine be crept into the eares, there is not the like means to cause it to come forth againe, as is the gall of mice dissolved in vineger & dropped into them. Also when water is gotten into the head by the eares, Goose greafe, together with the iuice of an Onion, is singular good to draw it out. Moreover, there is a notable medicine made of dormice for all infirmities of the eares, which otherwise could not be cured, but were giuen ouer by all Physitians: for the making whereof, they take a dormouse and flea it, and after the guts and entrails be taken forth, they seeth the same with hony in a new earthen vessell. Howbeit, some Physitians there bee who thinke it better to boile the same with Spikenard, vntill a third part be consumed, and so referre it for their vse: and whensoever after there is need of it, the manner is to infuse the said liquour warme into the eare by a pipe or instrument called an Otenthyte. This is knowne by experience to heale all the accidents of the eares, though otherwise incurable. Also the decoction of earth worms boiled with Goose greafe is singular good likewise to be poured into the eares. But if the eares be exulcerat, broken out, and do run matter, the red worms ingendred about trees stamped in a mortar with oile, are very proper to heale the same, if they be applied thereto. Lizards that haue hanged vp a long time a drying with their mouths downward, if they be punned with salt, serue to heale the eares that haue caught some hurt either by bruise, crust, or stripe. But aboue all other, the Lizards that haue brown spots vpon them like rusty yron, and are straked along the taile with lines, are most effectual for these infirmities. As touching the Wool beads or Caterpillers, which some call Millepedes, others, Multipedes, or Centipedes, which are a kind of earth-wormes keeping vpon the ground, all hairy, hauing many feet, & courbing arch wise as they creep; and if you touch them, they wil gather round together: the Greekes, some call them * Oniscos, others Tylos: these * worms (I say) are very effectual to assuage the pain of the eares, if they be sodden with the iuice of Porrer in the rind of a pomgranat: some put thereto oile of Roses, & giue aduise to poure this medicine into the contrary eare that is not pained. As for that worm or vermin which riseth not archwise with some part of the body in creeping, the Greekes, some call it Sepes, others Scolopendra; which though it be lesse than the former described, yet mischievous enough & venomous: The snails that carry shels vpon their backe, and are usually dressed for good meat, applied with Myrrhe or the powder of Frankincense, are very good for the eares that be crackt: so are the little

* Pliny foundeth Oniscos (which we call a Sow or Wood-louse) with the Caterpillar or woolebead Millepede.

Indeed our Sows or woodlice, called otherwise Porcellions, and Multipedes, but not Millepedes, & which if one touch them, draw themselves round, are good for the eares: but not the foresaid Wool beads or Caterpillers. Millipedes, which in their creeping rise and fall, &c.

tle and broad snail brought into the forme of a liniment with hony, and laid too accordingly. G
 ly. The sloughs or skins that serpents cast, calcined upon a tile or potshard red hot, and so reduced into ashes and incorporat with hony, are very medicinable for all the accidents of the eares, if the same be dropped into them; but principally when they stink or yeeld from them a strong favour: but if they be full of purulent matter, and run withall, it were better to mingle the same with vinger in stead of hony: but best of all with the gall of a Goat, a Boeue, or a sea-Tortois. The foresaid sloughs or skins if they be above one yere old, or have caught much wet by raine and water, haue lost their vertue, & do no good, as some are of opinion. Moreover, the bloudie humour that commeth from a spider, either tempered with the oile of Roses, or els alone by it selfe vpon a locke of wooll, or with a little Saffron, is very good for the eares: so is the Cricket H
 flie vpon a locke of wooll, or with a little Saffron, is very good for the eares: so is the Cricket H
 perities to this poore creature, and esteemeth it not a little: but the Magitians much more a fair deale: and why so? Forsooth because it goeth as it were reculing backward, it pierceth and bo-
 reth an hole into the ground, and neuer ceaseth all night long to creake very shrill. The manner of hunting and catching them is this. They take a flie and tie it about the midst at the end of a long haire of ones head, and so put the said flie into the mouth of the Crickets hole: but first they blow the dust away with their mouth, for feare lest the flie should hold her selfe therein: the Cricket spies the silly flie. sealeth vpon her presently and claspeth her round, and so they are both drawne forth together by the said haire. The inner skin of a Hens giser, which the cook vseth to cast away, if it be kept and dried, and so beaten to powder and mingled with wine, is good to be dropped or poured hot into the eares that runne with matter: so is the fat also I
 of an Hen. There is a certaine kind of fattinesse to be found in the flie or insect called * Blatta, when the head is plucked off, which if it be punned & mixed with oile of Roses, is (as they say) wonderfull good for the eares: but the wooll wherein this medicine is inwrapped, and which is put into the eares, must not long tarry there, but within a little while be drawne forth againe; for the said fat will very soone get life and proue a grub or little worm. Some writers there be who affirm, That two or three of these flies called Blattæ sodden in oile, make a soueraigne me-
 dicine to cure the eares: and that if they be stamped and spread upon a linnen rag and so appli-
 ed, they will heale the eares, if they be hurt by any bruise or contusion: Certes this is but a na-
 flie and ill favoured vermine, howbeit in regard of the manifold and admirable properties which naturally it hath, as also of the industrie of our Ancestors in searching out the nature of K
 it, I am moved to write thereof at large and to the full in this place. For they have described many Kindes of them. In the first place, some of them be soft and tender, which being sodden in oile, they haue proued by experience to be of great efficacie in fetching off werts, if they bee annointed therewith. A second sort there is, which they call Mylæcon, because ordinarily it haunth about mils and bake-houses; and there breederth: these, by the report of Musa and Pylæon two famous Physitians, being bruised (after their heads were gone) and applied to a bo-
 dy infected with the leprosie, cured the same perfectly. They of a third kind, besides that they be otherwise ill favoured enough, carry a lothsome and odious smell with them: they are sharp
 L
 rumped and pin buttocke also: howbeit, being incorporate with the oile of pitch called Pisse-
 læon, they haue healed those vlcers which were thought, *Nunquam sana*, and incurable. Also
 led the Kings evil: the botches or biles named Pani, wounds, contusions, bruises, morimals,
 scabs, and fellons: but then their feet and wings were plucked off and cast away. I make no
 doubt or question, but that some of vs are so dainty and fine eared, that our stomacke riseth at
 the hearing onely of such medicines: and yet I assure you, *Diadormus* a renowned Physitian, re-
 porteth, That he hath giuen these foure flies inwardly with rosin and hony, for the jaundise, and
 to those that were so strait winded that they could not draw their breath but sitting vpright.
 See what libertie and power ouer vs these Physitians haue, who to practise and trie conclusi-
 ons vpon our bodies, may exhibite vnto their Patients what they list, bee it neuer so home-
 ly, so it goe vnder the name of a medicine. Howbeit, some of the more ciuile sort, and who M
 carried with them a better regard of man-hood and humanitie, thought it better and a more
 cleanly kinde of Physicke, to referue in boxes of horne the ashes of them burnt, for the vses a-
 boue named. Others also would beat them (after they were dried) into powder, and minister
 them in manner of a clystire vnto those that were * Orthopnoicke and Rheumaticke.
 Certes,

* which Pliny
 taketh for a
 kind of Scara-
 beus or Beetle.

* Orthopnoici:
 Such as canot
 take their
 wind but sit-
 ting vpright.

A Certes it is well knowne and confessed, that a liniment made of them will draw forth prickles,
 thorns, spils, and whatsoeuer sticketh fast within the flesh. Moreover, the honey wherein Bees
 were extinct and killed, is soueraigne for the diseases of the eares. As for the impostumes and
 swellings arising behinde the eares, called Pacotides, Pigeons dung applied thereunto, either
 alone by it selfe, or with barley meale and oatmeale, driueth them backe or keepeth them down.
 Also the liuer or brains of an Owle being resolu'd in some conuenient liquor, and applied ac-
 cordingly, cureth the accidents of the lap of the eare, and the foresaid impostumations, so doth
 a liniment made of the wormes called Sowes, together with the third part of rosin: and lastly,
 the crickets about rehearsed, either reduced into a liniment, or else bound to, whole as they be,
 are good in these cases. Thus much concerning those maladies about specified: it remaineth
 B now to proceed vnto other diseases, and the medicinable receipts respectiue vnto them, drawne
 either from the same creatures, or els from others of that kinde: whereof I purpose to treat and
 discourse in the next booke ensuing.



THE THIRTIETH BOOKE OF THE HISTORIE OF NATVRE,

WRITTEN BY C. PLINIUS

SECVNDVS.

The Proem.

CHAP. I.

¶ The originall and beginning of Art Magicke. When it first began, and who were the
 Inventors of it. By whom it was practised and aduanced. Also other
 Receipts or medicines drawne from Beasts.

E He folly and vanitie of Art Magicke I haue oftentimes already taxed and confu-
 ted sufficiently in my former books, when and wheresoever iust occasion and fit
 opportunitie was offered; and still my purpose and intention is to discover and
 lay open the abuse thereof in some few points behind. And yet I must needs say
 the argument is such as deserueth a large and ample discourse, if there were but
 this only to enduce me, That notwithstanding it be of all arts fullest of fraud, de-
 ceit, and couensage, yet neuer was there any throughout the whole world either with like credit
 professed, or so long time vpheld & maintained. Now if a man consider the thing well, no mar-
 nell it is that it hath continued thus in so great request and authoritie: for it is the onely Sci-
 ence which seemeth to comprise in it selfe three professions besides, which haue the command
 and rule of mans minde about any other whatsoeuer. For to begin withall, no man doubteth
 but that Magicke tooke root first and proceeded from physicke, vnder the pretence of main-
 taining health, curing and preventing diseases: things plausible to the world crept and insinua-
 ted farther into the heart of man, with a deepe conceit of some high and diuine matter therein
 more than ordinarie, and in comparison thereof all other physicke was but basely accounted.
 And hauing thus made way and entrance, the better to fortifie it selfe, and to giue a goodly
 colour and lustre to those faire and flattering promises of things, which our nature is most
 giuen

giuen to hearken after, on goeth the habit also & cloke of religion: a point I may tel you that euen in these days holdeth captiuate the spirit of man, and draweth away with it a greater part of the world, and nothing so much. But not content with this successe and good proceeding, to gather more strength and win a greater name, the intermingled with medicinale reccits & Religious ceremonies, the skill of Astrologie and arts Mathematical; presuming vpon this, That all men by nature are very curious and desirous to know their future fortunes, and what shal be- tide them hereafter, perswading themselves, that all such foreknowledge depends on the course and influence of the stars, which giue the truest and most certain light of things to come. Being thus wholly possessed of men, and hauing their senses and vnderstanding by this meanes fast enough bound with three sure chaines, no maruell if this art grew in proceesse of time to such an head, that it was and is at this day reputed by most nations of the earth, for the paragon & chief of all sciences: inso much as the mighty kings and monarchs of the Levant are altogether ruled thereby. And verily there is no question at all, but that in those East parts, and namely in the realme of Persia, it found first footing, and was inuented and practised there by *Zoroastres, as all writers in one accord agree. But whether there was but that one Zoroastres, or more afterward of that name, it is not yet so certainly resolved vpon by all Auhors: for Eudoxus (who held art Magicke to be of all professions philosophical and learned disciplines, the most excellent and profitable science) hath recorded, that this Zoroastres, to whom is ascribed the inuention thereof, liued and flourished * 6000 years before the death of Plato. And of his minde is Aristotle also. Howbeit Hermippus, who wrote of that art most exquisitely, and commented vpon the Poeme of Zoroastres, containing * a hundred thousand verses twenty times told, of his making; and made besides a Repertorie or Index to euery booke of the said Poësie: this Hermippus (I say) reports, That one Azonaces taught Zoroastres Art Magicke; which master of his liued 5000 yeres before the war of Troy. Certes I cannot chuse but maruell much, first, That this Science and the memoriall thereof should so long continue, and the Commentaries treating of it not miscary and be lost all the while, during such a world of years: considering besides, that neither it was ordinarily practised and continued by tradition from age to age; nor the successors in that facultie were professors of the greatest name, and renowned by any writings. For what one is there, thinke you among so many thousands, that hath any knowledge, so much as by bare heare-say, of those who are named for the only Magitians in their time, to wit, Apuleius & Zaratras Medians, Marmaridius of Babylon, Hippocrus the Arabian, and Zarmocenis of Assyria. For bookes haue we none extant of their writing, nor any monuments which beare record and giue testimonie of such clerks. But the greatest wonder of all is this, that Homer the Poet in his Ilias (a poem composed purposely of the Trojan war) hath not so much as one word of Magicke; and yet in his Odyssæa, where he discourseth of the aduentures, trauels, & fortunes of prince Phylles, such a do and stirre there is with it, as if the whole work consisted of nothing else but magicke. For what is meant by the variable transformations of * Proteus, or by the songs of the * Mermaids, whereof he writeth so much; but that the one was a great forcerer, the other famous witches or Inchantresses. As for that which he relateth of lady Circe, how shee wrought her feats by conjuration only, and raising vp infernal spirits; surely it fauoreth of art Magicke and nothing else. I muste much also, that after Homers time there is no writer maketh mention how this art arriued at Telmessus, a city [in the marches of Lycia] wholly addicted to religion, & so famous for the colledge of priests and soothsayers there: or at what time it made a voyage and passed ouer into Thessaly; where it reigned to rise, and was so vually practised in euery towne & city, that with vs here in these parts of the world it tooke the denomination of * that countrey, and retained the same a long time, notwithstanding that the word Magicke indeed was appropriate vnto a strange and far remote Nation. And verily, considering how about the time of the war and destruction of Troy, there was no other physick in vse but that which Chiron the Surgeon practised, and that during the heat and bloudy wars only; it seemeth very strange and wonderfull to me, That the nation of Thessaly, and the native country of Achilles [and Chiron] should become so famous for magicke: inso much as Menander also (a Poet by all mens iudgement so framed by nature for deep learning and excellent literature, as that he had no concurrent in his time that came neere vnto him) entituled one of his Comœdies, Thessalica; wherein he deciphered and depicted liuely vnto vs the whole order and manner of witches, with all their charmes and incantations, by the vertue whereof they would seem to pull the Moon down from heauen. I would

* K. of the B-
rians, which
some take to
be Abraham.
* It seems that
in this calcula-
tion of years,
Pliny mistakes
the number:
for Plutarch
saith he liued
600 yeres be-
fore the Tro-
jan war, or els
that he means
Lunares annos.
* Picties centus
millia uersum,
i. two millions
of verses.
* Diadoms Si-
calus saith that
this was mer-
ely a fiction, a-
rising herupon,
That Proteus
being aking of
Egypt, accord-
ing to the eu-
stome of the
Egyptian kings
for greater
maiesty and
state, shewed
himself abroad
adorned with
the ensignes, re-
presenting a
Bull, Dragon,
Lion, tree, fire,
and such like:
altering these
ornaments,
which contain-
ed some hiero-
glyphicall
mysteries ap-
propriat to the
person of a
King.
* Three daugh-
ters of Ache-
lous & Calliope
whose names
were Parthe-
nope, Ligia, and
Leucosia, repu-
ted witches, &
able to doe
great matters
by charmes.
* For properly
the Magi were
the wise men
of Persia, and
yet at Rome
they vually
termed Magi-
tians by the
name of Thes-
salians.

A haue thought that Orpheus soon after and in the age next ensuing, had brought in first these superstitious ceremonies, by reason of the propinquity and neighborhood of that region, and that he proceeded therewith to the aduancement of physick, but for one thing which plucketh me back, namely, that Thrace his naturall country and the place of his birth, was altogether ignorant of Magicke, and knew not what it meant. But as far as euer I could finde, the first that is recorded to haue commented and written of this art, was Osthanes, who accompanied Xerxes K. of the Persians, in that voiage and expedition which (in warlike manner) he made into Greece: and to say a truth, he it was that sowed the seeds of this monstrous Art, and infected therewith by the way, all parts of the world wherefoeuer he went and came. Howbeit, those Authors, and historiographers who haue searched more neerly into the matter, set down another Zoroastres, born in the Isle Proconnesus, who wrote somewhat before Osthanes, of that argument: neuertheless, this is held for certain, That Osthanes was the man, who most of all other set the Greecke nations not onely in a hot desire, but also in a madding fit and iraged as it were after Magicke. And yet I must needs say that I haue obserued, that not only at first, but also from time to time, the greatest name that went of learned men and great philosophers, for their singular skill and profound knowledge, arose from the opinion that was of their insight in this Science. Certain it is, that Pythagoras, Empedocles, Democritus, and Plato, were so far in loue therewith, that for to attaine the knowledge thereof, they vndertooke many voiaiges and journies ouer sea and land, as exiled and banished persons, wandering from place to place, more like trauellers than students; and being returned againe into their owne countries, this Art they blazed abroad and highly praised; this they held as a secret and diuine myserie. As for Democritus, he raised a great name of Apollonices Capidones, and Dardanus of Phoenicia, as well by the Books of Dardanus his master (which he fetched from out of his sepulchre where they were bestowed) as also by publishing commentaries of his owne, which were extracts and draughts out of those authors and their writings; which afterwards, receiued and learned by others, so passed from hand to hand, and were so deeply ingrauen and imprinted in the minds and memories of men, that I assure you I wonder at nothing in the world so much, for so full they are of lyes, & so little or no truth, godlinesse, and honesty is contained in them, that men of iudgement and vnderstanding who approue and esteem his other Books of Philosophie, will not beleeue that these works were of Democritus his making: howbeit, this is but a vaine conceit and persuation of theirs; for well it is knowne & confessed, that Democritus led away an infinite number of people by this means, & no man so much, filling their heads with many faire promises, and the sweet impression thereof rauished their spirits after this Art. Moreover, there is yet one point more, whereat I wonder as much as at any other, to wit, that these two professions (Physicke I mean and Magicke) flourished both together in one age, and shewed themselves in their greatest glory; which was about the Peloponnesiack war in Greece, 300 yeres after the foundation of our citie of Rome; at what time as Hippocrates professed the one, and Democritus for his part published the other. Now there is another faction (as it were) of Magitians, which tooke the first foundation from Moses, * Iannes, and Iotapes, Iewes; but many thousands of yeres after Zoroastres: and yet the * Cyprian Magicke is later than so by as many yeres. But to come againe vnto our Magicke abovesaid: there was a second Osthanes in the daies of K. Alexander the Great, who (by reason that he attended vpon him in his train, during his journies and voiaiges that he made) was himself in great reputation abroad, and by meanes thereof gaue no small credit and authoritie to his profession; for that hee had opportunity thereby (as no man need to doubt) to trauell and compass the globe of the earth, and so to spread and divulge this learning in all parts. And verily, that this doctrine hath bin heretofore receiued in some nations of Italy, it appeareth as well by good euidences and records extant at this day in the body of our Law written in the 12 Tables, as by other arguments and testimonies which I haue alledged in the former Booke. Certes, in the 657 yere after the foundation of Rome citie, and not before (which fell out to be when Cn. Cornelius Lepidus and P. Licinius Crassus were Consuls) there passed a decree and act of the Senat, forbidding expressly the killing of mankind for sacrifice: whereby we may euidently see, that vntill this inhibition or restraint came forth, our progenitors and ancestors were giuen to those inhumane and monstrous sacrifices. No question there is verily, but that this Art of Magicke was professed in France, and continued vntill our daies: for no longer is it agoe than since the time of Tiberius Cesar, that their Druidæ (the Priests and Wisemen of France) were by his authority put down,

Kk

together

* It should seeme that these were the Magicians of Pharaoh, of whom S. Paul 2. Tim. 3. chap. maketh mention, who would haue counterfeited the miracles wrought by Moses; where note, that Pliny, ignorant in the holy Scriptures, and void of true religion, saith that Moses the prophet and faithful seruant of almighty God, with such forcerers and enchaunters, for the Paines, wanting the light of the Gospell, attributed all effects and operations about nature, to Magicke; & were not able to distinguish between miracles done by the finger of God or his ministers, and the illusions practised by the diuell and his lims.
* Some interpret this to be meant of Christianity, which was receiued with the first in Cyprus by the preaching of the Gospell, and as it is thought, by St. Barnabas; for that during the infancy of the primitive Church, many miracles were wrought by the Apostles and Disciples of our Sauour Iesus Christ; the heathen hold that Religion of Christians to be a kind of Magicke. Other vnderstand this place of the Priests of Cyprian Venus called Cynareans.

together with all the pack of such Physitians, prophets, & wizards. But what should I discourse any longer in this wife, of that Art which hath passed ouer the wide ocean also, & gone as far as any land is to be seene, even to the vtmost bounds of the earth; and beyond which, there is nothing to be discouered but a vast prospect of Aire and Water. And verily in Brittain at this day it is highly honored, where the people are so wholly deuoted vnto it, with all reuerence and religious obseruation of ceremonies that a man would think, the Persians first learned all their Magick from * them. See how this Art and the practise thereof is spread ouer the face of the whole earth! and how * those nations were conformable enough to the rest of the world in giuing entertainment thereto, who in all other respects are far different & diuided from them, yea and in manner altogether vnknowne to them. In which regard, the benefit is inestimable that the world hath receiued by the great prouidence of our Romanes, who haue abolished these monstrous and abhominable Arts, which vnder the shew of religion, murdered men for sacrifices to please the gods; and vnder the colour of Physicke, prescribed the flesh to bee eaten as most wholesome meat.

CHAP. II.

¶ The sundry kinds of Magicke. The execrable acts of Nero: and the detestation of Magicians.

Magick may be practised after diuers sorts, according as *Osthanes* hath set downe in writing: for it worketh by the means of (1) Water, (2) Globes or Balls, (3) Aire, (4) Starres, (5) Fire-lights, (6) Bassons, and (7) Axes: yea, and many other means there bee, that promise the foreknowledge of things to come: besides the raising vp and conjuring of ghosts departed, the conference also with Familiars and spirits infernall. And all these were found out in our daies, to be no better than vanities & false illusions, and that by the Emperor *Nero*: and yet was he neuer more addicted to play vpon the cythern, nor took greater pleasure to hear & sing tragical songs, than to study art Magick: and no maruell if he were giuen to such strange courses, hauing wealth & world at wil; and his fortunes besides attended vpon & accompanied with many deep corruptions of the mind. But amid those manifold vices whereunto he had betaken and sold himselfe, a principall desire he had, to haue the gods (forsooth) and familiar spirits at his command; thinking that if he could haue attained once to that, hee had then climbed vp to the highest point and pitch of magnanimity. Neuer was there man that studied harder, and followed any Art more earnestly, than he did Magick. Riches he had enough vnder his hands, and power he wanted not to execute what he would; his wit was quicke and pregnant, to apprehend and learn any thing, ouer and besides other means that he practised to bring about this deffine of his, which were so intollerable, that the world could not indure them: and yet he gaue it ouer in the end without effect: an vndoubted & peremptory argument to conuince the vanity of this Art, when such an one as *Nero* rejected it. But would to God he had conferred with familiars & spirits, yea & taken counsel of all the diuels in hell; for to be resolu'd of those suspitious which were gotten into his head, rather than giuen commission as he did to the professed bawds and common harlots in stinking stews and brothell houses, for to make inquisition from house to house after those whom he had in ieioultie. Certes, no bloudy and detestable sacrifices (how inhumane and barbarous soeuer) he could haue performed, but they had bene far more easie and tollerable, than those cruel imaginations which he conceiued, and whereupon he murdered most piteously so many good citizens, & filled Rome with their restless ghosts. But to return again to Art Magick, which *Nero* would so faine haue learned: what might be the reason that he could not reach vnto it? Surely these Magicians are not without their shifts & meanes of euasion to saue the credit of their art, if haply they misse and come short at any time of their purpose: for otherwhiles they beare vs in hand, that ghosts and spirits will not appeare, nor yeeld any seruice to those persons who are * freckled & full of pimples: and haply * *Nero* the Emperor was such an one. As for his limbs otherwise, he had them all, & found they were: besides, the set daies and times fit for this practise, and prescribed by Magicians, he might chuse at his good will & pleasure. Moreover, an easie matter it was for him to meet with sheep, cole black, & such as had not a speck of white or any other colour; for him (I say) who when he list could sacrifice men, and took greatest delight in those sacrifices: furthermore, he had about him *Tyridates*, the K. of Armenia, a great Magician, to giue him instructions. This prince *Tyridates* being vanquished and sub-

A dued by the Romane captains vnder *Nero*, and forced by their capitulations to present himselfe personally at Rome for to do homage vnto the Emperour, trauelled thither all the way by land (which was a fore charge to the countries & prouinces through which he passed, bringing with him as he did the whole pompe and train for the triumph ouer Armenia and himselfe) & came vnto *Cesar*. And why would not this *Tyridates* passe the seas and faile ouer into Italy, the nearest and most expedient way? Forsooth, so precise he was, that he made a scruple, and thought it vnlawful (as all magicians do) either to spit into the sea, or otherwise to discharge into it the necessary excrements that passe from mans body, therby to pollute and defile that Element. Many other magicians he brought with him in his traine. He instructed *Nero* in the principles of Magick, yea and admitted him to their sacred feasts, and solemne suppers, and all to enter him into that profession: but it would not be: for albeit *Nero* enthronized and enstalled *Tyridates* in his kingdom, and gaue him his royalties againe, all would not serue; for neuer could he receiue at his hands by way of remuneration and recompence, the skill of this Science. And therefore we may be fully assured and boldly conclude, That it is a detestable and abhominable Art, grounded on no certaine rules, full of lies and vanities, howsoeuer it carry some shew or shadow rather of veritie: and to say a truth, that certitude which it hath in effecting any thing, proceedeth rather from the diuellish cast of poisoning practised therewith, than from the Art it selfe of Magicke. But what needs any man to seek & hearken after the lies which the magicians in old time haue let flie and sent abroad? When I my selfe in my youth haue seen and heard *Apion* (that great and famous Grammarian) tell strange tales of the herbe *Cynocephalia*, which the Egyptians call *Oxyrites*, and namely that it hath a diuine and heavenly vertue, and was a singular preseruatiue against all poysons, charmes, and enchantments; but whosoever plucked or drew it out of the ground (saith he) could not escape present death. The same *Apion* reported in my hearing, that he hath conjured and raised vp spirits, to enquire and learne of *Homer*, what countryman borne he was? and from what parents descended? many hee durst not report what answer was made againe, either vnto him or them.

CHAP. III.

¶ Of Mould-warps: and of many other medicines taken from sundry beasts, which are in their kind either tame or wilde: and the same medicines digested according to diseases as they orderly follow.

One special argument this may be, to prooue the follie and vanitie of magicians, because of all other liuing creatures, they do admire & set greatest store by these wants or moulds, which Nature seemeth to haue condemned to perpetuall blindness and prison, shutting them vp as it were euermore in a dark dungeon, or keeping them rather vnder the earth, like as they were buried and enterr'd. And yet for all this, these wise men giue more beleefe to those signes which they spie in their bowels and entrails when they be opened, than to the inwards of any beast whatsoeuer. This opinion moreouer they haue of a mould-warpe, that there is not a creature more capable of religion, and fitter to be employed in sacrifice and diuine seruice, than it may they baste not to auouch & warrant, That whosoever swallowes down a whole the heart of a moule fresh killed, whiles it is yet warme and panting with life in it, shall haue the gift of diuination, and foretell the euent and issue of any businesse in hand. Moreover, they affirm, that the tooth of a moule-warpe taken out of her head whiles shee is aliue, is singular to allay the tooth-ach, if it be hanged about the necke, or tied to any part of the body. They talke of many other wonders wrought by this poore creature, which I purpose to deliuer as occasion shall be offered, in place conuenient. And yet when they haue all said that they can of them, that which carrieth the greatest likelihood and probabilitie, is this, That they should be good against the biting of these mufets or hardishrews, for as you haue heard me say before, the very earth that is pressed down with the wheels in a cart-tract, is proper for that purpose. But to leaue these moulds and to follow on still with this maladic of tooth-ach, the said magicians tel vs a medicine made of the ashes of a dogs head (dying of madnesse) that it should be passing good therefore, if it be mixed with the oile *Cyprinum*, & so dropped into the ear on the pained side: howbeit this care would be had, That the said dogs head haue no flesh at all sticking to the scalp or skull, when it is burned and calcined. They say moreouer, that the greatest eie-tooth of a dog growing on the

* As it appeareth by our old English Chronicles, which write of *K. Arthur*, the knights of the round table, and *Merlin* the prophet or magician. * No doubt hee meaneth England, Scotland, & Ireland, which seemed to be seuerat from the rest of the world; where in old time Magicke bare a great sway, and witches still swarm too much. (1) Hydromantia. (2) Spheromantia. (3) Aeromantia. (4) Astrologia. (5) Pyromantia. (6) Lecanomantia. (7) Animomantia.

* *Lentiginosus*. * *Succosius* in *Nero*: *corpora sunt maculosa & fada*. * His skin was full of foule spots.

* *Ad significandum Homerum*.

left side of his head serues well for this grievance, if the tooth that is in pain be scarried round about therewith. Also a bone growing out of the ridge or chine of a Dragon, will do as much; or that of the serpent called Enhydrius. Now are these serpents white of colour, and held al to be the male. The greatest tooth of this Enhydrius is thought to be singular for to scarrie or to let the painfull tooth bloud therewith: but in case the teeth in the vpper chaw do ake, they take two of the vpper teeth of this serpent, & apply them fast therto; but contrariwise if the nether jaw. They that hunt after crocodiles, vse to greafe themselves with the fat of this serpent. Moreover, it is good by their saying, to scarrie the gums about the teeth with the bones taken out of a lizards forehead at the ful of the moon; with this regard, that the same in any wise touch not the ground. Some of them there bewho make a collution with dogs teeth sodden in wine till the one halfe be consumed, and therewith wash the teeth that ake; but the ashes of the said teeth incorporated in hony, are singular good for little children which haue much a do in breeding their teeth. The same medicine is holden to be an excellent dentifrice for to make teeth look white. If the teeth that ake be hollow, they vse to put into the concavity thereof, the said ashes incorporated in mice dung, or els the liuer of a lizard dried. Also if one that is troubled with tooth-ach, set his teeth in a snakes heart & bite it, or hang the same about the neck or otherwise, it is thought to be an effectiual remedy for the said disease. Others there be of the magicians, who prescribe to chew and eat the flesh of a moufe twice in a month, and they assure vs by this means that we shall preuent and auoid the tooth-ach. Moreover, it is said that a decoction of earthworms boiled in oile & poured into the eare on that side where the tooth-ach is, doth giue great easement of pain. The ashes of the same mads burnt, put into the hole of a tooth that is rotten and worm-eaten, causeth it to fall out of the head with ease; and if the teeth that do ake be sound, rub them with the said ashes and the pain will cease. Now the said worms ought to be burnt or calcined vpon a tele or potsherd. Also a decoction of this kind of wormes sodden in squillitick vinegre with the root of a mulberie tree, is a soueraigne medicine to wash the teeth withall when they be in pain. Furthermore, the little grub or worue which is found in the herb Tazill, called *Pebe* *mus* Lauer, hath a wonderful operation to cure the tooth-ach, if it be put into the hole of a faulty tooth: and no maruaile, for the caterpillars that breed in coleworts, will presently fall off if they be but touched with this worm. The punaises also or wall-lice that come from mallows, infused into the ears with oile of rofat, assuage the tooth-ach. The small sandy grit that is found in the horns of shel-snails, conueied into an hollow tooth, presently allaiies the pain. The bare shels of the said snails, hollow as they be and void, calcined and reduced into a shes, and incorporat with myrrhe, are passing good for the gubs: but the ashes of a serpent burnt and calcined in an earthen pot, with salt among, helpeth the tooth-ach, if it be instilled into the eare on the contrary side, with oile of roses. The skin of a snake which she hath cast in the Spring, made hot in oile & the rosin of torchwood, is singular in this case to be distilled into eather of the ears, it makes no matter which: some put therto frankincense and oile of rofat. The said slough or skin of a snake thus prepared and put into an hollow tooth, causeth the same to fall out of their head without any pain or grieve at all. As touching white snakes, how they cast their slough at the rising or apparition of the Dog-star, I hold to be a meere fable; for it was neuer seen or knowne, that they did so in Italy: much lesse therefore it is credible, that in hot countries they should be so late ere they cast their slough. Moreover, it is commonly beleued, that the said slough kept long and incorporat with wax, draweth out a tooth most speedily, if it be applied thereto. Also, snakes teeth, either worn about the necke, or laid to teeth in pain, assuage their grieve. Some are of opinion, that a very spider all whole as it is, caught with the left hand, bruised and incorporat in oile of roses, and so dropped into the eare of the same side that the teeth ake, is very good to mitigat the pain. It is said also, that if a man take all the little bones of an hen (and saue those onely of the legs whole that be hollow) and keepe them in the hole or crany of a wall, and with one of the said bones either hit the tooth that ake, or scarrie the gumble about it, and then presently cast it away when he hath done with it, the paine will immediately be gon. The like effect hath the dung of a rauens, applied hard vnto the place within a locke of wood: likewise of M sparrows, tempered in oile hot and poured into the eare that is next vnto the pained tooth; but surely it will cause an intollerable itch: and therefore many thinke it a more safe and easie remedy, to burn young sparrows in a fire made of Vine-twigs, and the ashes that commeth from them to temper with vinegre, and therewith to rub the said teeth.

How to procure a sweet breath, & to take away the spots that blemish the face: and to amend the infirmities incident to the throat.

IT is said, that for to rectifie the offence of a strong and stinking breath, and to make it sweet and pleasant, it is good to rub the teeth with the ashes of mice burnt, and incorporat with honey. Some there be, who mingle therewith the root of fennell. If the teeth be pricked or scraped with a vulturs quill, it will cause the breath to be sowre: but to doe the same with the quill or prick of a porkepine, is a singular thing to strengthen the teeth and keepe them fast in the head. As touching the sores in the tongue, or the scabs and little vlcers breaking out about the lips, a decoction of swallowes sodden in honied wine, healeth them: but if the lips be chapped, there is not a better thing than to annoint them with the grease of a goose or hen. For the same purpose serueth the tried or rindled grease of swearie wooll, being incorporat with the powder of gall-nuts: also the white cobwebs that spiders doe weave, or else the little fine ones which they work vnder the planks and floors of high lofts, or rouses of houses. * If one chance to burne his mouth inwardly with some scalding broth or otherwise, the milke that a bitch giueth is a present remedie therefore.

As touching the spots that infect the skin of the face, the foresaid tried grease of wool vnwashed, called celypum, incorporat with the hony of the Island Corsica (which of al other is counted most vnpleasant and vntoothsome) is proper to subtiliat and scoure them: the same also laid to the face vpon a lock of wooll, causeth the scurfe or scales whereby the skin seemeth to pill, for to fall away: howbeit some thinke it better to put hony thereto. But say there appeare vpon the face any foule and thick morpew that hath pierced deep into the skin, it is good to rub the same with dogs gall, but first the place ought to be pricked thick with a needle that the medicine may enter in. If the skin look wan, or black and blew, take the light of rams or other sheep, cut them into thin slices like to skins, and lay them hot to the place, or els apply therto pigeons dung. The fat of a goose or hen, is a singular thing to preserve & keep soft, smooth, and dilicat, the skin of the face. As for the ringworms or ill fauoured tetteres called Lichenes, there is a proper liniment made either of the dung of mice incorporat with vinegre, or the ashes of an vrchin tempered with oile. But in this cure, the face ought to be bathed and fomented before with vinegre and salnitre. For to take away any spots or pimples arising in the face, there is not a better thing to apply to them than the ashes of the little broad snails which are commonly found in every place, incorporat with honey. And in truth, the ashes of any snails whatsoeuer, are astringent and hot, by reason of a certain absterfue qualitie that they haue; which is the reason that they enter into potentiall cauteries, or caustick & corrosiue medicines: and therefore they serue in liniments for to kill scabs, scurfs, mange, and leprosie; yea and to scoure away the foule spots called Lentils. Moreover, I read in authors of certain pisfoules greater than the rest, called *Herculanæ*, the which being stamped with a little salt put to them, are good for all the infections of the skin mentioned in the former receit. There is a kind of insect or flie called *Buprestis*, passing like to a long legged beetle, but seldom or neuer be any such found in Italy: kine and oxen catch much harme by this flie; for many times as they graze, they lick it vp with the grasse and swallow it down: and hereupon it tooke that name *Buprestis*: for no sooner commeth it to the gall, but it inflameth and setteth the beast into a great heat, wherupon it swelleth vntill it burst againe. So corrosiue it is (as I haue said before) that being incorporat with goats sewer, and so reduced into a liniment, it takes away the tetteres called Lichenes that be in the face. The bloud of a vultur (i. a geire) tempered with the root of white Chamæleon (I mean the herb so called) and the rosin of cedar, heales the leprosie, so that this liniment be couered with colewort leaues. Of the same effect are the feet of locusts braied in a mortar and incorporat with goats tallow. The greace of a cock, capon, or hen, wel stamped & wrought with an onion, is singular to scoure the spots and specks of the visage: also the hony wherein a number of bees were stifled and killed is proper for the said purpose: But about all, the greace of a swan is commended both for to cleanse the skin of the face from all flecks and freckles, and also take away wrinkles. As for the markes remaining after the cauterie or hor yron, there is no better means to take them out, than a plastre of pigeons dung and vinegre. If the rheume cause the mur, the pofe, or beaunisse in head, I find a pretie medicine to rid it away, by kissing only the little hairie muzzle of a moufe.

As touching the uvula and paine of the throat, they may be both of them eased and cured G with lambs ordure, which passeth from them before they haue bitten grasse dried in the shade. The juice or slimie humor that shel-snails yeeld when they be pricked through with a pin or needle, is singular good in a liniment for to be applied vnto the uvula; provided alwaies, that those snails do hang after, in the smoke. The ashes that come of swallows calcined & burnt, is likewise very soueraigne, being laid to the grieved place with hony; and in that sort prepared, it serueth also for the inflammation and swelling of the tonsils or amygdals of the throat. For the said tonsils and other accidents of the throat, a gargarisme of ewes milke is right soueraigne. There is a certain creeper called, a * Cheeslip, which if it be bruised or stamped, is good for the said infirmities: so is pigeons dung gargarised with wine cuit, or applied outwardly with salt nitre & dried figs. If the throat be troubled with hoarsnesse, occasioned by rheume or catarrhe, H the foresaid shel-snails do greatly mitigat the same infirmities, being first sodden in milke (all the fauce the earthy or muddy substance which they must be cleansed from) and then giuen in wine cuit to the patient for to drink. Some hold opinion, that the snails found in the Ile Astypalæa, are the best of all other for this purpose, but principally the absterfue substance that is found in them. The cricquet called Gryllus, doth mitigat catarrhs & all asperities offending the throat, if the same be rubbed therewith: also if a man doe but touch the amygdals, or almonds of the throat, with the hand wherewith he hath bruised or crushed the said cricquet, it will appease the inflammations thereof. To come now vnto the Squinancie: a goose gall incorporat with the juice of the wild cucumber, and hony together, is a most speedie and present remedy for it: also I the brains of an owle, and the ashes of a swallow drunk in water wel and hot, is good for the said disease: But for this medicine we are beholden to the Poët Ouid. Note that when I speak of any medicine (for what maladie soeuer) made of swallows, the yong wild ones are alwaies the better and more effectual in operation: and those you may know easily by the fashion of their nests where they do build: But if you would haue the best indeed, the yong ones of that kind which are called Ripariæ, passe al the rest for medicinable vses, for so they are commonly named which build in the holes of banke sides. Howbeit, some there be who assure vs, that we shal not need to feare that disease for a yeare together, if we do but eat any yong swallow, it skills not of what kind soeuer it be. Now the order of calcining them from their ashes, is to strangle them first, & so to burn them in their blood within an earthen vessell: and the ashes thus made, is usually giuen either wrought in past for bread, or else to be drunk; and some there be who mingle withall, K the like quantity of the ashes which come of weazils. And this kind of medicine thus prepared, they giue in drink euery day against the kings euill, and falling sicknesse. Moreover, swallows kept and condite in salt, are passing good for the Squinancie, taken in drinke to the weight of a dram at a time: and it is said, that their very nest giuen in drinke, cureth the said maladie. It is a common opinion, that a liniment made with the creepers called Sowes or Multipedes, is most effectual to cure the said Squinancie. And some there be who aduise to take one and twenty of these worms stamped, and to giue them in one hemine of mead or honied water for the said disease; but they must be conceiued downe the throat by a pipe or tunnell, for if this medicine touch the teeth once it will do no good. It is said moreover, that if one drinke the decoction of L mice sodden with veruaine, it is a soueraigne remedy for that disease: as also that a leather thong made of a dogs skin put thrice about the necke, will doe the deed. And some there be, who in this case vse pigeons dung mixed with oile and wine.

As touching the cricks of the nerues or sinewes that serue the nape of the necke; as also for the cramps that draw the head backward, they say, that a twig or branch of a vine taken out of a puttocks nest, and carried about one hanging to the necke or arme, is a speciall remedie for the abouenamed accidents.

CHAP. V.

¶ Medicines for the Kings euill that is broken and doth run: for the paines lying in the shoulders: as also for the griefe of the bowels about the midriff and precordiall parts.

The blood of a weazill is good for the wens called the king euill, when they be exulcerat & do run: so is the weazill it selfe sodden in wine and applied; provided alwaies, that they run

A not by occasion of any launcing or incision made by the Chirurgions hand. And it is commonly said, that to eat the flesh of a Weazill, is effectual for the cure. So are the ashes of a Weazill calcined vpon a fire made of Vine-twigs, if they be incorporat with Hogs greafe. Item, Take a green Lizard and binde it to the fore; but after thirty daies you must do so with another, & this will heale them. Some make no more ado but in a little box of siluer keep the heart of a Weazill & wear it about them. If women or maids be troubled with the kings euill, it were good to make choise of old shel-snails, and to stamp them shels and all into a plaister or liniment: but especially such as be found sticking to the roots of shrubs and bushes. The ashes of the serpent Aspis calcined, are likewise very good for this disease, if they be incorporat with buls tallow, & so applied. Some vse snakes greafe and oile together: also a liniment made with the ashes of snakes B burnt, tempered either with oil or wax. Moreover, it is thought that the middle part of a snake, after the head and taile both be cut away, is very wholesome meat for those who haue the kings euill: or to drinke their ashes, being in the same manner prepared and burnt in a new earthen pot neuer occupied, may if the said snakes chanced to be killed between two cart-tracks, where the wheeles went, the medicine will look much more effectually. Some giue counsell to apply vnto the affected place Crickets digged out of the earth, with the mould and al that commeth vpon: Also to apply Pigeons dung only without any thing els, or at the most to temper it with Barley meale or Oatmeale in vinegre. Likewise to make a liniment of a Moldwarps ashes incorporat with hony. Some there be who take the liuer of a Moule, crush and bruisse it between their hands, working it into a liniment, and lay the same to the fore, and there let it drie on the place C and wash it not off in three daies. And they affirme, That the right foot of a Moule, is a singular remedie for this disease. Others catch some of them, cut off their heads, stampe them with the mould that they haue wrought and cast vp aboue ground, & reduce them into certain trochisks which they keep in a box or pot of tinne, and vse them by way of application to all tumors and impostumes which the Greeks call Apostemata, and especially those that rise in the necke: but then they forbid the patient to eat porke or any swines flesh during the cure. Moreover, there is a kind of earth-beetles called tauri, i. Bulls: which name they took of the little hornes that they carry; for otherwise (in colour) they resemble tickes; some tearme them, Pedunculos terræ, earth-lice: These also worke vnder the ground like wants, and cast vp mould, which serueth in a liniment for the Kings euill, & such like swelling, as also for the gout in the feet, but it must not D be washed off in three daies space. Howbeit, this is to be noted, that this medicine must be renewed euery year, for the said mould wil continue no longer in vertue than one year. In sum, there be attributed to these beetles, all those medicinable properties which I haue assigned vnto the crickets called Grylli. Moreover, some there be who vse in manner and cases aforesaid, the *mould which ants do cast vp. Others for the Kings euill take iust as many mads or earthworms in number as there be wens gathered and knotted together, and bind the same fast vnto them, letting them to drie vpon the place: and they are persuaded that the said wens will drie away and consume together with them. There be again who get a Viper about the rising of the Dog star, cut off the head and taile, as I said before of snakes, and the middle part betwene they burne: the ashes that come thereof, they giue afterwards to be drunke for three weeks together, E euery day as much as may be comprehended and taken vp at three fingers ends: and thus they cure and heale the kings euill. Moreover, there be some that hang a Viper by a linnen thread fast tied somewhat vnder the head, so long till she be strangled and dead, and with that thread bind the foresaid wens or Kings euill, promising vnto their patients assured remedie by this means. They vse also the Sowes called Multipedæ, and incorporat the same with a fourth part in proportion to them, of true Turpentine: and they be of opinion, That this ointment or salue is sufficient to cure any impostumes whatsoeuer.

As touching the paines that lie in the shoulders, there is a proper medicine made in forme a liniment, with the ashes of a Weazill tempered with wax, which easeth the same.

To keepe yong boies from hauing any haire growing on their face, that they may seem alwaies yong, it is good to annoint their cheekes and chin with Ants egges. Also the marchants or hucksters that buy yong slaues to sell them againe for gain, vse to hinder the growth of haire as well of the visage, as in the armeholes and vpon the share, that they may be taken for yong youths still, by annointing those parts with the blood that commeth from lambs when they be libbed, which ointment doth good also to the armpits, for to take away the ranke and rammish smell

* Multipeda.

* For the martins or swallows called Apodæ, build not, but lay and breed in chinks and crannies of old walls.

* Of which being called more & more, come Maure hills, corruptly called Moule hills: for Ants were in old English called Maures: and Moules neuer cast vp such.

smell thereof: but first the haire there growing ought to be pulled vpon by the roots.

* The bowels,
as heart, liuer,
lights, &c.

* Prescribed
vino, not pre-
fused, vino.

* Because they
were brought
from the Isle
Melita, lying
within the
Sclavonian sea

Now that I am come to speake of the precordiall region of the body, know this, That by this one word *Precordia*, I meane the inwards or entrailes in man or woman, called in Latine * *Extra*, whensoever then there shall be pain felt in these parts or any of them, apply thereto a yong sucking whelp, and keepe it hard huggled to the place, doubtlesse the said grieve will passe away from the part to the puppie it selfe, as men say: and this hath been found true by experience in one of those whelpes * ripped and opened aliue, and the said bowels taken forth: for looke what part in man or woman was grieved, the very same was scene infected thereupon, in the puppie. And such whelpes thus vsed for the curing and taking vpon them our maladies, were wont to be entered with great reuerence and ceremoniall deuotion. As touching the pretty little dogs that our daintie dames make so much of, * called *Melitzai* in Latine, if they be euer and anon kept close vnto the stomack, they ease the paine therof. And in very truth a man shall perceiue such little ones to be sicke, yea, and many times to die thereupon: whereby it is euident, that our maladies passe from vs to them.

CHAP. VI.

¶ Of the diseases incident to the lights and liuer. Of those that vse to cast and reach vpon bloud at the mouth.

Mice are very good for the infirmities of the lungs, especially those of Barbarie, if they be first flaid, then sodden in oile and salt, and so giuen to the patient for to eat: Thus prepared and vsed, they cure them that either spit purulent and filthy matter, or else reach vpon there bloud. But a dish of meat made of snailles with shels, is most excellent for the stomacke. But for the better ordering and dressing of them: first they ought to siuer ouer the fire and take a few waulmes till they be parboiled, without touching or meddling one jot with their body: afterwards they must be broiled vpon the coales, without putting any thing in the world vnto them, and then to be serued vp in wine and fish pickle or brine called *Garum*, and so eaten. But the best for this purpose are those of Barbarie. It is not long agoe, that this experiment was found: but since it was once known, many haue done themselves much good thereby. But (that which I had well neare forgotten) many obserue to take them in some od number. Howbeit, as holosome as they are supposed to be otherwise, this discommoditie is found by them, That they cause those to haue a strong and stinking breath that vse to eat them. Being stamped without their shels, and so drunk in water, they helpe them that reach bloud vppward. But that you may know that there be degrees of them in goodness: The best snailles simply are they of Barbary, and namely, those about the quarter neere *Soli*: Next to them are much esteemed such as are gathered in the Islands *Astypelæa*, and *Sicilia*, for they are of a meane bignesse; for such as be grown very great, haue their flesh hard, and bevoid of humidity. Then are ranged in a third place, those that come from the *Balear* Islands, called *Cavaticæ*, because they breed in caues and holes. There be good also brought from the Islands *Capræ*. Holesom these shel-snailles may be well ynough: but toothsome surely they are not, whether they be old kept, or new taken. Those that be found in riuers, & which haue white shels, cary a rank and strong fauour with them: so do the wild sort that are not kept vp and fed in stewes & pits, and be hurtfull to the stomack, but good to loosen the bellie: euen so are all the sort of the little ones. But contrariwise, those that breed in the sea are better for the stomack than others: and most effectuall to allay the pains therof. Moreover, it is said, that they do most good, of what kind soeuer, if they be swallowed downe aliue & all whole with vinegre. Moreover, there be of these snailles called * *Aceratæ*, of a broad making, and growing in many and sundry formes; of whose properties, and how they are to be vsed, I will write elsewhere in place conuenient. The inner skin of a Hen or Capons gesser, preferred till it be drie, and reduced into powder, and so put into a cup of drinke like spice; the same also eaten fresh, & newly roasted or broiled, is singular for the catarrhes that fall into the breast, and for a moist cough. Shel-snailles punned raw & giuen in a supping with three cyaths of warm water, serue wel to appease & stay the cough. Take a piece of a dogs skin, and tie the same about any one of your fingers, which you will, it staies all rheumes and distillations. The broth made of *Patridges*, is soueraigne to comfort and refresh the stomack. As touching the grieve or paine of the liuer, it is said, That the flesh of a wild *Weazill*, or her liuer eaten, is a singular meat there-
fore.

* Haply so named, because they haue little or no bones, quass *quass* *quass*.

Afore: so be Ferrets roasted in manner of little pigs. The worms with many feet called sowes or chefeldips, are very proper for them that draw their wind short; but there must be one and twentie of them, neither more nor lesse, dissolved in the best Atticke hony, and so giuen in drinke and swallowed down by a pipe or tunill: the reason why they must be thus conueied through such a cane or tunill is this, because looke what cup or boule they so touch, they staine the same black. Some take of them to the quantitie of one sextar, and torrifie them vpon a pan or platter, vntill they looke white and be calcined, and then incorporat them in hony: [there be Latine writers who call this worme *Centipeda*, as if it had an hundred feet] and then giue direction, that they should be taken in hot water. Furthermore, it is said, That if the patient do either eat or drinke for the space of nine daies together one snail hot, stamped shell and all in three cyaths of wine, he shall find helpe, if he were giuen either to faint and swoone, or to be lunatick and to go beside himselfe, or else be subiect to the dizziness of the head. Others giue order to take them after another maner, namely, one the first day, the morrow twain, the third day three, the fourth two, and the fift one again: and in this wise they cure those who are shortwinded, or haue an impostume broken within their bodie. There is a kinde of Insect resembling a Locust, but that it hath no wings, which in Greek is called * *Tryxalis*; a Latine name it hath not found yet, as some do thinke: and writers there be not a few, who are of opinion, That it is the same that our Gryllus or criquet. Call it what you will: let there be twenty of them torrified and drunk in honied wine, it is reported for to be a singular medicine for those that cannot take their breath but sitting vpright: and for such as spit bloud. There is one writer who ordaineth to take snailles vn-washed, and to poure vpon them either the Mere-gout of the grape that runneth out first without pressing, or else sea-water, and so to boile them therein, and afterwards to eat them for a cough. And the same Authour giueth counsell, to pun them shels and all, and to take them with the foresaid Mere-gout to the same effect.

* or *Troxallis*,
according to
Alianus.

Touching inward impostumes broken, the hony wherein a number of Bees haue bin drowned to death, hath a peculiar vertue to heale them. The lungs of a Vulture burned to powder in a fire made of Vine-cuttings, giuen in wine morning & euening, if the patient be free from the ague; so there be put thereto one moitie of Pomegranat floures, and the floures of Quinces and Lillies as much of each, is a very soueraigne remedie for those that cast vp bloud out of their bodie: but if he be in a feauer, the same medicine would be taken in the decoction of Quinces.

As for the paine of the spleene, if we may belecue the reccits and prescriptions of the Magicians, the patient ought to haue the milt or spleen of a sheep spread and laid ouer the place: but the patient that hath the application thereof, must say these words withall, *This I do to cure the spleene*: Which done and said, the same milt of the sheep must be laid vp close and hidden within the wall or behind the feeling of the bed chamber where the sick body lieth, and sealed vp with a signet, for feare it should be taken away: with this charge, that he or she that hath the bestowing of it, repeat the foresaid charme nine times thrice ouer. If a dogs bellie be ripped aliue, and the spleen taken forth, whosoeuer cateth thereof, shall find it very good to ease them of the said maladie. But some content themselves with laying it fresh and warme to the region of the spleen. Others giue the spleen of a young whelp but two daies old, in squillitick vinegre, to the patient, but they make not the patient acquainted with the medicine what it is; or else they minister the spleen of an Hedgehog in the same manner. Likewise they giue the ashes of shell-snailles with Line seed and Nettle seed, putting thereto some hony: and this cure they continue vntill the patient be thoroughly whole. It is said moreover, That a green Lizard taken aliue, and hanged so in a pot iust before the dore of the patients bedchamber: with this charge, that euer as he goes in and out he touch the same with his hand, will worke the same effect. The ashes of a scritch-owls head reduced into an vnguent with oile, is good for this purpose, so is the hony wherein Bees were stifled: and lastly a spider, but especially that which they call *Lycos*.

The heart of the bird called a * *Houpe*, is highly commended for the paine of the sides. Also the ashes of shell-snailles boiled in *Ptisane* or husked Barley water: and some in this case apply the same otherwhiles in a liniment onely without any thing else. The ashes of a dogs head (I meane the bare skalle or skull onely) dying enraged and mad, is good to spie: a cup of drinke withall for this disease.

If the loines be pained, it is said, That the starre-Lizards called *Stellions*, comming from beyond sea sodden in wine together with the seed of black Poppie to the weight of halfe a denier

is very good, so the decoction be drunk: howbeit, this care must be had, that the head be cut off first, and the garbage taken forth. The green Lizards are good meat in this case, if they be dressed accordingly, and their feet and head cut away: so are shell-snails, braided shels and all together, and sodden in wine with fifteen grains of pepper. Some vse the feet and legs of an Ægle in this disease, pulling them away backward from the knees: and the right foot they apply fast to the paine of the right side: but the other if the contrary side be grieved. The many-foot Sowes or Cheeslips, which I called before Oniscos, help the same pains, if they be taken to the weight of halfe a denarius in two cyaths of wine.

To conclude with the Sciatica, the magicians giue order to put an earth-worm in a treene or wooden dish, which hauing bin cleft, was stitched vp again with iron wiew, or bound with a plate or hoope of yron: then to lade vp some water therewith, and in it to wash & rince the said worme very well, and then to enterre or burie the same again in the very place from whence it was digged forth: which done, to giue the said water anon to the patient for to drinke out the said wooden dish: and this they hold to be a wonderfull medicine.

CHAP. VII.

¶ Remedies for the dysenterie or bloudie flux. And generally for all diseases of the belly.

THe decoction of a leg of mutton sodden in water with Line seed, is singular good for to be supped off to stay a bloudie flux. So is old Cheese made of Ews milke: and sheeps suet sodden together in some austere wine. The same is singular for the Sciatica passio, and an old cough. The starre-Lizard Stellio, which breeds beyond sea, being slaied, garbaged, and dressed for meat, so that the head and feet be taken away, and so sodden and eaten, is commended also in this case. Moreover it is said, That two snails and one Hens egg, stamped the one as well as the other with their shels, and afterwards gently sodden in a new earthen pot with some salt & two cyaths of wine cuit, or else with the juice of Dates & 3 cyaths of water giuen to the patient to drink who is tormented with the dysenterie or bloudy flux, will bring great alleuian to the said disease. It is thought also, That the ashes of the said shell-snails calcined, if they be taken in wine with a little rosin, are soueraigne therfore. As touching naked snails without any shels, they be found plentifully in Affricke. Passing good they be for the bloudie flux, if 5 of them be burnt and calcined together, with halfe a denier weight of Acacia, & 2 spoonfulls of their ashes taken in Myrtle wine or some other austere & astrigent wine, and a like quantity of hot water. Some there be who in this sort vse all the snails of Barbary. Others thinke it better to take sue of the said snails of Affricke, or rather as many of the broad and flat sort, and to clysterize them for the dysenterie. But if the flux be exceeding vehement, then they put thereto of Acacia the quantitie of a beane. It is said moreover, That the spoile or slough of a serpent boiled with oile rosat in a vessell of tinne, is singular for the Dysenterie and Tinefme, to be injected by a clyster: Or if it be sodden in any other vessell, yet with an instrument or pipe of tin it is to be conueighed into the fundament, that the tiwille thereby may be annointed. The broth of a Cocke cureth these infirmities: but if it be of an old Cocke, it is the more effectually. And yet if the said broth be any thing saltish, it stirreth the bellie & prouoketh to the seege. The inward skin of an Hens gisier broiled and giuen with salt and oile, doth mittigate and appease the wrings caused by the flux of the stomacke. But then this regard must be had before, That neither the Hen haue any come giuen her, nor the patient feed vpon any graine some time before. Pigeons dung being burnt, and the ashes taken in drinke, is of great effect and vertue in these cases. The flesh of a Quoit or Stock-doue sodden in vinegre, is good both for the bloudie flux, and also for the loosenesse, proceeding from the imbecillitie of the stomacke. The Thrush or Mauis roasted with Myrtle berries, is soueraigne for the dysenterie: so is the Merle or black-bird. In which respect, great account also is made of the honey boiled, wherein bees were killed. [Of all the paines that be, the * lliacke passion is most sharpe and grievous to be endured. But it is said, That the blood of a Bat, torne and plucked in peeces aliue, is very good against it; yea, and if the bellie be annointed therewith, it caseth the torment thereof.] But to come againe vnto the flux of the bellie, shell-snails prepared and made in manner aforesaid for those that be short winded, are singular good for to stop the same, and to knit the bodie. So are their

* Or Affricke,

* Ulcer of the guts or bloudie flux.

* A continuall desire to the stoole without doing ought.
* *Dolores colicorum*. Some read *Colicorum*, of the Collicke.

* Which is the torture, or inflammation of the vpper small guts.

A ashes (if they were burnt and calcined aliue) taken in some austere or astrigent wine. The liuer of a cocke roasted, together with the skin of the gisier, which ordinarily the cocke casteth away, dried and kept, and so taken with a little of the juice of Poppy mixed with it, is of great power to remedy these accidents: others take the same skin whiles it is new and fresh, which they broil lone beaten to powder and taken in some grosse and astrigent wine, is singular to stay a flux of the belly. The wild Ring-doue or Quoit, boiled in vineger and water, is of the same effect. The A liniment likewise made of Pigeons dung and hony, is of great vertue, if the patients belly be annointed therewith.

B Touching those that haue feeble stomacks, and cannot concoct and digest their meat. It is said, That the maw or gisier of that kind of Geire or Vulture, which is called in Latine *Ossifragus*, dried, puluerized and drunk, is right soueraigne. Nay, if the patient doe but hold the same gisier in his hand whiles he is at his repast, it will help digestion. And in truth therbee diuers that for this cause weare these gisiers ordinarily about their necks: but I thinke it not wholesome to do so, long, for it maketh them leane as many as vse it, and spendeth their body.

To stay a flux of the belly, the blood of Mallards or Drakes is thought also to be singular good. The meat made of shell-snails, discusseth and scattereth ventosities. The Milt of a Mutton broiled to ashes and giuen in wine, is singular good to allay the wrings and torments of the belly. Of the same operation is the wild Quoit or Ring-doue, sodden in vineger and water. The greater kind of Swallows or Martins called Apodes, are no lesse powerfull, if they be sodden and taken in wine. The ashes of the bird Ibis plucked & burnt without his feathers, & so giuen to drink, work the same effect. But strange it is and wonderfull, if that be true which is reported as touching this malady, namely, that if a Ducke be applied aliue vnto the belly which is tormented with such wrings, she shall draw away the disease into her own body, and die of the torment, but the patient shall be eased by that means. These painful gripes likewise are cured with sodden hony, wherein Bees sometimes were drowned to death.

As for the Collick, there is nothing so good to assuage the paine thereof, as to eat Larkes, which the Latines name *Galerita*. Howbeit, some giue aduise and thinke it better to burne and calcine them in their feathers within a new earthen vessel, & so to stamp them to ashes or powder, and to drink therof foure daies together in water by three spoonfulls at a time. Others make no more ado, but take the heart of a Lark, and bind it to the inward part of the thigh: and there while it was warme. There is a family of the Asprenates, men of good quality and reputation, for that they had bin sometimes Consuls of Rome: in which house, of two brethren, the one was fully cured of the collick by eating these birds, and by wearing ordinarily the heart of one of them about his arme, inclosed within a bracelet of gold: the other being likewise troubled with the said disease, found remedy by a kind of sacrifice which he offered in a little chappell made with vnbacked bricke, piled vp archwise in manner of a furnace: and so soon as the sacrifice was finished, he stoop vp the same againe. That Vulture which is called *Ossifragus*, hath one gut of wonderfull nature, for it is able to concoct and digest whatsoever the said fowl deuoureth. And for certain this is known and generally receiued, that the nethermost end thereof cureth the collick, if the patient do but carry it about him. There are other secret and hidden diseases incident to the guts, wherof there be wonders told: and namely, that in these cases, if yong whelpes before they can see be applied for 3 daies together vnto the stomack especially, and the breast, so that they suck milke from out of the patients mouth the while: the said disease shall passe into the body of the poore whelpes, wherof in the end they shall die. Let the same be ripped & opened, then it will appear evidently what the cause was of the foresaid secret malady of the patient. But such whelpes ought when they are dead to be entered & buried. As for the Magicians, they auousch, That if the belly be annointed lightly with the blood of a Bat, the party thus dressed, shall not need to feare any paine of that part for one whole yeare after: or if it chance that one be pained in the belly, let him (say they) indure to drinke the water that runneth down from his feet when his legs be washed, and he shall find help anone.

¶ *Medicines against the stone and grauell: the paines of the bladder. The swellings in the cods and the share. Also for the biles and botches called Pani.*

FOr them that are troubled with the stone, it is good to annoint the region of the belly with Mouse dung. It is said, that the flesh of an Vrchin or Hedgehog is very good meat & pleasant in tast, if so be he were killed outright in the head at one blow, before that he had time to stee his owne vrine vpon himselfe: and looke whoeuer eat this flesh, shall neuer be subject to the disease of the strangury. The flesh of an Vrchin killed in this sort, helpeth the bladder, in case the vrine passe by dropmeale from it. But contrariwise, if the Vrchin chance to wet and drench himselfe with his owne vrine, as many as eat of the flesh shall fall into the infirmity of the strangury or pissing dropmeale. Moreover it is said, That earthworms drunke either in wine or cuit, is of great efficacy to breake or dissolue the stone: as also that snailles, prepared in that sort as they are ordained to be dressed for shortnesse of wind, work the like effect. Take snails naked out of their shels, and stamp them; giue 3 of them to the Patient to drinke in a cyath of wine the first day, two the morrow after, and the third day one againe, you shall see how it will helpe the strangurie or pissing dropmeale. But let the empty shels be burnt, the ashes therof wil scoure away and expell the stone. Semblably, it is said, that the same effect followeth vpon drinking the liuer of a water-snake: the eating of the ashes of scorpions calcined, either in bread, or with the locusts. Likewise, to take the little stones or grit that be found in the craw of a cocke, or in the giser or maw of a stock-doue: to beat the same to powder, and therewith to spice the drinke, is singular good for the infirmity aforesaid. To do the like with the skin of a Cocke or Hens giser, dried: or if it be new and fresh, to rost and eat it. Also for the stone and other difficulties or impediments of the bladder, it is good to take the dung of Quois or Stock-doues, with Beane meale. In like manner there is much help found by the ashes of Quois feathers, such as be of a wilder kind than the rest, taken with Oxymell. Moreover, the ashes of the guts of this bird giuen to the quantity of three spoonfulls: as also the nest of swallows: and Cricquets infused and dissolved in hot water, are commended for this purpose. Some helpe themselves with the giser of Ossifragus dried: others vse the decoction of Turtles dung boiled in honied wine, or els the broth of the Turtle it selfe. Furthermore, for the difficulty of vrine, it is wholsome to eat blacke birds or Merles, boiled with Myrtle berries: or Grasshoppers fried in a pan: & to drinke the fowls or Cheeclips called Oniscoi, folke make it not strange to do themselves good. But if there be pain in the bladder, it is said, That the broth made of Lambs feet, is soueraigne. If the body be bound or costive, a Cocke-broth causeth it to be soluble: and the same doth withall lenifie the acrimony of humors that cause the foresaid grieffe of the bladder. The dung of Swallows likewise procureth loosnesse of belly, in case it be tempered with hony to the forme of a suppositorie, and so put vp.

Touching the infirmities incident to the feat, the tried greafe of vnwashed wooll, (whereunto some adde Tutie and oile of Roses) the ashes also of a dogs head are soueraigne medicines: the slough likewise which a serpent hath cast, applied with vineger, is good, in case there be chaps and fissures in that part. Likewise, the ashes of dogs dung, which looketh white, incorporat with oile of Roses: & this receipt (they say) was the inuention of *Aesculapius*, and is besides most effectual to take away werts. The ashes of Mice dung, Swans greafe, & the tallow of Oxe or Cow, are helpfull for this infirmity. If the tuill or gut Longaon be relaxed and hang forth, it is good to annoint the same with the moisture issuing forth of shel-snails that is pricked through with a pin or needle, for it driueth it back againe to the right place. If the feat be galled, it is thought that the ashes of the wood-Mouse tempered with hony, cureth the same: or els the ashes of an Vrchin, together with the brains of a Bat, Allum, and the greafe tried out of vnwashed wooll, wil skin it againe. In like manner, Pigeons dung with hony: for the swelling blind hamorrhoids or piles called Condylomata, there is a proper remedy, namely, to rub the place with a spiders body, after the head and legs be cast away. Against the acrimony and sharpnesse of humors, that they should not fret and burne those parts, there is a faire liniment made with Goose greafe, in corporat with Barbary wax, white lead, and oile of rofat. So is the fat of a Swan. These medicines also

A also are said to heale the hamorrhoids that run.

For the pain of the Sciatica, it is thought that raw shell-snailles bruised are good, if they bee taken in Ammeine wine and pepper: also a greene lizard eaten as meate, without the feet, garbage, and head: so is the starre-lizard Stello, but thereto ought to be put the weight of three oboli of black poppy seed.

For ruptures, inward spasmes and convulsions, it auaileth much to take sheeps gal with breest milk. In case the priuities haue an itch & a fretting humor vpon them, or if some offensive werts arise in those parts, the dripping or graue that commeth from a rams lights roasted, doth much good, if the place be therewith annointed. As touching other accidents which happen to those parts, the wooll of a ram calcined and reduced into ashes, euen with all the filthinesse that is therein, is thought to be very good, so that the ashes be applied to the affected place with water. The fewer of the kell of a mutton, but especially that which groweth to the kidneys, incorporat with the powder of a pumish stone and salt, is much commended in this case: also greasie and vnwashed wooll soaked in cold water, is good to be applied to the place: the flesh moreover of a mutton calcined, so as the ashes be incorporat with water. Item, the ashes of a mules house: and the powder of caples teeth braied & puluerized, if the grieved place be strewed therewith.

To come lower to the infirmities of the cods: the powder of the bones of a dogs head without any flesh vpon it, puluerized, is singular therfore. If it fall out that one of the genitoirs be relaxed & hang down lower than his fellow, it is good to annoint the same with the waterish slime and some that commeth from shel-snails; so they say it is an excellent remedy: if there be any foule and malignant vlcers in those parts running with filthy matter, the ashes of a dogges head fresh killed are singular to heal the same: so are the little broad and flat shel-snails bruised and incorporat with vineger, if either the same or the ashes be applied thereto, also the honey wherein bees haue been killed mixt with rosin: the naked snailles likewise which bred (as I said in Barbarie, in case they be stamped & incorporat with the powder of Frankincense & the white of an egg, with this charge, that the said cataplasme be not taken off in 30 daies, by which time it will be ready to fall away of it selfe. Some in stead of frankincense, put the bulbous roots of small onions or scallions. For those who be troubled with the * waterish rupture, it is thought that the star-lizards Stilliones be wonderfull good, in case their head, feet, and guts, bee taken forth, and the rest of the body roasted, but the patient had need to eat of this meat often, and so it helpeth those who cannot hold their water. The like opinion there is of dogs greafe incorporat with * Alum de plume, if the patient take thereof to the quantity of a bean: as also the snailles of Barbary burnt, flesh, shell and all, so as the patient drinke their ashes. Furthermore, it is said, that the tongues of three geefe roasted and eaten, is a speciall remedy for this infirmity: and *Alumaxilans* is he that deuised this receipt.

Touching the biles called Pani, sheeps tallow incorporat with salt torrifacted, is singular good to breake them: but mice dung, with the fine powder of frankincense & orpiment or red Arsenicke, is as proper to resolute them: likewise the ashes of a lizard, and the lizard it selfe split alieue and applied hot thereto. In like maner cheeclips or fowls stamped and incorporat with the right terpentine, to the quantity of a third part, & so brought into a cataplasme. Some there be who to shel-snails punned, adde the common bole-armoniack. Also the ashes of the void shels only alone without the snailles mixt with wax, are of a resolute and discutient facultie. In like manner, a liniment made either of pigeons dung only, or els incorporat with barley meale or oatmeale. The flies called Cantharides mixed with quicklime, are a good potentiall cauterie, and open such biles as well as the Chirurgians launcet. The botches or swellings in the share, a liniment made with the small shel-snails and hony, doth assuage and mitigate. Finally, to keepe down the veins from swelling which be called Varices, it is good to annoint the legs of children with the blond of a lizard, but this must be don, while both the children and the party who hath the doing thereof be fasting.

CHAP. IX.

¶ *Receipts for the gouts of feet and hands: and generally for the paines or diseases of ioints whatsoever.*

THe tried greafe of vnwashed wooll incorporat with womans miik and white lead, is a very proper liniment to mitigate the pain of the gout: so is the liquid dung of sheep when they

run out behind. Their lights likewise, or a rams gal incorporat with their suet. Some split mice and lay them hot to the place: also the blood of a weazil reduced into a liniment with Plaintain; and the ashes of a weazil burnt alive, tempered with vinegar and rose water, and brought into a thin liniment, so that the place affected may be dressed with a feather. Others temper wax and oile of roses together. And there be again who vse dogs gal for this purpose, but in any wise the hand must not touch it, but the place ought to be annointed with a feather: likewise hens dung, and the ashes of earthworms mixt with hony, with this charge, that this cataplasme be not vndone or removed before the third day. Howbeit it is thought better by some, to apply the same ashes with water: but by others to vse vinegar in measure and with moderation, together with 3 cyaths of hony, hauing before hand annointed with oile of rose the gouty feet. It is said moreover that to drink broad snails, is a singular medicine to take away the gout of the feet, or the pain of any other ioint: the manner wherof is to stamp 2 at a time, and drink them in wine: some apply the same in a liniment with the juice of the herb Parietary. Others content themselves to bruise them and so to incorporate them into a cataplasme with vinegar. Many are of opinion, that the gout may be cured, if the patient vse oftentimes to take the salt, which together with a Viper was calcined in a new earthen pot: as also that it is very good to annoint the feet with Vipers grease. And they affirme constantly of a Kite that hath bin kept long dried, if the patient reduce it into powder, and drink thereof in water as much as three fingers will well take vp, it cureth the gout thoroughly. But if the feet be full of blood and swollen withall, they vse Nettles thereto. Some there be that take the yong feathers of a Kite so soon as they put forth, and stamp the same with Nettles to a liniment. The very dung likewise that these foules do meut, serueth in stead of a good liniment to annoint the painful gout in any ioint whatsoeuer: so do the ashes of a weazil or of shell-snails burnt or calcined and incorporate either with Amydum or gum Tragacanth.

If a man haue gotten a rap or rush vpon any ioint, there is not a better thing for to cure it than copwebs: some chuse for this intention, those which be woven by the spiders of ash colour: like as to vse the ashes of Pigeons dung with parched barley groats and white wine. In any dislocation of joints, the most present remedy that is knowne, is theepes suet tempered with the ashes of of womens haire burnt. This suet likewise serueth well to be applied with allum to the kibes of the heels: so do the ashes of a dogs head, or of mice dung. But in case there be any vlcere there not yet putrified, adde wax thereto, and it will skin vp and heale the same: and the like effect is wrought by the light ashes of crickets burnt and tempered with oile, or els with the ashes of the wild wood-mice mixt with hony: of earth-worms also incorporate with old oile: & lastly, many apply thereto the snails that be found naked & without their shels. And verily, the ashes of such snails burnt alive, heale all sores of the feet: howbeit, if the feet be galled & but lightly ex-coriated, there is not a better thing for them than the ashes of hens dung, or pigeons dung incorporate with oile. If the shoo hath rubbed off the skin, or fretted any part of the foot, the ashes of an old shoo-sole are singular good to heal the same: so are the lights of a ram or lambe. The powder of a caples teeth is a soueraigne and speciall remedy for the feet, if there ouste out any matter from vnder the nailes. The blood of a green lizard healeth the galls vnder the foot, yea, and cureth thoroughly the sore feet both of man and beast, if they be dressed therewith.

As for the corns and agnells which arise about the feet, it is good to besmeare them with the vrine of * Mule or mulet, together with the mire in the very place where they staied: also with sheeps dung. The liuer or blood of a greene lizard applied vpon some flocke to the place, or vpon a locke of wooll. Some vse in that order, earth-wormes stamped with oile, or the head of the star-lizard Stellio, incorporate in oile with a like quantity of Agnus Castus. Last of all, others take Pigeons dung foddren in vinegar, and lay the same to the place.

Touching werts, of what sort soeuer they be, there is not a more proper thing to make them fall off, than to bathe them well with the vrine, durt and all, of a dog where he lately pissed: or to apply thereto a salve of dogs dung ashes and wax: it is not amisse also to lay to them sheeps dung, or to rub them wel with Mice-blood new killed: or to apply a Mouse split along the mids aliae: the gall likewise of an Vrchin: the head of a lizard: or the blood: or lastly, the ashes of a lizard calcined: the old slough of a snake also. Lastly, hens dung incorporate with oile and salnitre. If all these medicines fail, begin the cure new with Cantharides incorporate with wilde grapes called Vva tamine: this is a corrosiue, & wil eat them out: but when they be thus fretted & ex-ulcerat

* Muli mulanet
Some take mu-
lu to be the
mule ingeh-
dred by a male
asse & a mare:
but Mula, to be
that mule that
cometh of
a horse and
female asse.

A ulcerat, the cure must be followed with those appropriat means which I haue set downe before in the healing of vlcers.

CHAP. X.

¶ Medicines appropriate for diuers and sundry diseases which possesse the whole body.

Returne we now to the cure of those maladies which are incident not to this or that mem-ber, but to the whole body. First and foremost, the Magitians say, that the gall of a blacke dog (a dog I say and not a bitch) is a singular countercharme and preseruatiue against all B forceeries, inchantments, and poisons, which may indanger a whole house, in case there be a per-fume made therewith to purifie the aire thereof, yea, and to hallow and blesse it against all such dangers. The like effect (say they) we are to look for, if the walls of the said house be sprinkled or striked with the blood of the said black dog, with this charge, To burne vnder the threshold or dore sell at the entry of the said house the genitall member of the same dog. Men may maruell well enough at these fooleries and absurdities of theirs: but surely wonder lesse will they thereat, who know what store they set by illfaured ticks, the foulest and nastiest creatures that be: and why do they thus magnifie so filthy a vermine? because (forsooth) this creature onely of all others hath no passage at all for the voidance of excrements, sucke it neuer so much: and no way there is but death with them when they are thus full, but so long only as they continue hun-gry and fasting: and yet they say, that they wil indure so a long time, euen a whole seuen-night together with abstinence and spary feeding: may let them feed stil to the ful, they wil not hold out so long, but burst again in fewer daies space. Well, this tick, so filthy as it is, and of so admi-rable and strange a nature in their conceit, they hold to bee of exceeding vertue to appease all paines and torments of the body whatsoeuer, in case a man take one of them, with the left eare of a dog, and carry them hanging to some part about him. And more than that, these Magiti-ans take marks by it, & presage of the life or death of their patients, for they hold it for a certain and assured signe of life, if one hauing a ticke about him, stand at the beds feet where the sick man lieth, and when he asketh him how he doth, and where he is amisse, &c. if the patient make answer readily vnto him: but in case hee make no answer at all, then surely hee shall die there is C no remedy. But take this withall: this ticke must be plucked likewise from the left eare of a dog, and the same dog ought to be cole-blacke without any specke of other colour. And Nigidius hath left in writing, that dogs will not all day long come neare vnto a man nor abide to see him, who hath plucked a ticke from an hogge. But to returne vnto our Magitians: they affirm, that such as be lunaticke and beside themselves, shall come againe to their right wits and senses, in case they be sprinkled with the blood of a moule. They auouch moreover and say, that if one seeth the tongue, eies, gall, and guts of a Dragon in wine and oile, and permit this decoction to coole all night abroad in the open aire, it is a soueraigne medicine to chase away such bugs, spi-rits, and goblins, wherewith folke be haunted and affrighted in the night season, if they bee an-nointed therewith all ouer their bodie, morning and euening. Nicander writeth, that who soeuer E carry about them the serpent Amphisbæna dead, or no more but the very skin thereof hanging fast to any part of their bodies, they shall finde it to bee a most soueraigne remedy for any through cold or chilling fit that hath surprised them. Nay hee staich not there, but addeth moreover and saith, that if the said serpent be bound vnto any part of a tree that is to bee felled and laid along, the workemen that hew at the butt thereof, shall feele no cold all the while; and the tree by that meanes shall the sooner and more easily bee cut downe and ouerthrowne. No maruell therefore, if this serpent afore said dare leaue his nest, and commit himselfe to the cold weather; for he ventureth first to come abroad, and is to be seene aboue ground before the Cuc-kow begins to sing. But since I haue made mention of the Cuckow, there comes into my minde a strange and miraculous matter that the said Magitians report of this bird; namely, that if a F man the first time that he heareth her to sing, presently stay his right foot in the very place where it was when he heard her, and withal marke out the print and just proportion of the sayd foot vpon the ground as it stood, and then digge vp the earth vnder it within the said compasse, looke what chamber or roome of the house is strewed with the said mould, there will no fleas breed there.

They say moreover, that the fat which is fleted or skimmed from the broth wherein dormice G and rats be foddren, is excellent good for those that be affraid of the palseie, and subject thereto: also that Sowes or Cheeslips called Millipedæ, prepared and taken in drink, in manner as I appointed for the squinancie, are singular for those that find themselves to be false into a phthytick or consumption of the lungs: so is a green Lizard (by their saying) foddren in three sextars of wine, till there be but one remaining, if the patient take thereof a spoonfull at a time every day, untill he feele himselfe warished and fully cured. Others assure vs of as great effect, by drinking the ashes of shell-snailles in wine.

As for the falling sicknesse, the tried greace of sweatie and vnwasht wooll tempered with a little myrrhe, so that the quantitie of them both arise to the bignesse of an hazell nut, cures the same, if it be taken infused and dissolued in two cyaths of wine, presently after the patient haue sweated and be come out of the baine. For the same disease, they ordaine the cullions or stones of a ram which haue bin kept long and dried, to be reduced into powder to the weight of halfe a denier Romane, and so to be taken in water, or else in one hemine of asses milke, howbeit with this charge, That the patient forbear drinking of wine five daies after, and as many before. Furthermore, they do highly commend the drinking of sheeps blood: likewise their gall in milke, but principally if it be the gall of a lambe sucking whelpes is very good in this case, if it be taken with wine & myrrhe, but first the head and feet must be cut away. Some for this purpose drink the furors or rough werts growing to the legs of a mule, in three cyaths of oxymell: others giue order to drinke in vinegre the ashes of the star-lizard Stellion, which breedeth beyond-sea and the tender skin or slough of the said Lizard (which the casts in the same maner as a snake doth) taken in drink, helpeth much. Some Physitians are so venturous and bold, that they haue giuen to those who be subiect to the falling sicknesse, the verie Stellion it self, after it is rid and clesed from the garbage or guts, and so kept dried; appointing their patients to drinke the powder thereof in some conuenient liquor, through a pipe of a cane: others appoint it to be rosted vpon a wooden broch or spit, and so to be eaten for meat. And seeing I haue occasion thus to write of this Stellio, and the skin thereof, it were very conuenient and necessarie in this place to shew the manner how the said slough (which is growne ouer him in winter) may be gotten from him when he hath turned himselfe out of it, considering that he vseth commonly to deuoure and eat it himselfe, because it should not do any man good; for there is not a beast againe more spightfull to mankind, and enuious of our commoditie: in so much as this word * Stellio is growne to be a reprochfull tearme among vs. Well, to meet with this skin of his (as craftie as he is to beguile men of it) they vse to obserue in hot summer daies, his nestling hole into which he is wont to retire himself: and ordinarily they find it to be in some hollow crannies about doors & windows, or else vnder vaults and sepulchres: when they haue espied where it is, they wait for the prime of the Spring, they set iust against his hole certaine little cages or leaps made of clouen and sluied reeds, and the same wrought and wouen good and thicke: and in very truth he delighteth to get betweene the streights and narrow passages of the staues and windings, whereof the said cages are made, for by means thereof he may the better slip himselfe out of that coat which cloggeth his body and maketh him vnweldie: and thus in getting through the said lattices, he leaueth the same behind him: but after he hath thus done, hard bested he is, for back he cannot the same way againe for to eat the said slough. Certes, there is not a medicine preferred before it, for the falling sicknesse: and yet good reckoning there is made of the brains of Weazles which haue bin kept and dried: yea and of the liuer so prepared, if they be reduced into powder and so taken in drinke: yea their very genetoirs, and bagg or matrice wherein they beare and breed their young; or their maw likewise sauied, dried and condite with coriander seed, are singular good for this maladie, as I haue heretofore noted: and so are their ashes. Some are of opinion, that it is good eating of them whole as they be, especially the wild kind, without any such preparing & dressing, but others esteeme ferrets to be as effectual as they, for the falling cuil. Moreover, it is said: that the green lizard eaten with some sharp sauce that quickneth appetite, is singular good in this case, but the heads and feet must be first taken away. Moreover, the ashes of shell-snailles together with line-seed & nettle-seed, brought into the form of a liniment with honny, cure those thoroughly of this disease who are all ouer annoiued therewith. But I like better yet, that for this maladie one should carrie about him the taile of a dragon bound within a buck or does skin to some part of his body, with the sinews of a stag or hind: or els to tie vnto the left arme

* Stellionatus
crimē as much
as conuenge,
or cony-
catching.

A arme the little stones that be taken out of the craw or giser of yong swallows: for it is said, that so soone as the old swallow hath hatched her birds, she giueth them such litle stones to swallow downe: but in case this dose be taken in the very beginning, and that the first time that one is false of this disease, there be giuen to him for to eat, the yong swallow that the dam hath first, he shall be deliuered from it clearly and neuer haue more fits. But at any time after, swallows blood and frankincense, or els the heart of a swallow fresh killed, cureth them that be surprized with this malady, if they swallow the same downe. Moreover, it is said, that the little stone found in a swallows nest, if it be but applied vnto man or woman that is false of this sicknesse, it will raise them out of the fit, and bring them againe to themselves immediately; but if they carry it tied to any part about them, they shall neuer haue fit againe. Much talke there is also of a kites liuer, that it should be of singular operation to this effect, if it be eaten as also of a serpents old skin which she hath cast off, that it will do no lesse. The heart of a vulture stamp together with the own blood, and giuen in drink 3 weeks together, worketh wonders in this disease. So doth the heart of the yong bird of a vulture, if the patient weare it about his arme, or hang it at his necke: but then they giue counsel, to eat the flesh of the vulture it selfe, & especially when he hath eaten his ful of mans flesh. Some of them ordaine the brest of a vulture to be drunk, but it must be out of a cup or maser made of the wood of Cerrus: and others there be who to this purpose cause the stones of a cock to be kept and dried, and the same to be giuen to the patient in water and milk, after he hath abstained five daies from drinking wine. To conclude, there haue bin of them, that prescribed vnto their patients in this case, 21 of these sandy or reddish flies (but they must be dead ones) for to be taken in drinke: howbeit, if they were but of a feeble complexion, they gaue fewer of them.

CHAP. XI.

¶ Against the Iaudise and Phrensie. Against Feaners and the Dropse.

THE excrement ingendred in the eares, called commonly Bare-wax, mightily withstandeth the jaundise: so doth that ordure also which gathereth about the vidders & tears of sheepe and goats, if the patient drinke thereof to the weight of one denier in two cyaths of wine, with some myrrh, though it be neuer so little: the ashes of a dogs head calcined, taken in honied wine: one of these sowes or Cheeslips with many feet, in one hemine of wine: earthworms in honied vineger with myrrh, be all excellent for the said disease. Moreover, it is said, that a hen with yellow feet is very good therefore, in case the said feet be clesed and washed first in faire water, afterwards bathed and rinsed in the wine that the patient is to drinke. The brains of a Partidge Ægle, or other birds of prey, taken in three cyaths of wine, is very proper also therefore. The ashes of dates; those also of the entrails of stork-doues, giuen in honied wine to the quantity of three spoonfulls, are soueraigne in this malady: likewise the ashes of sparrows burnt in a fire made of vine-wood, work the same effect, if they be taken in mead to the quantity of 3 spoonfulls. A bird there is called in Greeke Iærus, of the yellow colour which the feathers carry; which if one that hath the jaundise do but looke vpon, he or she shall presently be cured thereof, but the poore bird is sure to die for it: I suppose that this is the same bird which in Latine is called Galgulus.

As for the Phrensie, it seemes that the lights of a mutton, applied hot round about the head, and so kept fast, is soueraigne to bring their heads againe into temper, who are besides themselves. Say that true it were, that not only the brains of mice giuen in water to drinke, or the ashes of a weazil, but also the flesh of an archin kept in salt or dried, are very good for such as are bereft of their right wits, who will venture to giue them these medicines, be they neuer so certain and assured? For as touching the ashes verily of Scrich-owls (which these Magicians so highly commend for the phrensie) I take it to be one among many other of their illusions, whereby they mocke and abuse the world. But about all the course that they take in the cure of Feuers, saureth nothing at all of Physick, which indeed is opposite to all their rules and proceedings: for they haue diuided and digested the same into all the 12 signes in the Zodiack, according as the Sun or Moone passeth through any of them. All which, is nothing els but a meere mockerie to be rejected and vtterly condemned, as I will plainly proue and shew to the view of the eye by some few examples and instances gathered out of many. For in the first

place they ordain, that when the Sun is in Gemini, the combs, the ears, the nailes, and clawes of G cocks should be burned, and the ashes thereof tempered with oile, wherewith the sicke persons are to be annointed all ouer: but if the moon do passe through the said sign, the same cure (they say) is to be done with the ashes that come of their barbs & spurs: whiles either Sun or Moone be in Virgo, the cure doth alter, and is to be wrought with barley corns in the same manner vsed. But how if either of these 2 planets bee in Sagittarius? then the wings of a Bat must serue the turne. In case the moone be entred into Leo, they imploy the leaues and branches of the Tamariske; many it must be the tame and garden Tamarisk in any case. Lastly, if she be in Aquarius, they prescribe the coles made of box wood, punned and puluerized. Certes, I purpose not to run through all their receipts: such onely as are found and approued good, or at least waies carry some shew and probability thereof, I am content to set downe: as namely, when they giue order for strong odours and perfumes to be applied vnto patients lying of a lethargy, for to awaken and raise them out of their dead sleepe: among which peradventure, the stones of a weazill dried and long kept, or their liuer burnt, may doe some good. And whereas they thinke it conuenient to apply hot vnto their heads all about, the lungs of a Mutton, they speake not altogether besides sense and reason.

As for quartane agues, so far as much as it is often seen, that all the physicke that is vsed about them doth little good or none at all, be a Physitian neuer so Methodical, Rational, & Diligent, yea, though he visits such patients ordinarily, & be present with them by their bed sides: in that regard I wil not stick to relate many of their medicines and receipts for this disease; beginning first with those that are locall, and outwardly to be applied, hanged, or worn about any part of the body. *Imprimis*, they say, that the dust or sand wherein any hawke or bird of prey hath basked or bathed her selfe, is singular good for the quartane ague, if the patient wear it in a linnen cloth tied with a red thred. *Item*, the longest tooth in the head of a cole-black dog, is very proper for this purpose. There is a kind of bastard wesps, which the Greeks thereupon call *Pseudosphæces*, and ordinarily they do flie alone, and not in troupes as others doe; which, if they be caught with the left hand, and hanged about the neck vnder the chin, do cure quartans, as some Magitians say: howbeit, others attribute this effect to one of these wesps, which a man saw first the same yeare. Cut the head of a Viper off, or take out the heart aliue, and wrap the one or the other within a little linnen rag, and carry it about you, the quartane ague will be gone anon, by their saying. Some of them take only the little pretty snouts end of a mouse, or the very tips of K the ears, and injoin the patient to lap the same in a red carnation coloured cloth, and so to carry it about him; but then the mouse must in any case be let go again and not killed. Others pluck out the right eie of a green lizard aliue, which done, within a while after they chop off the head: then they infold them both in a piece of goats skin, and giue the patient in charge to haue the same about him: and many there be, who by the direction of magitians carry about them in like manner for the same purpose, one of these flies or Beetles that vse to roll vp little bals of earth: and in very truth, in regard of this kind of beetle, the greater part of Ægypt honour all beetles, and adore them as gods, or at leastwise hauing some diuine power in them: which ceremoniall deuotion of theirs, *Apian* giuerh a subtill and curious reason of, for he doth collect, that there is some resemblance between the *operations and works of the Sun, and this flie: and this hee I setteth abroad, for to colour and excuse the superstitious rites of his countrymen. Howbeit, the Magitians imploy in the cure of a quartan ague, another kind of them *which hath little horns turning backward, but they must be gotten likewise with the left hand, or els they will doe no good. As for the third sort, spotted with white, and called in Latine by the name of *Fullo*, they appoint one of them to be slit through in two, and the 2 pieces to be tied to both armes of the patient, whereas those of other kinds, they bind to the left arme only. Semblably they say, that the heart of a snake taken out of her body aliue with the left hand, cureth the quartan, if the patient carry it about him: as also, that who soeuer taketh foure of the knots or joints of a scorpions taile, together with the sting, and carrieth the same about him inwrapped within a piece of black cloth, with this charge, That for 3 daies space hee doe not see either the scorpion which M was let go, nor the party who tied the said cloth and that which is within it about him, he shal be deliuered from the quartan ague: but after the returne of the third fit, the patient must hide this clout and the joints afore said, & bury them in the ground: some there be who lap a caterpillar in a little piece of linnen cloth, & bind the same thrice about with linnen thred, making three

* Haply, because all these beetles be considered of the male sex, & none of them female: for in those little roundles of earth there breed grubs, which turne so be in the end beetles. * This beetle he called before *Tanymus*, i. Bull,

A three knots thereof, saying at the knitting of euery knot, that this they do to cure him or her of a Quartane feuer. Others carry about them a naked snail in a little piece of fine leather: or else foure heads of snails cut off and inclosed within a small reed. Many thinke it better to infold one of these sows or Cheellips within a Locke of wooll, and so to carry it about them against the quartane, or els the little grubs or worms whereof come the oxe-flies, before their wings bee grown. And there be that for this purpose fit themselves with those smal worms couered al ouer with a kind of down or Cotton, which are found in thickets, & among bushes or shrubs. Some of these Magitians giue direction otherwhiles to take 4 of the said wormes inclosed within a wal-nut shel, & to bind them to some part of the patient, or els the snails which be found naked without their shels. Others put a liue Stellion or star-lizard in some little casket or box, & lay B the same vnder the pillow or bolster where the patient laieth his head: but when the ague beginneth to decline and is like to go away, they let the Stellion go againe at liberty. They prescribe likewise to swallow downe the heart of a sea-gull or cormorant, taken forth of the bodie without any knife or instrument of yron: if not so, to keepe the same dried, to beat it to powder, and then to drink it in hot water. The hearts of swallows condite in hony, and so eaten, bee excellent good for the quartane ague, as our Magitians say. And yet some of them make no more ado, but giue of their dung to the weight of one dram, in 3 cyaths of goats milke and ewes milke, or els of wine cuit, before the acceffe come. Howbeit, others would haue the Swallows themselves to be eaten whole without any dressing at all. The people of Parthia drink for the quartan ague the fixt part of a denier weight of an Aspis skin, with the like poise of pepper, & they hold C it to be a soueraigne remedy. *Chrysippus* the Phylosopher was of opinion, and so he hath put down in writting, That to carry one Phrygianum tied to some part of the body, is excellent for the quartan. But what liuing creature he would meane by that same Phrygianum, neither hath he himselfe described, nor ever could I meet with any man that knew it: howbeit, I thought it good to set downe this remedy, being thus deliuered by so graue an Author as *Chrysippus* was, to stir vp the diligence of others, if haply there be any so industrious as will take paines to search farther into the thing, and learne what it might be.

In any of these long diseases which be called Chronique, it is commonly thought, That to eat the flesh of a Crow, & to apply vnto their body their * nest, is most excellent to bring them to an end.

* Nidum. Some made of Ieremy

D As for Terrian agues, it were an easie matter to try the experiments of such receipts as are giuen out for them: considering how the poore patients in hope of ease are willing enough & delighted to be doing and working conclusions: and namely to see whether the copweb, nest, and all, of that spider which they call * *Lycos*, incorporat with rosin and wax, & so applied as a fronsale to the forehead and temples on both sides of the head, will do any good to rid them away. Certes, some vse to wear about them the spider it selfe, inclosed within a quill or piece of a reed: in which sort it is reported to auail much in the cure of other feuers. Also it is thought, That a green lizard hung about the neck aliue in some box sufficient to receiue it, is as effectual. And these kind of medicines they affirm to be of great efficacy for to driue away those agues which by way of relapse vse often to return againe when they were thought to be cleane gone.

E Touching the dropsie, the tried greafe of sweety wooll taken in wine with a little Myrrh, so that the whole arise to the quantity of an Hazel nut, is supposed to be a singular receipt: but some put thereto Goose greafe also and oile of Myrtles. The filthy ordure that gathereth about Ewes vdders, hath the same effect. Likewise, the flesh of an vrchin long kept in powder or otherwise, and eaten, doth much good. To conclude, it is thought, that if the belly be rubbed well and annointed with that which a dog doth vse to cast by way of vomit, it helpeth those that bee in a dropsie, for it is reported to haue a speciall vertue to draw a water, and to drie vp the superfluous humidity ingendring that disease.

* i. Wolf. Supposed to be our common spider that hunteth flies.

CHAP. XII.

F ¶ Medicines for *S. Anthonies fire*, Carbuncles, fellons, burns, crampes, or contractions of sinewes.

THE suet or greafe of vnwashed wooll incorporat with oile of Roses and Tutie, is a proper liniment for *S. Anthonies fire*: so is the bloud of a tike, and earth-wormes reduced into an vnguent with vineger: but especially these Cricquets, crushed and wrought within ones hand

hand to the consistence of an vnguent and so applied. And this medicine last mentioned, is passing effectuall for the party himselfe that hath the handling of it: for it assureth him aforehand, that he shall not fall into the said disease in a whole yere following: but this Criquet must bee digged out of the ground with some instrument of yron, and the earth & all to be taken vp with it, for to serue in this cure. Moreouer, it is said, That goose greafe is very good in this case: so are the ashes of a Vipers head kept dried & then calcined, if the same be afterwards applied in form of a liniment with vineger. The old sloughs that snakes cast off, reduced into an vnguent with Bitumen and Lambs suet, quencheth this burning humor of S. *Anthony's* fire, if the body be annointed therewith tempered in water, presently after the baine.

As for Carbuncles, the means to rid them away, is to annoint them either with Pigeons dung alone, or els mixed with Linseed and honied vineger: likewise, it is good to make a cataplasme of those Bees which haue bin drowned or killed in their own honey, and lay the same vpon the sore. Others apply vnto them either a pulstise of fried Barley groats, or else a powder made with their meale. If there be a carbuncle risen in their priuities, the fattinesse of greasie and vnwashed wooll, incorporat in hony and the skales refuse or cinders of lead, into a salve, cureth it: and the same healeth generally all other botches or vlcers in those parts. Sheeps dung that is fresh and Greene, they hold to be singular for carbuncles, taken in the very beginning.

All tumors and hard swellings, which had need to be mollified, are made soft and brought downe most effectuallly with Goose greafe, or the fat of a Swan.

Moreouer it is said, That a spider laid to any fellon, before it be once named what thing it is cureth the same; but it must not be removed from the place before the third day. The mouse called an Hardshrew hanged vp aliue vntill it be dead, is very good for these fellons, in case it touch not the ground afterward, and that there be 3 circles or turnes made with it round about the fore, so that withall both the patient and the party that hath this cure in hand, spit vpon the floore three times in the doing thereof. Also the dung of Cocke or Henne (that which looketh reddish especially) tempered with vineger & laid to a fellon, healeth it: but the said dung ought to be fresh and newly meuted. Of the same operation and effect is the giser of a Storke boiled in wine. Some there be that take certain flies of some odde and vneuen number, bruise and work them into the consistence of a saue, with their *ring-finger, and therewith apply them to the fellon. Others vse for the said purpose the filth ingendred in sheeps ears: old sheeps tallow mixed with the ashes that come of womens haire, reduced into a liniment, serueth to cure the sayd accident: so doth rams suet mixed with the ashes of a pumish stone calcined, and a like quantity in weight of salt.

As for burns and scaldings, the ashes of a dogs head burnt, are singular good to cure the same: so be the ashes of Dormice tempered with oile; sheeps treddles also mixed with wax: the ashes of mice and shell-snails; and this medicine will skin them so cleane, that there shall no scarre remaine afterwards to be seen. In like manner, the greafe of Vipers: or the ashes of Pigeons dung calcined and reduced into a liniment with oile.

Touching the nodosities of the sinewes, the ashes of a Vipers head burnt and brought into an vnguent with the oile Cyprinum, is thought to be a soueraigne medicine for to resolueth them. Likewise, earth-wormes made into a cataplasme with honey, and so applied vnto the affected place. But if the said sinews doake and be pained, bind vnto them the serpent called Amphibana dead, and it will ease the grieft. The like effect you may looke for of Vultures greafe, together with the giser of the said foule, dried or stamped with old swines greafe or lard, and so reduced into a liniment. And if we may giue any credit to the Magicians, a drinke made of honied wine, spiced with the ashes of a scritch-owles head, together with a Lillie root, wil work the same effect.

In contractions of the sinewes, it is good to eat the flesh of stock-doues, especially if the same hath bin powdered and kept in salt. The flesh likewise of an Hedgehog is as good for crampes and spasmes: as also the ashes of a Weazil. The old slough that snakes leaue off, infolded within a piece of a Buls skin or leather made thereof, is good to be worn tied about one for to prevent this disease: and more particularly for those spasmes or convulsions that draw the sinewes of the neck so, as the head is pluckt backward, there is not a better medicine than to drinke the poise of three oboli of a kites liuer dried, in as many cyaths of mead or honied water.

When the skin turneth vp about the roots of the nails, or the excrecence of the flesh putteth the

A the fingers to pain, which accidents be called in Latine Reduvia, and in Greek Pterygia: it were good to vse to them the ashes of a dogs head calcined, or the matriee of a bitch sodden in oile; with this charge, to annoint them aloft with a liniment of butter, made of ewes milke and honny incorporat together. The bursie likewise or little bladder, which containeth in it the gall of any beast, is good for this purpose.

If the snails be ragged and rugged, it is not amisse to apply vnto them Cantharides incorporat with pitch, without reemouing this plaister before the third day: or els to lay vnto them Locusts fried in Goats suet: sheeps tallow also is good therefore. Some mix therewith Birdlime made with Misselto and Purcelane tempered together: others take Verdegriis or rust of brasie and the foresaid birdlime, but they remoue not the plaister off in three daies.

CHAP. XIII.

¶ Receipts for stanching blood: repressing or smiting backe the swelling incident to wounds: healing of vlcers and Greene wounds: and generally for curing of many other maladies. Remedies all taken from dumbe creatures.

T He suet that commeth from the kelle of a mutton, staies any flux of blood, if it be conueied into the place from whence it issueth: so is their rede, especially if it be the rennet of a yong Lambe tempered with water, either drawn vp into the nostrils or poured into them: this is thought to be such a soueraigne remedie, that when all others haue failed, it hath done the deed. The earthie substance sticking to shell-snails, hath the same effect: yea, and their verie flesh when they are pulled out of their houses. In case the nose do bleede excessively, take the said shell-snails, bruse them and lay them to the forehead: they will stanch the bleeding: the copwebs also put vp into the nostrils. As for the brains of a Cocke or Capon, they stop a flux of blood issuing from the braine. But say that blood do gush immoderately out of a wound: it is wonderfull how the ashes of horse dung, together with egg-shells, will stop the same, if it be laid thereto.

As for *wounds, the greafe of vnwashed wooll, incorporat with the ashes of torrifed and calcined Barley and Verdegriis, of each a like quantitie, and so made into a plaistre, healeth them. D The same is a soueraigne salve for any corrosiue vlcers, be they neuer so maligne & cankerous. It eateth and consumeth the dead flesh about the brims and edges of vlcers, yea, and brings downe the excrecence of proud flesh, reducing the same to be euen with the rest about it. The same doth incarnat likewise and skin the place after it is filled vp with yong flesh. If the vlcers proue to be ill fauoured cankers, it is thought, that the ashes of sheeps dung mixed with salnitre, is an effectuall powder for the same: and as great operation is attributed to the ashes of a Lambs leg bones, but principally if the said fores be of the nature of *Nunquam sana*, and will not skin vp, in these cases, for it eateth away all the excrecences of ranke flesh in vlcers, and there is not the like againe vnto it, for reducing all vnto an equalitie. The very dung also of sheep heat vnder an earthen pan and afterwards wrought into a masse or paste, assuageth the tumour of any vlcers: And it serueth likewise to mundifie and heale fistulaes, as also to rid away the chil-blaines or bloody fols, which are our night-foes. But of al other, the ashes of an horse head is most forcible in this case, for it consumes all superfluous flesh growing in sores, and heales vp the same afterwards, no Spodium better. And yet it is said, that mice dung is very good therefore: like as the ashes of Weazils dung. The hard callosties in the bottome of vlcers, the Cheeflips or Soves if they be stamped fresh and reduced drie into powder, do search thoroughly: like as all cankers also they cure, if they be incorporat with the right Turpentine and common *Bole-Armioniacke. And these medicines abovesaid are singular for those vlcers that be giuen to breed wormes, and thereby are dangerous. And seeing I am light vpon the mention of wormes, it would be noted, that there be diuerse sorts of wormes which haue wonderfull properties in these cases: For first and formost, the grosse and fat wormes breeding in wood & timber, which the Latins call Cossi, are soueraigne healers of any vlcers whatsoeuer. But if the same be burnt with an equall weight of Annise seed, and reduced into a liniment by meanes of oile, they haue a speciall vertue to cure those sores that be corrosiue, which the Greeks call Nomæ. Earthwormes are great healers, and

*Medico, & the fourth of new to the little finger.

*Vulueribus. Some e.d. Vlcibus.

*Simplif m take it for the sigillat: but it skill th not much, being this Kallat. Siop ca, Tord. Vltima, & Bole Armion, yea, and Terra Lemnia, little diff. in operation, siop ca. Armion, is the leyned thack. Vid. Erythim dare Metalia.

and soon do soulder greene wounds: in which operation they are so effectuall and speedy withal, G
That if the sinewes be cut quite asunder, it is a common opinion, that they will consolidat and
vntite them again in lesse space than a week: and therefore, because they should be ready and e-
uer at hand, many preferue them for this purpose condite in hony. Indeed, when they be reduced
into ashes, they are effectuall to eat downe the hard callosities growing in the sides and edges of
vicers, if they be incorporat with Tarre, or the Sicilian hony called Hyblæum. Some vfe them
dried in the Sun and tempered with vineger, for wounds: but this cataplasme they doe not re-
died in the Sun and tempered with vineger, for wounds: but this cataplasme they doe not re-
do much good: yea, and taken forth whole as they be out of their shels, stamped and so applied,
they conglutinat greene wounds, and stay the running farther of corrosiue vicers. Also there is a
certain liuing creature, which is called Herpes by the Greeks; the same hath a peculiar proper-
ty to heale any sore that * runneth on still and corrode as it goeth. For which kinde of vicers, H
snails, bruised shels and all, be passing good: and the same incorporat with Myrrh and Frankin-
cense, haue the name to heale sinewes that be cut in two: Moreouer, the fat of a Dragon dried
in the Sun, is very effectuall: like as the brains also of a Cock, to heale green wounds, if the pati-
ent withall eat salt to his meat, which was calcined together with Vipers flesh: and by this
means (they say) that any vicers will sooner yeeld to the cure, and be healed with more speed.
The renowned Physitian *Antonius Musa*, hauing certain Patients in cure vnder his hand, who
had vicers that were thought incurable, prescribed them to eat Vipers flesh; and wonderfull it
is how soone he healed them cleane by that means.

The ashes of certain Locusts without wings, called by the Greeks Tryxalides, cause the thick
roufs and escars that grow about the brims of vicers to fall off, and they consume the hard cal-
losities thereof applied with hony. The ashes likewise of Pigeons dung tempered with Orpi-
ment or Arsenick and hony, serue as a corrosiue to eat away any excrecence that ought to bee
consumed: the brains of schrich-owls incorporat with greafe, doth wonderfully conglutinat any
wounds. As for those morimals, named by the Greekes Cacoethe, the ashes of a rams shanke-
bones & legs mixt with breist milk, is singular to heale them, so that the said sores were first well
and thoroughly washed and bathed with fine linnen cloaths foked in some conuenient liquour.
There is a bird called an Hular, which if it be foddren in oile, & so resolued, is good therefore, in
case the same be incorporat with butyr made of ewes milk and hony. If the sides or brims of any
vicer be growne callous and hard, the Bees that are stifled and killed in hony, doe mollifie vnto
well. The blood and ashes of a Weazill calcined, doe cure the white filthy leprosie called Ele-
phantiasis. The wounds occasioned by whipping and scourging, the marks also and wales remai-
ning to be seen black and blew after such lashes and stripes, are done away and go presently out,
with applying thereto a sheeps skin fresh and newly flaid. If there be any joint bruised or crac-
ked, the ashes of a Sheeps leg bone, burnt, haue a special vertue to help the same: but much bet-
ter, if they be incorporat into a cerot with wax. Of the same operation there is another plaster
made, namely, if there be calcined with the former the jaws of the said Sheep, and a Harts horn:
and if the wax be softened and resolued with oile rosat. When bones bee broken, it is good to
apply vnto the fracture the brains of a dog spread vpon a linnen cloth or inwrapped therein, co-
uering the said cataplasme with wooll laid aloft, and the same est-soones moistened and wet
thoroughly [* in some astrigent liquor:] this manner of cure doth soulder them lightly in
14 daies at the farthest. The ashes also of field-mice work the like effect as speedily, if the same
be tempered with hony, or mingled with the ashes of earth-wormes: which also is able to draw
forth spils of bones, and make them to worke out. The lights of a Mutton and of a Ram espec-
ially, reduce skars to their liuely colour againe, futable vnto the skinne about: their tallow also
mixed with sal-nitre: so do the ashes of a greene lizard: the slough that snakes cast off in the
Spring boiled in wine: and Pigeons dung tempered with hony, and so applied. The same me-
dicines do take away the filthy white Morphew, called in Latine Vitiligo, if they be vfed with
wine: for which Morphew or infection of the skin, it is good to apply Cantharides, with twice
as much of Rue leaues, which the patient must indure and abide, lying still vpon the place in the
Sunne, vntill such time as the skinne begin to rise in pimples and little blisters. Afterwards it is
needfull to foment and bathe the said place thus offended, yea, and to annoint it wel with oile:
which done, to returne againe to the former emplastration, and so hold on this course by
turnes for many daies together, but in any wise to take heed that the exulceration in this cure
goc

* As oile of ro-
ses, or red wine

A go not ouer deep. For the same morphew, many giue order to make a liniment with flies & the
root of docks, and herewith to annoint the places infected with this morphew: also, to apply
thereto hens dung, I mean as much thereof as is white: for which purpose they keep the same in
oile within horne boxes, for to serue the turne as need requireth. Likewise, to annoint them with
the blood of bats, or the gall of an Vrchin tempered with water. As for the running scalls, the
brains of a schrich-owle is very good, incorporat with salt-petre: but dogs blood hath no fel-
low to repress the same: like as to kill the itch, the little broad snailles stamped and brought
into a liniment, are souveraigne. If there be any spill or shiuer of arrowes, if any piece of a dart or
whatsoever els stick within the flesh, which would bee gotten forth, split a liue mouse in the
middest, and lay the same hot to the place, you shall see how it will draw the same out. But a Li-
zard passeth all the rest, being in this wise slit along and diuided: or if the head onely be stam-
ped with salt, and applied accordingly. There be certain shel-snailles that creep in troups toge-
ther for to deuour the yong spring and green leaues of plants, which serue to this effect, if they
be punned with their shels and laid to the place. Those also that we vse to dresse and eat, if they
be taken forth of their shels: but if you put thereto the rennet of a yong hare or leueret, it is won-
derfull to see how effectuall they will worke. Snakes bones incorporat with the rennet of any
four-footed beast whatsoever, within lesse than 3 daies shew the same effect, and draw forth a-
ny thing that sticketh within the body. Finally, the flies called Cantharides are much commen-
ded for this operation, if they be stamped and incorporat with barley meale.

CHAP. XIII.

¶ Proper remedies for the cure of womens maladies: and to help them for to goo
out their full time, and bring forth the fruit of their womb fully
ripe and accomplished.

THE skin or secundine which an Ewe gleaneth after she hath yeaned, and which inlapped
the lambe within her belly, prepared, ordered, and vfed (as I said before) as touching goats,
it is very good for the infirmities that properly bee incident vnto women and occasioned
by their naturall parts. The dung likewise of sheep, be they rammes, ewes, or weathers, hath the
same operation. But to come vnto particulars, the infirmity which otherwhiles putteth them to
D passe their vrine with difficulty and by dropmeale, is cured principally by sitting ouer a perfume
or suffumigation of Locusts. If a woman after that she is conceiued with child, vse est-soons to
eat a dish of meat made of cock-stones, the infant that she goeth with shall proue a man child,
as it is commonly thought and spoken. When a woman is with childe, she meanes to preferue
her from any shift and slip that she may carry out her full terme, is to drink the ashes of Porke-
pines calcined: also the drinking of a birches milk maketh the infant within the womb to come
on forward & to grow to perfection, before it seek to come forth vntimely: also, if the child stick
in the birth, or otherwise make no haste to come forth of the mothers body when the time is
come: the skin wherein the bitch bare her whelps within her body, and which commeth away
from her after she hath pupped, hasteneth the birth, if so be it were taken away from her before
E it touch the ground.

If women in labour drinke milke, it will comfort their loins or smal of the back, Mice dung
delaied and dissolued in rain water, is very good to annoint the breasts of a woman, new laied, to
break their kernel, and to allay their ouermuch strutting presently after childbirth. The ashes of
hedgehogs preferueth women from abortion or vntimely births, if they be annointed with a li-
niment made of them and oile incorporat together. The better speed and more ease shall those
women haue of deliuerance, which in the time of their trauell drinke a draught of Goose dung
in two cyaths of water: or else the water that issueth out of their owne body by the natural parts
a little before the child should be borne, and that out of a weazils bladder. A liniment made of
earth-wormes, if the nouch or chine of the necke and the shoulder blades be annointed there-
F with, preferueth a woman from the pain of the sinews, which commonly followeth vpon child-
bearing: and the same send away the after-birth, if when they bee * newly brought to bed, they
drink the same in wine cuit. A cataplasme made of them simply alone without any other thing,
and applied to womens sore breasts which are impostumat, bring the same to maturacion, breake
them when they are ripe, draw them after that they runne, and in the end heale them vp cleane
and

* Grauidis,
et parturientis
perperis

and skin all again. The said earthwormes also if they be drunk in honied wine, bring down milk into their breasts. There be certain little wormes found breeding in the common Coich-grasse, called Gramen, which if a woman weare about her neck, serue very effectually, to cause her for to keep her infant within the wombe the ordinary terme: but she must leaue them off when she drawes neere to the time when she should cry out: for otherwise, if they be not taken from her, they would hinder her deliuerance. Great heed also there must be taken, that these wormes bee not laid vpon the ground in any hand. Moreouer, there be Physitians who giue women to drink 5 or 7 of them at a time, for to help them to conceiue. If women vse to eat snailes dressed as meat, they shall be deliuered with more speed, if they were in hard labour: let them be applied to the region of the matrice or naturall parts with Saffron, they hasten conception. If the same be reduced into a liniment with Amylum and gum Tragacanth, and laid too accordingly, they do stay the immoderat flux of reds or whites. Being eaten in meat, they are soueraigne for their monthly purgations. And with the marrow of a red Deere they reduce the matrice againe into the right place, if it were turned a to-side: but this regard must be had, that to every snail there be put a dram weight of Cyperus also. If the matrice be giuen to ventosities, let the same snails be taken forth of their shells, stamped and laid too with oile of Roses, they discusse the windnesse thereof. And for these purposes before named, the snailes of Aftypalæa be chosen for the best. Also for to resolu the inflation of this part, there is another medicine made with snailes, especially those of Barbarie, namely, to take two of them and to stampe them with as much Fenigreeke seed as may be comprehended with three fingers, adding thereto the quantity of four spoonfuls of hony, and when they be reduced all into a liniment, to apply the same to the region of the womb, after the same hath been well and thoroughly annointed all ouer with the iuice of Ireos, *i. Floure-de-lis*. There be moreouer, certaine white snailes that be small and long with all, and these be commonly wandering here and there in euery place. These beeing dried in the Sun vpon tiles, and reduced into powder, they vse to blend with bean floure, of each a like quantity. And this is thought to be an excellent mixture for to beautifie their body, and make the skin white and smooth. Also, if the itch be offensiue, so as a woman be found euer and anon to scratch and rub those parts, there is not a better thing therfore than the little flat snails, if they be brought into a liniment with fried Barly groats. If a woman with child chance to step ouer a Viper, shee shall be deliuered before her time of an vnperfect birth. The like accident will befall vnto her, in case she go ouer the serpent Amphisbæna, if the same were dead before. And yet if a woman haue about her in a box one of them aliuie, shee shall not need to feare the going ouer them, though they were dead. And one of these Amphisbænes dead as it is, and preserued or condite in salt, procureth safe and easie deliuerance to a woman that hath it about her. A wonderfull thing, that it should be so dangerous for a woman with childe to passe ouer one of them which hath not bin kept in salt: and that the same should be harmelesse and do no hurt at all, if immediatly after it hath bin so kept, shee stepped ouer it. A perfume madewith a snake long kept and dried, procureth the desired sicknesse of women. The old slough of a snake, which shee hath cast, applied vnto the loines of a woman that is in labour, helpeth her to better speed: but it must be remoued presently after that shee is deliuered. Many vse to giue it vnto women with child for to be drunk in wine with frankincense: for being taken otherwise it causeth abortion. The rod or wand whereby one hath parted or taken off a frog or toad from a snake, helpeth women that be in trauell of childbirth. And a liniment made with the ashes of the vnwinged Locusts called Tryxalides & hony tempered together, helpeth forward their monthly purgations. The spider likewise that commeth downe spinning from aloft, hanging by her fine thred which she draweth in a length, if she be caught with the hollow of the hand, bruised & applied accordingly, worketh the same effect: but take the same spider winding vp her yeanne, and returning back to her nest vpward, it wil worke contrariwise, & stay the fleurs of women. The Ægie stone called A tires, because it is found in an Ægles nest, preserueth & holdeth the infant still in the mothers womb to the full time, against any indiret practise of sorcery or otherwise, to the contrary. If a woman be in hard labor of childbirth, put a Vultures quill vnder her feet, it will helpe her to a more speedy deliuerance. Great bellied women, as it is well knowne & found by prooffe, ought to be very chary and to beware of rauens eggs, for if they chance to goe ouer one of them, they shall fall to labour presently, and slip an vntimely birth with great danger of their life. It seemeth to many, that the meuting of an Hawke drunke in honied wine, maketh women which were

A were barren before, to be fruitfull. Certes, the greafe of a goose or swan doth mollifie any hard tumors, schirrh, and impostumations of the matrice and secret parts. Goose greafe mixt with the oile of roses and * Ireos, * preserueth womens breasts after they be newly brought to bed. In Phrygia and Lycaonia it is found by experience, that the fat of the Bistard or Horn-owle is very good for greene women lately deliuered, if they be troubled with the pricking or shooting paines of their breasts: but for women that are in danger to be suffocated with the rising of the mother, they haue a liniment also made with the beetils or worms called Blattæ. The ashes of Partridge eggs calcined, mixed with brasse ore called Cadmia, and wax, and so reduced into a cerot, preserueth womens breasts plump and round, that they shall not be riuelled or flaggie: and it is thought, that if a woman make three imaginary circles round about them with a partridge egg, they shall continue knit vp and well trussed, and not hang downward if sauoredly: let a woman vse to sup them off, shee shall be both a fruitfull mother of many children, and also a good milch nurse for to reare them vp. Also it is a generall receiued opinion, that if womens paps be annointed all ouer with goose greafe, it will allay the griefe and paine thereof: likewise there is not a better thing for to dissolue and scatter Moon-calues and such like false conceptions in the wombe: or to mitigate the scurfe or manginess incident to that member, than to apply to those parts a liniment made of punaises bruised or stamped to the purpose.

Bats blood hath a depilatorie facultie to fetch off haire, and lett the growing thereof; howbeit sufficient it is not alone to worke that feat in boies cheeks and chins whom we would keep smooth and beardless, except the place be rubbed afterward with the seed of rocket or hemlock: and in this manner if they be dressed, either no haire at all will come vp there, or els it will neuer be but soft downe: it is thought that their brains also wil worke the same effect. Now these brains be of two sorts, to wit, red and white: howbeit some giue counsell to mingle with the said till her flesh be thoroughly sodden, and as tender as may be, hauing before rid her from all her bones; and it they vse for a depilatorie: but first they plucke vp all those haire by the roots which they would not haue to grow any more. The gall of an vrchin is a depilatorie, especially if it be mixed with the brains of a Bat, and goats milke. Item, the ashes thereof simply, mingled with the milk of a bitch of her first litter; so that the haire which we would not haue to come againe be plucked vp; or if those places be annointed therewith where neuer yet grew any, none shall spring there afterwards. The same effect (by report) hath the blood of a tick that was taken from a dog: and finally, the blood or gall of a swallow.

CHAP. XV.

¶ Many Receipts handled together disorderly one with another for sundry maladies.

It is said, that Ants eggs stamped & incorporat with flies likewise punned together, wil giue a louely black colour to the hairs of the eie-browes: also if a woman be desirous that her infant should be born with black eies, let her eat a rat while shee goes with childe. To preserue the haire from being gray and grise, annoint them with the ashes of earth-worms and oile oliue mixt together. If sucking babes be wrang or gnawne in the belly, by reason of some cruddled milk which they draw from their nurses, or doth corrupt so in their stomach, it is good to giue them in water the rennet of a yong lambe to drink: but in case this accident commeth by cauling of the milk, they vse to giue vnto them the said rennet in vinegar for to discusse the same. For the paine that they abide in toothing, the brains of an * hare is soueraigne to annoint their gums withall. It falleth out that yong infants many times be tormented with an vnaturall heat and burning of their head, called Sirialis; for to ease and cure them thereof, they vse to take the bones that are found in dogs dung, and to hang them about their necks or arms. Yong infants are subiect to ruptures and descents of the guts, in which case it is good (some say) to apply a greene lizard vnto their bodies whiles they lie asleepe, and to cause it to bite the place: but then afterward the said lizard must be tied fast to a reed and hung vp in the smoke: for look how it decaieeth and dieth by little and little, so shall the rupture knit and heale again. The foamie moisture that shell-snails yeeld, if childrens eies be annointed therewith, doth not only redifie and lay streight the hairs of the eie-lids which grow crooked into the eies, but also nourisheth & causeth them to grow. The ashes of burnt shell-snails reduced into a liniment with

* Irino, as followeth in the next chapter: not arano, as it is in most prints.
* From swelling, hardness, or the ague, as women call it.

* Leporis or percoris, (i. e.) of a Sheepe

kincense and the white of an egg, doth in the space of 30 daies cure those that are bursten belled. In the little horns of shell-snails there is found a certaine hard substance resembling grit or sand, which if it be hanged about a young infant, is a means that it shall breed teeth with ease. The ashes of snail shells when the snails are gon, incorporat in wax, and applied to the feat of the fundament, putteth backe the end of the tiwill that is fallen down and ready to hang out of the body: but you must not forget to mingle with the said ashes the bloody substance that is let out of a vipers brains when her head is pricked. The braines of a viper if they be put in a little fine skin, & worn by a yong child, helpeth it to breed teeth without any great pain: for the same purpose serue also the teeth of serpents, so they be chosen the biggest that are in their heads: rauens dung wrapped in wool and hung to any part of yong infants, cureth the chin-cough.

Some things there remain as touching this argument, which hardly methinks I should not handle seriously & deliuer in good earnest: howbeit since there be diuers writers who haue put them down in writing, I must not passe them ouer in silence. They are of opinion and doe giue order, to cure the rupture and descent of the guts in little children, with a lizard: but how? first it ought to be of the male kind which is taken for this purpose; and that may soone be knowne, if vnder the taile it haue one hole and no more: then there must be vsed all means possible that the said lizard do bite the tumor of the rupture through a piece of cloth of gold, cloth of siluer, or purple: which done, the said lizard must be tied fast within a new cup or goblet that neuer was occupied, & so set in some smoky place where it may die. If little infants pisse their beds, a ready way to make them containe their water, is to giue them foddren mice to eat. If there be any suspection of forcerie, witchcraft, or enchantment practised for to hurt young babes, the great horns of beetles, such specially as be knagged as it were with smal teeth, are as good as a countercharm and preseruatiue, if they be hanged about their necks. There is (as they say) a little stone within the head of an ox or cow, which they vse to discharge and spit out when they be in danger of death; the same if it be taken out of one of their heads which is suddenly stricken off before the beast bewate therof, & hanged about an infants necke or other part of the body, is wonderful good for breeding of teeth. Semblably they prescribe their brains to be caried about them in like maner, & for the same purpose: also the little bone or stone found in a naked snails back. Moreover, the anointing of childrens gumbs with the brains of a yong sheepe, is singular good and effectual to cause them to breed their teeth with facilitie: like as goose grease instilled with the iuice of basil into their ears, cureth the infirmities therof. There be in many prickly herbs certain rough & hairy worms, which if they be hung about the necks of yong infants, do presently cure them, if haply there were any thing in their meat that sticke and lay hard in their stomack, for they wil cause them to puke it vp. To prouoke sleep there is not a better thing than the tried grease of vnwashed wool, with some myrrh, be it neuer so little infused & dissolved in two cyaths of wine, or els incorporat with goose grease and wine of myrtles: for which intent they vse to take the bird called a Cuckow, and within a hares skin tie it to the patient; or els to bind the bil of a yong heron to the forehead, within a piece of an asse skin: and they are of opinion, that the same bill alone is as effectual, so it be well washed in wine: contrariwise, the head of a bat dried and hanged about the neck, keeps one from sleep altogether. A lizard drowned to death in the vrin of a man, disableth him from the vse of venery, who * drank the liquour whereof that vrine came: and no maruel, for why? the magitians repose a great thing in a lizard in loue matters. The excrements of snails which resemble dung, as also the dung of pigeons, tempered in a cup of wine and giuen to drink, coole fleshly lust. The right lobe or side of a vultures lungs prouoke men to Venus sports, if they cary it about them enwrapped within a cranes skin. In like maner the yelks of five pigeons eggs incorporat with swines grease to the weight of one denier Roman, and so supped off, work the same effect. Some eat sparrowes vsually for this purpose, or sup their eggs. Also there be who carry about them the right stone of a cock, inclosed fast within a piece of leather made of a rams skin, and to good effect, if all be true that magitians say: who affirm also, that those women who are anointed with a liniment made of the ashes of the bird Ibis, incorporat with goose grease and the oile Ireos, shal if they be conceiued with M child go out their full time: and they say, that whosoever be anointed with a liniment made of the stones of a fighting cocke and goose-grease, shall haue but little mind to performe the act of generation: or if the same be tied vnto any part of them within a piece of leather made of a rams skinn. In like manner, it is said that the stones of any other dunghill cock are of the same effect,

* Biberit, some
reide fecerit,
i. who made
the said water.

A effect, if together with the blood of the said cock, they be but laid vnder ones bed. If one pluck the haire out of a naules taile while the stallion couereth her, and bind the same together in a wreath or knot, & apply them to the legs or loins during the act of generation, they will cause (women) to conceiue whether they will or no. Whosoever maketh water vpon the very place shal find himselfe thereby more vnlustie to the worke of Venus. A wonderfull thing it is (if it be true) which they report likewise of the ashes of a star-lizard or Stellion; that if the same be enshitt the same into the right hand, it wil coole one as much. Moreover, that if one put vnder the pillow where a woman laies her head, a few flockes, or Locke of wooll soked well in batts blood, it wil set her on to desire the company of a man; or if she do take a goose tongue either in meat or drink. The old skin or slough that snakes do cast off in the Spring, whosoever drinketh in his ordinary drink, it will kil all the vermin or lice of the body within three daies: so doth the whey of milke after the cheefe is gathered, if one drinke the same with a little salt. If the braines of a weazill be put into the rendles or rennet that goeth to the making of cheefe, they say that the cheefe so made, shal neither corrupt all summer long, nor be eaten by the mouse. The ashes of the same weazill giuen to chickens or young pigeons among the past that is made for to feed them, secureth them from the weazill. Furthermore, it is said, that if a batt be tied vnto a horse or mare or such labouring beasts that are pained in their staling, they shal soon haue an end of that grieue and impediment: if they haue the wringing of the guts, or be troubled with the bots, there will ensue ease of their paine, presently vpon the making three turns or compasses round about their shap and naturall parts with a stockdoue. But see a maruellous matter! the doue being let go, dieth forthwith; and the beast immediatly is deliuered from paine. Moreover, if you would know a remedy against drunkenesse, marke this experiment; Giue for three daies together to great drunkards the eggs of an owle continually in their wine, they will take a loathing same before he sit downe to drinking, shal not be overtaken or drunken, how freely soeuer he powreth downe the wine. The ashes of swallowes bills incorporat with myrrhe, will secure any man from drunkenesse, and cause him to beare his drinke well, in case the wine that he drinketh be spiced therewith: And *Horus* king of the Assyrians, deuised first this receipt against drunkenesse.

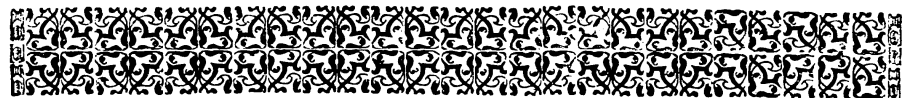
Quer and besides all this, there by many other singular properties behind, worthy to be noted, which are attributed vnto sundrie beasts, and doe properly pertaine to this present treatise handled in this booke: for these magitians tel vs of a certain bird in Sardinia called Gromphæna, like vnto a crane, but I beleue verily that the Sardinians at this day know not what bird it is. Within the said Island and prouince, there is a beast called *Ophion, which in haire only resembleth a stag, but in no place els doth it breed: and the very same authors haue told vs of another by the name of Sirulugus, but they set not downe in writing either the description what manner of beast it shoulde be, nor the place where it should breed. I doubt not verily but such fortune there were, considering that they haue shewed diuers medicines that they do affoord. And *M. Cicero* writeth of a beast named Byturos, which gnaweth the vines in Campania.

CHAP. XVI.

¶ Strange wonders reported of certaine beasts.

Here remains yet certain wonderfull things to be spoken of, depending vpon those brute creatures, of which I haue treated already: namely, that whosoever haue about them the secondine of a bitch, that is to say, the skin wherein her whelps lay within her belly, or hold in their hands either the hair or dung of an hare, no dogs will bark at them whereuer they come. Also that there be a kind of gnats called Muliões, which liue not about a day. Moreover, as many as haue about them the bill of a woodspecke when they come to take honey out of the hie, shall not be stung by Bees: againe, let a man giue to swine among their meat, or in a morcell of past or bread, the brains of a rauē, they will follow him whither soeuer he goes. Furthermore, that if one be strewed with the dust wherein a mule hath wallowed & tumbled her self, he shal bewel cooled in loue, how amorous soeuer he were before. Quer & besides, take a rat & cut

out his stones, and so let him go againe, he will make all other rats to run away. Make a mash or drench of a snakes skin, salt, red wheat called Far, with some wild running thyme, stamped all together, in one and the same day; put all into wine and conuey the same into the throat of a cow or ox, about the time that grapes begin to ripen vpon the vine, the said beasts will stand to health for a whole yeare after: or giue them young swailowes, and cause them to let the same downe their body in some past or bread at three seuerall times. Gather the dust together out of the place where you see a snake hath gone and made a tract, fling the same vpon a swarme of bees, they shall returne againe to their hieue. Tie vp the right stone or cullion of a ram, he shall get none but ram-lambs. And looke whosoever haue about the strings or sinewes taken from the wings and legs of a crane, they shall not be tired and faint in any labour that they take. If you would haue mules not to winse and fling out with their heels, giue them wine to drinke. Last of all, I cannot overpasse one notable and memorable example as touching the house of a mule: when *Antipater* should send the venomous water of the fountaine *Styx* for to poyson king *Alexander* the great, he could meet with no matter that would hold this poyson, without piercing and running through it, but onely the house of a mule: and to the knowledge hereof hee came, by the direction of *Aristotle* the Philosopher, who deuised a cup to be made thereof. A foule staine and blot of *Aristotles* name, for being priuie to such vilanie, and setting it forward as he did. Thus much of Land-creatures: it remaineth now to returne againe to those of the Waters, and their vertues in Physicke.



THE XXXI. BOOKE OF THE HISTORIE OF NATVRE, WRITTEN BY C. PLINIVS SECVNDVS.

The Proem.

CHAP. I.

¶ The medicinable vertues of creatures liuing in water. The admirable nature of waters.

Now followeth the discourse of Water-beasts, and how beneficiall they be vnto vs in regard of Physicke: wherein verily dame Nature (the mother and workemistress of all things) sheweth how little idle shee is, not ceasing euen there also by her continuall operations to make knowne her wonderful power, among the waues and surging billowes, amid the reciprocal tides of the sea, ebbing and flowing in their alternative turnes; yea and in the swift course and streames of great riuers. And verily, to say a truth and speak as it is, there is no part of the World wherein the might and majestic of Nature more appeareth, than in the waters: for this one Element seemeth to rule and command all the rest. Waters deuoure and swallow vp the earth: waters quench and kill the flames of fire: they mount vp aloft into the aire, and seeme to challenge a seignorie and dominion in the heauens also; whiles by a thick feeling and floore as it were of clouds, caused by the dim vapours arising from them, that vitall spirit which giueth life vnto all things, is debarred,

stopped.

of Plinies Naturall Historie.

A stopped and choaked. And what might the reason els be of thunder and lightnings flashing and breaking forth in that violence, and causing such trouble and broils, as if the world were at war within it selfe? And can there bee any thing more wonderfull and miraculous, than to see the waters congealed aboue in the aire, and so to continue pendant in the skie? And yet as if they were not contented to haue risen thus to that exceeding height, they catch and snatch vp with them into the vpper region of the aire, a world of little fishes: otherwhiles also they take vp stones, and charge themselues with that ponderous & weighty matter which is more proper to another Element. The same waters falling downe againe in raine, are the very cause of all those the wonderfull nature thereof, and namely, how the corne groweth vpon the ground, how trees and plants doe liue, prosper, and fructifie by the means of waters, which first ascending vp into the skie, are furnished from thence with a liuely breath, and bestowing the same vpon the herbs, cause them to spring and multiply; we cannot chuse but confesse, that for all the strength and vertue which the Earth also hath, shee is beholden to the Waters, and hath received all from them. In which regard, aboue all things, and before I enter into my intended discourse of Fishes and beasts liuing in this Element, I meane first to set down in generality the maruellous power and properties of water it selfe, and to illustrate the same by way of sundry examples: for the particular discourse of all sorts of waters, what man liuing is able to performe?

CHAP. II.

¶ The diuersitie of waters: their vertues and operations medicinable: and other singularities obserued therein.

THere is in maner no region nor coast of the earth, but you shall see in one quarter or other waters gently rising and springing out of the ground here and there, yeelding fountains in one place cold, in another hot; yea and otherwhils there may be discouered one with another neere adioyning: as for example, about * *Tarbella* a towne in Guienne, and the Pyrenean hills, there do boile vp hot and cold springs, so close one vnto the other, that hardly any distance can be perceiued between. Moreover, sources there be, which yeeld waters neither cold nor hot but luke-warme, and the same very wholesome and proper for the cure of many diseases; as if Nature had set them apart for the good of man only, and no other liuing creature beside. To these fountains so medicinable, there is ascribed some diuine power, in so much as they giue name vnto sundry gods and goddeses, and seeme to augment their number by that means: yea & otherwhiles great towns & cities carrie their names: like as *Puteoli* in Campanie; *Statyella* in Liguria; *Aqua Sextia* in the prouince of Narbon or Piemont: but in no countrey of the world is there found greater plenty of these springs, and the same endued with more medicinable properties, than in the tract or vale *Baianus* within the realm of Naples, where you shall haue some hold of brimstone, others of alum; some standing vpon a veine of salt, others of nitre, some resembling the nature of Bitumen, and others againe of a mixt qualitie, partly soure, and partly salt. Furthermore, you shall meet with some of them, which naturally serue as a stoupe or hotte house; for the very steeme and vapour only which ariseth from them, is wholesome and profitable for our bodies: and those are so exceeding hot, that they heat the baines, yea and are able to make the cold water to seeth & boile again which is in their bathing tubs: as namely, the fountaine *Possidiana* within the foresaid territory *Bajanus*, which name it tooke of one *Possidius* a so hot, that they are able to seeth an egg or any other viands or cates for the table. As for the *Licinian* springs, which beare the name of *Licinius Crassus*, a man may perceiue them to boile and reeke againe, euen out of the very sea. See how good Nature is to vs, who amid the waues and billows of the sea, hath afforded healthfull waters! But now to discipher their vertues in Physicke according to their seuerall kinds: thus much in generality is obserued in these baths, That they serue for the infirmities of the sinewes, for gout of the feet, & sciatica. Some more properly are good for dislocations of ioints, and fractures of bones: others haue a property to loosen the bellie & to purge: and as there be of them which heale wounds and vlcers, so there are againe that more particularly be respeciuely to the accidents of the head and ears: and among the rest, those which beare the name of *Ciceronian*, and be called *Ciceronian*, be soveraign for the eyes. Now these

is a memorable manour or faire house of plaifance, situat vpon the sea side in the very high way G which leadeth from the lake Auernus to the cittie Puteoli; much renowned for the groue or wood about it, as also for the stately galleries, porches, allies, and walking places adioyning therunto, which set out and beautifie the said place very much: this goodly house, *M. Cicero* called Academia, in regard of some resemblance it had vnto a colledge of that name in Athens, from whence he tooke the modell and patterne: where he compiled those books of his which carrie the name of the place, and be called * *Academicæ questiones*: and there he caused his monument or sepulchre to be made, for the perpetuities of his memoriall, as who would say, he had not sufficiently immortalized his name throughout the world, by those noble works which he wrote and commended vnto posteritie. Well, soone after the decease of *Cicero*, this house and Forrest both fell into the hands and tenure of * *Antistius Vetus*; at what time, in the very forefront as it were H and entrie thereof, there were discovered certaine hot fountaines breaking and springing out of the ground, and those passing medicinable and whole some for the eies. Of these waters, *Laurea Tullius* (an enfranchised vassall of *Cicero*) made certaine verses, and those carying with them such a grace of maiestie, that at the first sight a man may easily perceiue how affectionat and deuout he was to the seruice of his lord and master: and for that the said Epigram is worthy to be read not onely there, but also in euery place, I will set it downe here as it standeth ouer those baines to be seene, in this Decasticon.

*Quo tua, Romane vindex clarissime lingue,
Sylua loco melius surgere iussa virer,
Atque Academia celebratam nomine villam.
Nunc reparat cultui sub potiore Vetis
Hic etiam apparent lymphæ non ante repertæ,
Lanquidæ quæ infuso lumina rore leuant.
Nimirum locus ipse sui Ciceronis honori
Hoc dedit, hæc fontes cum patefecit ope,
Vt quoniam totum legitur sine fine per orbem,
Sint plures, oculis quæ medeamur, aquæ.*

O prince of Romane Eloquence, loe here thy Groue in place How Greene it is, where planted first it was to grow apace: And *Vetus* now, who holds thy house, Faire Academic high, Spares for no cost, but it mainteins and keeps in better plight. Of late also, fresh fountaines here brake forth out of the ground, Most whole some for to bath sore eies, which earst were neuer found. These helpfull springs, the Soile no doubt, presenting to our view, To *Cicero* her ancient lord, hath done this honour due; That since his books throughout the world are read by many a wight, More waters still may cleare their eyes, and cure decaying sight.

In the same tract of Campaine, and namely toward Sinuessæ, there be other fountaines called L Sinuessan waters: which haue the name not only to cure men of lunacie and madnes, but also to make barrain women fruitfull and apt to conceiue. In the Island Enaria there is a spring which helpeth those that be troubled with the stone and grauell: like as another water which they call Acidula, within 4 miles of Teanum in the Sidicins country, and the same is a ctually cold: also there is another of that kind about Stabij, called by the name of Dimidia: like as in the territory of Venafrum, that which proceeded from the source Acidulus, and gaue name to the foresaid water Acidula. The same effect they find who drink of the lake Velinus, for it breakes the stone. Moreover, *M. Varro* maketh mention of such another fountain in Syria at the foot of the mountaine Taurus. So doth *Callimachus* report the foresaid operation of the riuer Gallus in Phrygia: howbeit they that take of this water must keep a measure, for otherwise it distraits their vnder- M standing, & driues them besides their right wits: which accident hapneth to those (saith *Ctesias*) who drink of the red fountain (for so it is called) in Æthiopia: as touching the waters neer Rome called Albulæ, they are known to heale wounds: these waters are neither hot nor cold: but those which go vnder the name of Cutiliæ in the Sabins country, are exceeding cold, & by a certain mor-
dication

A mordication that they haue, seem to suck out the humors & superfluous excrements of the body, being otherwise most agreeable for the stomacke, sinewes, and generally for all parts. There is a fountain at Thespiæ, a city in Bœotia, which doth great pleasure to women that would faine haue children; for no sooner drinke they of the water, but they are ready to conceiue: and of this propriety is the riuer Elatus in Arcadia. In which region also the Spring Linus yeeldeth water, which if a woman with child do drink, she shall go out her full time & not be in danger to slip an vnperfect birth. Contrariwise, the riuer Aphrodisium in Pyrrhæa, causeth barrennesse. The mention of one *Titius*, a man of good worth and sometime lord Prætor, who was so bewraied B & painted all ouer his face with spots of Morpheus, that he looked like an image made of spotted marble. Cydnus, a riuer of Cilicia, hath a vertue to cure the gout; as appeareth by a letter written from *Cassius* the Parmezan vnto *M. Antonius*. Contrariwise, the waters about Trœzen are so bad, that all the inhabitants are thereby subject to the gout and other diseases of the feet. There is a citie in * Gaule named Tungri, much renowned for a noble * fountaine, which runneth at many pipes: a smacke it hath resembling the rust of yron, howbeit this tast is not perceiued but at the end & loose only: This water is purgatiue, driues away tertian agues, expels the stone and cureth the Symptomes attending thereupon. Set this water ouer the fire or neare to it, you shall see it thick and troubled, but at the last, it looketh red. Between Putcoli and Naples, there be certain wels called Leucogæi, the water wherof cureth the infirmities of the eies, and healeth I hath ranged the moores or fens of Reate, for that the water issuing from them, hath naturally a propriety from all others, to harden the houses of horses feet. *Endemus* reporteth, That in the territory of Hestîæa, a citie in Thessalie, there be two springs, the one named Ceron, of which, as many sheepe as drinke, proue black: the other Melas, the water wherof, maketh black sheepe turn white: let them drinke of both waters mingled together, they will proue flecked and of diues colours. *Theophrastus* writeth, That the riuer Crathis in the Thurius country, causeth both kine and sheepe as many as drinke thereof, to looke white: whereas the water of Sybaris giueth them a black hew. And by his saying, this difference in operation is seene also vpon the people that vse to drink of them: for as many as take to the riuer Sybaris, become blacker, harder, and withall of a more curled hair than others: contrariwise, the drinking of Crathis causeth them to look white D to be more soft skinned, & their bush of haire to grow at length. Semblably in Macedony they that would haue any cattell to grow white, bring them to drinke at Aliacmon the riuer: but as many as desire they should be brown or black, driue them to water at Axios. The same *Theophrastus* hath left in writing, That in some places there is no other thing bred or growing but brown and dusky, in so much as not only the cattell is all of that lere, but also the corne on the ground, & other fruits of the earth; as among the Messapians. Also, at Lusæ, a city of Arcadia, there is a certain wel, wherein there keep ordinarily land-mice. As for the riuer Aleos, which passes through Erythræ, it makes them to grow hairie all their bodies ouer as many as drinke thereof. In Bœotia likewise, neare to the temple of the god *Trophonius* & hard by the riuer Orchomenas, there be two fountaines; the one helps memory, the other causeth obliuion, wherupon they * took their names. E In Cilicia, hard at the town Crescum, there runs a riuer called * Nus: & by the saying of *M. Varro*, whosoever drinke thereof, shall find their wits more quicke, and themselves of better conceit than before. But in the Isle * Chios there is a spring, which causeth as many as vse the water to be dull and heauie of spirit. At Zamæ in Affrick, the water of a certain fountain, makes a cleare & shrill voice. Let a man drinke of the lake Clitorius, he shall take a misliking and loathing of wine, saith *M. Varro*. And yet *Endoxus* & *Theopompus* report, That the water of the fountaines be- fore said make them drunk that vse it. *Mutianus* affirmes, That out of the fountain vnder the temple of father *Bacchus*, within the Isle Andros, at certaine times of the yere for 7 daies together, there runneth nothing but wine, in so much as they call it the wine of god *Bacchus*: howbeit, remove the said water out of the prospect and view (as it were) of the said temple, the tast wil turne to be waterish again. *Polyclitus* writeth of a certaine fountaine of Cilicia neere vnto the citie Soli, which yeeldeth an vnction or oleus water, that serueth in stead of oile. *Theophrastus* reports the same of another fountain in Æthiopia, which hath the like quality. And *Lycus* saith, That among the Indians there is a fountaine, the water wherof is vsed in lampes to maintaine light. And the like is reported of an other water about Bebat in [the capitall citie of Media,] *Theopompus*

* Like as *Tusculane questiones*, which he made in *Tusculano*, a ferme or house that he had in *Tusculum*.
* A noble man of Rome, Consull with *D. Lælius* *Calpurnius*, anno ab urbe condita 747.

* Otherwise called *Aniger*: but this name itooke of *Alphion*, which signifieth a kind of white morpheus. He meaneth the Low-countries, called sometime Belgica Gallia. * Called now the parish of Spaw.

* For the former is called *præcis*, or *præcis*, the latter *præcis*, wit and vnderstanding. In Chio,

Theopompus writeth, That neere to Scotusa [in Macedonie] there is a lake, the water wherof is so-
ueraign for the healing of wounds. Morcouer, king *Inba* hath left in writing, That in the Troglodites country there is a lake, for the hurtful water that it beareth, called the Mad lake, which thrice a day becommeth bitter and salt: and as many times for, it turneth to be fresh and sweet: which course it keeps also in the night season, breeding otherwise white serpents twenty cubits long, of which it is crawling full. The same Prince (mine author) reports, That in Arabia there is a spring boiling out of the ground with such a force, that it scorneth and checketh any thing that is throwne into it, and cannot be kept downe with any weight whatsoeuer. *Theophrastus* maketh mention of the fountain Marfyas in Phrygia, neere vnto the town Celæna, which casteth vp great stones. And not farre from it be two other springs *Clæon and Gelon, so called by the Greeks for the contrary effects which they worke. At Cizicum there is a fountain of *Cupid*, and whosoever drinke of the water thereof, shall lay aside and forget all affection of loue, as *Mutinus* doth both report and beleue. At Cranon there is a hot spring, and yet not so boyling as many others be: the water thereof, if it be put into a bottle or flaggon of wine, will maintain the heat thereof for three daies together, that it shall drinke hot. In Germany beyond the riuier Rhene, there be waters so hot, that whosoever drinketh thereof, shall sensibly find the heat in his body 3 daies after: The springs that yeeld this water be called Mattiaci. This peculiar property besides hath this water, that about the edges and brims thereof there engender pumish stones. Now if any man suppose some of these strange reports to be incredible, let him learne & know, that in no part of the world Nature hath shewed more admirable works than in this element of Water. And albeit in the beginning of this mine historie I haue written in ample manner of many a wonder obserued in the waters, yet somewhat remaineth still to be related. For *Ctesias* saith, That the Indians haue a lake or poole, wherein nothing will swim, but all sinks to the bottom. And *Calius* also our countryman auoucheth, That the leaues which fall into the lake Avernus will settle downward and not flote aboue. And *Varro* auoucheth moreover, That what birds soeuer flie ouer it, or approach the aire and breath thereof, they will die presently. Contrariwise, in Apulcidamus a lake of Affrick, nothing goes down, but all swims aloft. The like doth *Appian* report of Phinthia, a fountain in Sicilie: as also of a lake in Media, and namely the pit or well of *Saturne*. The fontaine Limyra is wont ordinarily to change his seat, and to passe into places adioyning, but neuer for nought, prefaging alwaies thereby some strange accident to ensue. And wonderfull it is, that the fishes therein should follow and do the like. Now when this water is thus removed, the inhabitants of the country, desirous to know the issue of things to come, repaire thither as to an Oracle, and seek to be resolu'd by the foresaid fishes, and therewith offer to them some meat: if they come vnto it and swim away with all, it is a good token, & this they take for an affirmatiue answer, as if they said, Yea, to their demands: but in case they refuse the meat and flit it away with their tailes, they collect the contrary, and this is their flat nay. There is a riuier in Bithynia called Olachas, running close to Briazus (which is the name both of a temple, and also of the god therein honoured) the water wherof will discouer and detect a perjured person: for if he that drinketh thereof, feele (as it were) a burning fire within his body, take him for a false forsworne villaine. Furthermore, in Cantabria or Biscay the fountains of the riuier Tamaricus, are endued with a secret vertue to presage and foretell future euents: and three heads or sources there be of them, eight foot distant one from another: they meet all at length in one channell, and maintaine the great and mighty riuier Tamaricus. Howbeit, twelue times euery day, yea and otherwhiles twenty times they are dry, and haue no shew at all or appearance of water, notwithstanding there be another fountain or well neere to them, that yeeldeth plenty of water, and neuer giueth ouer running. And this is held for an ominous and fearefull presage, if when folke are desirous to see them, they seeme not to run at all: as it was seene of late daies by *Lartius Licinius*, sometime lord Pretour and afterwards Lieutenant Generall vnder the Consuls. For within a feuen night after, a great misfortune happened vnto him. In Iurie there is a riuier which euery Sabbath day is dry. Thus much of waters medicinable and miraculous, and yet not simply hurtfull. Contrariwise, there be others of as wonderfull a nature, but dangerous to they are and deadly withall.

Ctesias writeth, That there is a fontaine in Armenia, breeding and bringing forth black fishes: wherupon, as many as feed, are sure to die for it immediatly. I haue heard the like reported of such dangerous fishes about the head of the riuier Danubius, vntill a man come to a fountain

* Non tu ridet,
i. flata, & pater,
i. Rife. For the
one causeth
weeping, the
other inuouch
to laughter.

A taine which presently dischargeth it selfe into the channell of the said riuier; for beneath that place such fishes go not, nor enter lower into the riuier. And hereupon the fontaine is by the generall voice of people taken to be the very source and head of Danubius aforesaid. The selfe same accident as touching fish, is reported by a poole in Lydia, called the poole of the nymphs. In Arcadia neere vnto the riuier Pheneus, there floweth a water out the rockes called Styx, which is present death to as many as drink thereof, as heretofore I haue shewed: And *Theophrastus* saith moreover, that in this water there be certaine small fishes (a thing that a man shall neuer see in any other venomous fountains) and those likewise are as deadly as the water. *Theopompus* writeth, That in Thracia there be waters about the place called Chropfos, which kill those that drinke thereof. And *Lycus* maketh report of another fontaine in the Leontines countrey, wherof as many as drink die within three daies. *Varro* hath left in writing, That neere to the hill Soraete there is a fontaine foure foot large, which at the rising of the Sunne ouerfloweth like boyling water: but the birds that haue tasted of the water die presently, and are there to be seene lying dead. For this secret mischiefe there is besides in many of these waters, that they are faire and cleare to see to, and thereby seeme to allure both man and beast to drinke thereof, for their ownebane and destruction: as we may see by Nonacris in Arcadia; for surely this fontaine giueth no suspicion at all, wherby we should mistrust a venomous quality, and yet some are of opinion, That the hurt which commeth thereby, proceedeth from excessive cold; and they ground their reason vpon this, That the water issuing out of it into riuers and rills, will congeale and grow to a stony substance. It fareth otherwise about the vale of Tempe in Thessalie, where the water of a certaine fontaine is fearfull to see to, and there is no man but abhorreth the sight thereof, besides the corrosiue quality that (by folks saying) it hath, to fret and eat into brass and yron: the best is, that (as I haue shewed before) it runneth not farre, and the course that it holdes is but short. But wonderfull it is, that a certaine wild Carob should enuiron this source round about with his roots, and the same continually beare purple flours, as it is reported to do. Also, in the very brinke and edge of this fontaine there is another herbe of a kind by it selfe, which abideth fresh and Greene from one end of the yeare to another. In Macedonie, not far from the tombe of *Euripides* the Poet, there be two riuers run together, the one yeelds water most wholesome for to be drunke: the other is as noisome and deadly. Neere to Perperena, a towne in Troas, there is a spring the water wherof giueth a stonie coat or crust to all the earth that it either ouerfloteth or runneth by: of which nature are the hot waters issuing out of a fontaine neare Delium in Eubœa; for look what way soeuer the riuier runs, you shal see the stones to grow still in height. About Eurymena, which is in Thessalie, there is a well, cast into it any chaplets or guirlands of floures, they will turne to stones. There runneth a riuier by Colossi, a city in Phrygia, into which if you throw bricke or tiles that be raw and vnbacked, you shall take them forth againe as hard as stones. Within the mines of the Isle Scyros there is a riuier, which conuerteth into stone all the trees that it runneth by or toucheth, as well the boughs as the bodies. In the famous and renowned caues called Corycia, all the drops of water that distill from the rocke, turne to be as hard as stones: and no maruell, for at Meza in Macedonie, a man shall see the drops of water become stone, as they hang to the very vaults of the rocke, much like to yfickles from the caues of houses in Winter time: whereas at Corycum abouenamed, the said drops turne into stone when they are fallen downe, and not before. In certain caues they are to be seene conuerted into stones both waies, and some of them are so big, as they serue to make columnes and pilastres of, and those otherwhiles of diuers colours to the eye: as may be seene in the great caue of Phausia, which is within the Chersonese of the Rhodians. Thus much may suffice by way of examples, to shew the varietie of waters, with their sundry vertues and operations.

CHAP. III.

¶ The qualitie that is in waters. How a man may know which be good and wholesome from such as be naught and unwholesome.

Much question there is & controuersie among physicians, What kind of water is best? and yet with one generall consent they condemne, and that iustly, all dead and standing waters; supposing those that run to be better: for it standeth with good reason, that the very agitation and beating vpon the banks as they beare streame in their current, maketh them more subtil, and

subtile, pure, and cleare, and by that meanes they get their goodnesse. Which considered, I G
maruaile very much at those who make most account of the * water gathered and kept in ce-
sternes: But they ground their opinion vpon this reason, because raine water is of all others
lightest, as consisting of that substance which was able to rise and mount vp aloft, and there to
hang about in the aire. Which is the cause also, that they preferre Snow water before that
which commeth downe in shoures: and the water of yce dissolued, before the other of melted
Snow; as if the water were by yce driuen together and reduced to the vtmost point of finenesse.
They collect hereby, that these waters, to wit, raine, snow, and yce, be all of them lighter than
those that spring out of the earth: and yce among the rest farre lighter than any water, in pro-
portion. But this opinion of theirs is to bee reputed as erroneous, and for the common good
and profit of mankind to be refuted: For first and formost, that leuitie whereof they spake, can
hardly and vneath bee found and knowne by any other meanes than by the fence and feeling
of the stomacke: for if you goe to the weighing of waters, you shall perceiue little or no differ-
ence at all in their poise. Neither is it a sufficient argument to prouoe raine water to be light,
because it ascendeth on high into the aire, for wee may see stones likewise drawne vp into the
clouds: and besides, as the raine falleth downe againe, it cannot chuse but be infected with the
grosse vapours of the earth. Whereby it commeth to passe, that wee find raine water ordina-
rily to bee most charged and corrupted with ordure and filthinesse: and by reason thereof it
heateth most quickly and corrupteth soonest. As for snow and yce, that they should bee
thought to bee composed of the subtile parts of this Element, and yeeld the finest water,
I wonder much, considering the neare affinitie which is betweene them and haile, which might
induce vs also to thinke the same of it: but all men confesse and hold, that the same is most
pestilent and pernicious for to bee drunke. Moreouer, there are amongst them not a few, who
contrary vnto the opinion of other Physicians their fellowes, affirme flatly and confidently
the water of snow and yce to bee the vnwholesome drinke that is, for that all the puritie and
finenesse thereof hath bene drawne and sucked out. And in very truth, wee find it by ex-
perience, that any liquor whatsoever doth diminish and consume greatly by beeing fro-
zen and congealed into an yce. Wee see besides, That ouer-grosse and foggie dewes breed
a kinde of scurfe or scab in plants: white frosts burne and sedge them: and both of these, the
hore frost as well as the dew, proceed from the same causes in a manner that snowes doe.
Certes, all Philosphers agree in this one point, That raine water puttifieth soonest of any
other, and least while continueth good in a ship, as saylers know full well. Howbeit, *Epige-
nes* auoucheth and affirmeth, That the water which hath bene seuen times puttified and as
often purified againe, is subiect no more vnto putrifaction. And as for cesterne waters, the
Physicians also themselves confesse, That they breed obstructions and schirrhosities in the
bellie, yea, and otherwise be hurtfull to the throat. As also, that there is not any kinde of wa-
ter whatsoever, which gathereth more mud or engendreth more filthie and illfaoured ver-
mine than it doth. Neither followeth it by and by, that all great riuer waters indifferently are
the best: no more than those of any brooke, or the most part of ponds and pooles are to
bee counted and esteemed most wholesome. But of these kinds of water wee must conclude
and resolute with making distinction, namely, That there be of euery sort thereof those which
are singular and very conuenient, howbeit, more in one place than in another. The kings and
princes of Persia bee serued with no other water for their drinke but from the two riuers, Cho-
aspes and Euleus onely: And looke how farre soeuer they make their progresse or voyage
from them two riuers, yet the water thereof they carry with them. And what might the rea-
son be therefore? Certes, it is not because they be riuers which yeeld this water, that they like
the drinke so well: for neither out of the two famous riuers, Tygris and Euphrates, nor yet
out of many other faire and commodious running streames doe they drinke. Moreouer,
when you see or perceiue any riuer to gather abundance of mud and filth, wote well, that ordi-
narily the water thereof is not good nor wholesome: and yet if the same riuer or running streame
bee giuen to breed great store of yeeles, the water is counted thereby wholesome and good
enough. And as this is a token of the goodnesse, so the wormes called * Tineæ, engendered
about the head or spring of any riuer, is as great a signe of coldnesse. Bitter waters of all o-
thers bee most condemned: like as those also which soone follow the spade in digging, and
by reason that they lie so ebbe, quickly fill the pit. And such be the waters commonly about
Troezen.

* Which some
take for Sows.

A Troezen. As for the nitrous, brackish, and * salt waters found among the deserts, such as trauell
through those parts toward the red sea, haue a deuise to make them sweet and potable within
two houres, by putting parched barley meale into them; and as they drinke the water, so when
they haue done they feed vpon the said barley grots, as a good and wholesome gruel. Those spring
waters are principally condemned, which gather much mud and settle grosse in the bottome:
those also which cause them to haue an ill colour who vse to drinke thereof. It skilleth also very
much to mark if a water staine any vessels with a kinde of Greene rust; if it be long before pulle
vp, and lastly, if it furthor vessels with a thicke rust wherein it vseth to be boiled: for all these
be signes of bad water.ouer and besides, it is a fault in water, not only to stink, but also to haue
any smack or tast at all, yea though the same be pleasant and sweet enough, and inclining much
C to the rellice of milk, as many times it doth in diuers places. In one word, would you know a
good and wholesome water indeed? Chuse that which in all points resembleth the aire as neere
as is possible. At Cabura in Mesopotamia there is a fountaine of water which hath a sweet and
redolent smel: setting it aside, I know not any one of that qualitie in the whole world againe:
but hereto there belongs a tale, namely that this spring was priuiledged with this extraordinary
gift, because queen *Luno* (forsooth) sometimes bathed and washed her selfe therein: for other-
wise, good and wholesome water ought to haue neither tast nor odor at all. Some there be who
iudge of their wholesomnesse by their ballance, and they keep a weighing and poising of waters
one against another: but for all their curiositie they misse of their purpose in the end; for sel-
dom or neuer can they find one water lighter than another. Yet this deuise is better and more
certain, namely, to take two waters that be of equal measure and weight: for looke whether of
them heateth and cooleth sooner, the same is alwaies the better. And for to make a trial herof,
lade vp some seething water in a pale or such like vessel, & set the same down vpon the ground
out of your hand, to ease your arm of holding it hanging long in the aire, and if it be good wa-
ter, they say it will immediatly of scalding hot become warm and no more. Well, what waters
then, according to their sundry kindes in generalitie, shall we take by all likelihood to be best?
If we go by the inhabitants of cities and great towns, surely, wel-water or pit water (I see) is sim-
ply the wholesomest. But then such wells or pits must be much frequented, that by the continual
agitation and often drawing thereof, the water may be more purified, and the terren substance
D passe away the better by that means. And thus much may suffice for the goodnesse of water re-
spectiue to the health of mans body.
But if we haue regard to the coldnesse of water, necessarie it is that the Wel should stand in
some coole and shadowie place not exposed to the Sun, and nathelss open to the broad aire,
that it may haue the full view and sight (as it were) of the sky. And about all this, one thing
would be obserued and seen vnto, that the source which feedeth it spring and boile vp directly
from the bottom, and not issue out of the sides: which also is a main point that concerns the per-
petuitie thereof, and whereby we may collect that it will hold stil, and be neuer drawn dry. And
this is to be vnderstood of water cold in the owne nature. For to make it seem actually cold to
the hand, is a thing that may be done by art, if either it be forced to mount aloft, or fall from on
E high, by which motion and reuerberation it gathers store of aire. And verily the experiment
herof is seene in swimming; for let a man hold his winde in, he shall feele the water colder by
that means. Nero the Emperor deuised to boile water, & when it was taken from the fire to put
it into a glasse bottle, and so to set it in the snow a cooling: and verily the water became thereby
exceeding cold to please and content his tast, and yet did not participate the grossenesse of the
snow, nor draw any euill qualitie out of it. Certes, all men are of one opinion, that any water
which hath been once sodden, is far better than that which is still raw. Like as, that after it hath
been made hot, it will become much colder than it was before, which I assure you came first
from a most subtil and witty inuention. And therefore if we must needs occupy naughty water,
the only remedy that we haue to alter the badnesse thereof, is to seeth it wel until the one halfe
F be consumed. Now if a man desire to know the vertue and commoditie of cold water: first, it or-
dinarily stancheth any flux of blood, if it be cast vpon the place. Also if one be not able to en-
dure the heate in a bain or hot-houfe, the best way to auoid this inconuenience, is to hold in his
mouth cold Water all the while. Moreouer, many a man hath found by a verie familiar expe-
rience,

* *Salsus*, al-
though some
reade *Salmaci-*
das, which be
holden for wa-
ters that will
effeminateth
that drinke
thereof. But
such waters be
impertinent to
this place: nei-
ther doe we
reade of the
fountain *Sal-*
masis to be in
this desert.

rience, that the coldest water in the mouth is not alwaies the coldest in the hand. And contrari- G
wise, when it is exceeding cold without to be felt, it is not so sensibly cold within to be drunk.

Of all Waters in the world, that which wee call here in Rome Martia, carrieth the greatest name by the generall voice of the whole City, in regard both of coldnesse and wholesomnesse. And verily we may esteeme this water for one of the greatest gifts that the gods haue bestowed vpon our city. In times past it was called Aufseia, and the very fountaine from whence it cometh, Piconia. The head or source thereof ariseth at the foot of the vtmost mountains of the Pelignians: it runneth through the Marsians country, and passing through the lake Fucinus, it tendeth no doubt euen then directly toward Rome; but anon it is swallowed vp within a hole vnder the ground, so as it is no more seen vntill it shew it selfe again in the territorie of the Tiburtines; from which place it is conueyed vnder vaults, and so carried through to Rome by arch-work for the space of nine miles. The first that began to bring this water to the city, was Ancus * Martius one of the Roman Kings. Afterwards Qu. * Martius Rex, in his Pretorship finished the said worke: and when in proceffe of time it was fallen to decay, M. Agrippa repaired it againe: who also brought the water named Virgo to the city, which hath her head eight miles from Rome, in a certaine noue or by-corner about two miles turning from the great port way leading to Præneste. Neere vnto it runneth the riuer Herculaneus: but this water keepeth stil behinde, as though it fled from it, whereupon it tooke the name Virgo. Compare these two riuers together which are conueyed to Rome, you shall see the difference before said as touching the coldnesse of waters; for looke how cold Virgo is to the hand, so much is Martia in the mouth. But long ago haue wee of Rome lost the pleasure and commoditie of these two Rills, I through the ambition and auarice of some great men, who haue turned away these waters from the City, where they yielded a publike benefit to the Commonwealth; and deriued them for their priuat delight and profit, into their owne mannors and houses in the country, for to water their gerdens, and serue to other vses.

And here in this place I thinke it not impertinent to adioine to this present treatise, the manner and skill of searching and finding out waters. And first to speake in general terms: springs ordinarily be found in Vallies, in the pitch or crest of some little hill where it hath a fall and descent, or else at the foot of great mountaines. Many are of opinion, That in any tract whatsoever, that side or coast which regardeth the North is giuen to haue water in it. And verily it were not amisse to shew how Nature disporteth her selfe and worketh variably in this behalfe. First, a man shall neuer see it raine on the South side of the mountaines in Hyrcania, which is the reason, that on that part onely which lieth to the North they are giuen to beare wood, and be full of forrests. But Olympus, Ossa, Parnassus, Apenninus, and the Alpes, be replenished with Woods on all sides, and are furnished with their Springs and Riuers euerie where. In some countries the hills be Greene, and watered on the South side onely. As for example in Candy, the mountaines called * Albi: so that there is no heed to be taken by this, for the rule holdeth not alwaies. But to come now vnto particulars: Looke where you see growing Rushes, Reeds, or the * Herbe whereof I made relation before, be sure you shall find water vnderneath. Item, Wherefoeuer you finde Froggs lying in any place vpon their breasts, make account of good store of water there. As for the wilde and wandering Sallow, the Aller tree, L Agnus-Castus, or Yvie, they come vp many times of their owne accords, in some low grounds where there is a settling or stay of raine water fallen from higher places: inso much as they that goe by these signes to finde some Spring may soone be deceived. A surer aime yet by farre, is a mist or exhalation, which a man may discouer a farre off a little before the Sunne rising. And for to espie it the better, some there be who get vp into an high place, and lay themselves grouel long with their chinnes touching the ground; and by that meanes discerneth where any such smoke or vapor doth arise. There is also another speciall means besides to find out Waters, but knowne it is vnto those onely who be skilfull and expert in this feat. For they that are guided by this direction to Water, goe forth in the hottest season of the yeare, and about the noone-tide of the day to marke the reuerberation of the Sunne beames in any place: for if this repercussion and rebounding appeare moist, and namely when the face of the earth looketh dry and thirstie, they then make nodoubt but to finde Water there. But they had need to looke so intently and earnestly, that oftentimes their eyes ake and

* No manuell
then if it were
called Martia.

* Anemopis
i White.

* To wit, wild
Folefoot, ca. 6.
lib. 26.

A and be pained withall. For auoiding which trouble and inconuenience, some betake themselves to other experiments, and namely, they dig a trench or ditch five foot deep within the ground; the mouth whereof they couer all ouer with earthen vessels of potters worke vnbacked, or els with a barbars brazen bason well enuiled; and withall a lamp burning: ouer all which, they make a little arch-work of leaues and boughs, and mould thereupon. Now if they come within a while after to this place, and either see the earthen pots broken or wet, or perceiue a dew or sweat standing vpon the brasse, or finde the lamp aforesaid gon out, and yet no want of oile to maintain themselves they shall find water if they sink the pit deeper. Some there be, who for better assurance hereof make a fire in the place, and burne it thoroughly, for then the vessels aforesaid if they proue to be wet, giue a more infallible hope of a spring. Moreover, the very leire it selfe of the soile, if it be spotted with white specks, or be altogether of a reddish bright colour, promising spring water to be vnderneath; for if the ground look black, lightly the water wil soon fail if there be any spring there found. If you chance to light vpon a vein of potters clay or chalk, make account you shall meet with no spring there, sink as deep as you will: and therefore work-change of euery coat (as I may so say) of the earth as they dig, to wit from the black delfe, vntil they meet by degrees with the veins aforesaid. Furthermore it is to be noted, that the water which is found in clay grounds is alwaies sweet and potable: like as that which a stony and gritty soile doth yeeld, is commonly colder than any other: and such a kinde of ground also is allowable for the prooue of good waters, for it ingendreth sweet and wholesome water, light also of digestion, and pure withal, by reason that as it passeth by a soft grit as it were, through a strainer, all the grossnesse thereof it leaueth behind sticking thereto. As for * thicke sand & gr- gather mud. Ground giuen to beare * pibbles or the grosser sort of grauell, giue vs no security that the springs therein wil hold all the yeare long, howbeit the water is very good & pleasant. The hard and compact grauell called the male grauel, and the land which seemeth full of black and burnt carbuncle stones, bringeth forth wholesome waters, and the sources be sure and perdurable. But red stones yeeld the best simply, and those that we may be sure will neuer giue out stone, or vpon flint, wee may boldly reckon of wholesome and euermore lasting springs; and this gift they haue beside, to be passing cold. Moreover, in digging and sinking pits marke this for an assured and infallible signe that you approach vnto water; namely, if the earth appeare and shew moist more and more, still as you go lower and lower: also if the spade enter more willingly, and goe downe with ease and facilitie. When pionsers haue wrought deepe vnder the ground, and then chance to meet with a veine of brimstone or alume, the dampe will stop their breath, and kill them presently, if they take not the better heed: and therefore to foresee and preuent this danger, they vse to let downe into the pit a candle or lampe burning; for if it goe out, they may be sure it hath met with the dampe. Therefore if pits be subiect to the rising of such vapours, cunning and expert workemen make on either side of such pits, both on the right hand and the left, certaine out-casts, tunnels, or venting holes, to receiue those hurtfull and dangerous vapours, whereby they may evaporate and breathe forth another way. Otherwhiles it falls out, that the aire which they meet with in digging very low, doth offend the pionsers, albeit there be no brimstone nor alume neere: but the ready meanes to amend the same and auoid the danger, is to make winde and fresh aire with continuall agitation of some linnen cloathes. Now when the pit is sunke and digged as far as to the water, the bottome must be layd, and the lowest sides of the wall reared of stone simply without any mortar made of [lime and] sand, for feare lest the veins of the source be stopped. Some waters there are, which in the verie prime and beginning of the spring are of this nature, That they grow to be exceeding cold, namely such as haue their source or spring lying but ebb; for they are maintained only of winter rain: Others againe begin to be cold at the rising of the Dog-starre. And verily we may see the experience both of the one and the other about Pella the capitall city of Macedonie: for the water of the meere or marish there before the towne in the beginning of Summer is cold; and afterward when the weather is at the hottest, the spring water in the higher parts of the Citie is so extreame cold that it is readie to bee frozen. The semblable happeneth in Chios, where

* In Topos.

* Sabulum.

* Glarea.

Nn

there

there is the same reason of the hauen and towne it selfe. At Athens, the great and famous fountain named Enneacrunos, in a rainy or stormy summer is colder than the pit water or well in *the* *piters* garden, within that city; and yet the said Well water if it be a dry season, will stand with an ice at Midsummer.

CHAP. IV.

¶ The reason of certaine Waters that appeare and be hid againe suddenly.

BVt about all others, the waters of pits or wells be ordinarily most cold about the * retreat or Occultation of Arcturus, yea and many times they faile in the mids of summer, and all of them in maner grow very low for the space of toure daies, at the time of the setting of the foresaid star. Many there be which haue little or no water in them all winter long, and namely about the hil Olympus, where it is spring first ere the waters return and find the way into their pits. And verily in Sicilia, about the cities Messana and Mylae, during winter the springs are altogether dry; but in summer time they run ouer the brinks of their Wells and pits, maintaining pretty riuers. At Apollonia a city in Pontus there is a fen neere the sea side, which in Summer only ouerfloweth, and especially about the rising of the great Dog-star, many if the summer be colder than ordinarie, it is not so free and plentifull of water. Some Springs haue this qualitie with them, to be drier for shoures and raine water: as for example, in the territorie of Narnia, a city in the duchy of Spoletto, which *M. Cicero* hath not forgot to insert among other admirable things, in his treatise of Wonders: for of this territorie hee writeth in these termes, That in a drought it was durty, and in rainy weather dusty. Moreover this is to be noted, That all waters are ordinarily more sweet in winter than in summer, but in autumn least of all, and in a dry season lesse than at other times. Neither are the riuer waters most times of like taste, by reason of the great difference that is in their chanel; for commonly the water is such as the earth & soil through which it passeth, and doth participat the qualitie and tast of those herbs always which it passeth and runneth by. No manuell therefore if the water of one and the selfe-same riuer be found in one place more vnwholsome and dangerous than in another. It falls out many times, that the brooks and rills which enter into great riuers, do alter their water in the very taste (as we may see by experience in the famous riuer Borysthenes) inso much as such great riuers be overcome with the influence of such riuerets, and either their owne taste is delaied by them, or clean drowned and lost. And some riuers there be which change by occasion of rain: the prooffe whereof was thrice seen in Bosphorus, when by reason of the fall of some fast shoures, the floods that ouerflowed the fields destroyed all the corne vpon the ground. The like also fell as often in Egypt; for the rain that fel caused all the washes arising from the riuer Nilus, which watered the grounds, to be bitter, whereupon ensued a great plague and pestilence to the whole region. It chanceth many times, that presently vpon the cutting and stocking vp of Woods, there arise and spring certaine fountaines which beforetime appeared not, but were spent in the nourishment of the tree roots; as it fell out in the mountain Hæmus, when as *Cassander* held the * Gallogreeks besieged; for when the woods thereupon were cut down to make a palaisad for a rampier, presently there issued forth springs of water in their place. Moreover, it hath bin oft times known, that by occasion of spoiling some hills of the wood growing therupon, the springs haue met altogether in one streame, and done much hurt in sudden ouerflowing the vaile beneath; whereas the trees before-time had wont to drink vp, digest, and consume all the moisture & wet that fell and fed the said waters. And verily it auaieth much for the maintenance of water, to castre with the plough, and to till a ground; thereby to break vp and loose the vppermost callositie and hide (as it were) of the earth, that kept it clunged and bound. Certes it is recorded for a truth, that vpon the raising and destroying of Arcadia (a towne so called in Creet) wherby the place was dispeopled, all the fountaines waxed dry, and the riuers in that tract (which were the inhabitants fell to earing and ploughing any grounds within their territorie, the foresaid fountaines appeared again, and the riuers returned to their former course.

CHAP.

A

CHAP. V.

¶ Divers historிக்கal obseruations touching this point.

Moreouer, Earthquakes, as they discouer sometimes new springs and sources of water, so otherwhiles they swallow them vp that they are no more seene like as it hapned (as it is well knowne) 5 times about the riuer Pheneus in Arcadia. And in manner abovesayd, there issued forth a riuer out of the mountaine Corycus, so soone as the peasants of the country began to break it vp for tillage. But to return again to the change and alteration of waters: wonderfull they must needs be (no doubt) when there is no euident cause thereof to be knowne: as namely in Magnesia, where all the hot waters of the baines suddenly became cold, without any other change besides of the tast: also in Caria, where standeth the temple of *Neptune*, the riuer which was knowne before to be fresh and potable, all on a sudden turned into salt water.ouer and besides, is not this a strange miracle, that the fountain Arethusa in Syracuse, should haue a sent or smell of dung, during the solemne games and exercises at Olympia? But there is some probable reason to be rendred hereof, Because the riuer Alpheus passeth from Olympus vnder the very bottom of the sea into that Island [of Sicily] where Syracuse standeth, and so cometh to the foresaid fountain. The Rhodians haue a fountain within their * Cherstone, which euery ninth yere purgeth it self & sends out an infinit deale of ordure and filthines. And as the tast & smell of waters do alter, so their colours also do change: as for example, there is a lake in the country of Babylon, which euery summer for the space of 11 daies, looketh red: and Borysthenes also in the summer time, runneth with a blewish colour like * violers, or the sky; and yet a most pure and subtile water it is of all other: which is the reason, that it swims aloft and floteth naturally vpon Hypanis the riuer. In which two riuers, there is another maruell reported, That all the while a Southern wind bloweth, the riuer Hypanis is discerned aboue it. But there is one argument more besides, that proueth the water of Borysthenes to be passing light & thin, for that there arise no mists out of it, may it is not perceived to yeeld any exhalation or breath at all from it. To conclude, they that would seem to be curious and skillfull in these matters, do obserue and affirme, That generally all waters grow to be heavier after that mid-winter is once past.

D

CHAP. VI.

¶ The maner of water-conduits. How and when those waters which naturally are medicinable, ought to be used. Also for what diseases it is good to saile and take the aire of the Sea. The vertues and properties of se waters as touching Physicks.

IF a man would convey water from any head of a spring, the best way is to vse pipes of earth made by porters art; and the same ought to be 3 fingers thick, and one jointed within another, so as the end of the vpper pipes enter into the nether, as a tenon into a mortaise, or as a box into the lid; the same ought to be vnited and laid euen, with quicklime quenched and dissolued in oile. The least leuell for to carry and command water vp hill from the receit, is one hundred foot; but if it be conveyed but by one canal and no more, it may be forced to mount the space of two Actus, i. 240 foot. As touching the pipes by means whereof the water is to rise aloft, they ought to be of lead. Furthermore, this is to be obserued, That the water ascend alwaies of it self at the deliuerie, to the heigh of the head from whence it gaue receit: if it bee festened a long way, the worke must rise and fall often in the carriage thereof, that the leuell may bee maintained still. As for the pipes, ten foot long apiece they would bee, if you do well. Now if the said pipes of lead be but * five fingers in compass, ordinarily they should weigh sixty pound: * if they be of eight fingers size, they must carry the weight of one hundred pound; but in case they bear a round of * 10 fingers, their poise would be at the least 120 pound; and so the rest more or lesse according to this proportion. Those pipes be called properly in Latine Denarie, the web or sheet whereof beareth ten fingers in breadth, before it be turned in and brought to the compass of a pipe: like as Quinariæ, when the same is halfe so broad. Moreover, this is to be obserued, That in euery turning and twining of an hill, the pipe ought of necessity to be five fingers round and no more, for to repress and breake the violence of the water in the current. Likewise the vaulted heads which receiue and contain water from all the sources meeting together, must

be of that capacity, as need requireth.

And since I am false into the treatise and discourse of fountains, I wonder much at *Homer*, that he hath made no mention at all of hot springs, and yet otherwise throughout his whole poem, hee bringeth in oftentimes those who bathed and washed in hot baines. But it may verie well be, that the reason thereof is, because in those times there was not that use of them in physick as at this present: for now adays, if folk be amiss or ill at ease, straightwaies they run to the baines and bath for remedy. And in truth, those waters which stand vpon brimstone, be good for the sinews: such as come from a veine of slume, are proper for the palseie, or such like infirmities proceeding from resolution of the nerues. Moreouer, they that hold of bitumen or nitre (such as be the fountains. *Curilita*) be potable and good to be drunke, and yet they are purgatiue.

To come to the vse of natural baines and hot waters: many men in a brauery sit long in a bath, and they take a pride in it, to endure the heat of the water many hours together; and yet is there nothing so hurtfull for the body: for in truth, a man should continue little longer in them than in ordinary artificial baines or stoups; and then afterwards when he goeth forth, hee is to wash his body with fresh cold water, not without some oile among. Howbeit, our common people here, thinke this to be very strange, & will not be brought to it: which is the reason, that mens bodies in no place are most subject to diseases: for the strong vapours that steme from thence, stuffe and fill their heads; and although they sweat in one part, yet they chile in another, notwithstanding the rest of their bodies stand deep within the water. Others there are besides, who on the like erroneous conceit, take great joy in drinking a deal of this water, struing avice who can poure most of it downe the throat. I haue my selfe seen some of them so puffed vp and swolne with drinking, that their very skin couered and hid the rings vpon their fingers; namely, when they were not able to deliuer againe the great quantity of water that they had taken in. Therefore this drinking of much water is not good to be used, vnles a man do effoonly eat * salt withall. Great vse there is and to good purpose, of the mud which these fountains do yeeld; but with this regard, that when the body is besmeared and bedawbed outwardly therewith, the same may dry vpon it in the Sun.

* For to irritate and prouoke the expulsive faculty to send all forth againe.

Well, these hot waters be commonly full of vertue; howbeit, this is not generall, That if a spring be hot, by and by we should thinke it is medicinable, for the experience of the contrary is to be seen in *Egesta* of Sicily, in *Larissa*, *Troas*, *Magnesia*, *Melos*, and *Lipara*. Neither is it a sure argument of a medicinable water (as many are of opinion) if a piece of silver or brasse which hath bin dipped therein, lose the colour: for there is no such matter to be seene by the naturall baths of *Padua*; neither is there perceived in them any difference in smell from others.

Concerning Sea waters, the same order and mean is to be obserued, especially in such as be made hot, for to help the pains and infirmities of the sinews: and many hold them good to souder fractures of bones, yea and to cure their bruises and contusions: likewise they haue a desiccative vertue, whereby they dry rheumaticke bodies, in which regard, men bath also in sea water actually cold. Moreouer, the sea affoordeth other vses in diuers and sundry respects, but principally the aire thereof is wholesome for those who are in a phthisicke or consumption (as I haue before said), and cureth such as doe reach or void blood vpward: and verily, I remember of late daies, that *Annaeus Gallio* after that he was Confull, tooke this course; namely, to saile vpon the sea for this infirmity. What is the cause thinke ye, that many make voiajes into *Egypt*? surely it is not for the aire of *Egypt* it self, but because they lie long at sea, and be sailing a great while before they come thither. Furthermore, the vomits also which are occasioned at sea by the continual rolling and rocking of the ships neuer standing still, are good for many maladies of head, eies, and breast, and generally they doe cure all those accidents, for which the drinking of *Elleboro* serueth. As for sea water to be applied simply of it selfe vnto the outward parts, physitians are of opinion, that it is more effectual than any other, for to discusse & resolu tumors: & more particularly, if there be a cataplasme made of it and barley meale sodden together, it is singular for the swellings behind the eares, called *Parotides*. They mingle the same likewise in plasters, such especially as be white and emollientes: and if the head be hurt, and the * brain touched and offended, it is soveraigne to be infused into the wound. It is prescribed also to be drunke: for albeit the stomack take some offence and hurt thereby, yet it purgeth the body well, and doth evacuate melancholick humors and black choler, yea, and if the blood be cluttered within the body, it sendeth it out oneway or other, either vpward or downeward. Some haue ordained it to be

A be giuen for the quartan feuer; others aduise to saue and keep it a time, for to serue the turne in case of Tinesmes, which are vnordinat strainings at the stoole to no effect: also for all goutts and pains of joints: and in very truth, by age & long keeping, it forgoeth al that brackish tast, which it had at the first. Some boile it before: but all in generall agree in this, To vse for these purposes mixture of fresh water with it; and before their patients do drinke it, enioyne them to vomit: and then also do they mingle with it, either vineger or wine for that purpose. They that giue little oxymell, for to prouoke the patient to vomit againe. Moreouer, they vse otherwhile to minister a clystere made of sea water, first warmed: & verily there is not a better thing than it for to bath and foment the cods withall, if they be swelled either with ventosities or waterish humors. Alrat: and in like manner they kill the itch, cure scabs, tetterts, and ringwormes. Seawater serueth wel to wash the head, & to rid it of nits and filthy lice: yea, and reduceth black and blew marks in the skin, to the fresh and liuely colour againe. In all these cures, after the vse of salt-water, it is passing good to foment the place affected, with vineger hot.ouer and besides, it is thought to be very wholesome and good against the venomous stings of serpents; and namely, of the spiders *Phalangia* and scorpions. Semblably, it cureth those that be infected outwardly with the noythermore, a perfume made with sea-water and vineger, is singular for the head-ach. If it be clysterized hot, it allaieth the wrings and grindings of the belly; yea, and stateth the violent motions of cholericke humors working vpward and downward. Those that be once chaufed and set into an heat with sea water, shall not so easily feeble cold againe. When womens paps are ouer-grown, and so exceeding great that they meet and kisse one another, there is not a better thing to take them downe, than to bath in a tub of sea-water: the same also may serue to amend the griefe of the bowels and precordiall parts, yea, and to restore those that be exceeding leane and worn away. The fumes and vapors of this water boiling together with vineger, are soveraign for those that be hard of hearing, or troubled with the head-ach. Sea water hath this especiall property, that of all things it scoureth away rust of yron soonest. The scab that annoieth sheepe, it healeth, and maketh their wooll more soft and delicat. But what meane I to say thus much of sea water, knowing as I do full well, that for those who dwell far vp into the maine, and inhabit the inland parts, all this may seem needlesse, and superfluous? And yet there hath bin means deuised to make artificiall sea-water, wherewith euery man may serue his own turn when he will. In which inuention, one wonderfull thing is to be seen; namely, if a man put more than one sextar of salt to foure of water, the nature of the water will be so soone overcome, that salt shall not dissolve nor melt therein: but if you mingle one sextar of salt just with foure sextars of water, you shall haue a brine as strong as the saltiest water that is in the sea: but to haue a kind & most mild brine, it is thought sufficient to temper the foresaid measure of water with 8 cyaths of salt: and this water thus proportioned, is very proper for to heat the sinewes, without any fretting of the skin at all. There is a certain compound sea water kept in manner of a Syrrupe, which they call *Thalassomeli*, made of Sea-water, hony, and raine water, of each a like quantiry. Now the foresaid sea-water they ferch for this purpose out of the very deep, and this composition they put vp in earthen vessels well pitched or varnished, and reserue it for their vse. An excellent purgatiue this is; for besides that it clenseth the stomacke without any hurt or offence thereof, the tast and smell both are very pleasant and delectable. As touching the mead called *Hydromell*, it consisteth in times past of rain water well purified, and hony: a drink ordained and allowed onely to sick and feeble persons when they called for wine, as being thought lesse hurtfull to be drunke: howbeit, rejected it hath bin these many yeares, and condemned: for by experience it was found at length, to haue the * same discommodities that wine, but farre short it was of the good and wholesome qualities of wine.

Moreouer, soasmuch as sea-faring men and saylers be many times at a fault for fresh water, and thereby much distressed, I thinke it good to shew the means how to be provided for the supply of this defect. First and foremost therefore, if they spread and display abroad certaine fleeces of wooll round about a ship, the same will receiue and drinke in the vapours of the Sea, and become moist and wet withall; presse or wring them well, you shall haue water fresh enough.

* Namely, aduise to the head & sinews

Item, let downe into the sea within small nets, certain pellets of wax that be hollow, or any other void and empty vessels wel closed & luted, they will gather within them water that is fresh and potable: for we may see the experience hereof vpon the land: take sea-water & let it run through cley, it will become sweet and fresh.

But to proceed vnto the other medicinable properties of water: let there be any dislocation in man or beast, by the swimming in water (it matters not of what kind it be) the bones wil very quickly and with great ease be reduced into joint againe.

It falleth out many times that traouellers be in feare and danger of some sicknesse, by change of waters, and such especially as they know not the nature and quality of. To prevent this inconuenience, they drink the water cold which they doubt and suspect, so soone as euer they be come out of the baine; for then they shall find it presently.

As touching the mosse which is found in the water, foueraigne it is for the gout, in case it be applied outwardly: mix oile thereto, and reduce it into the forme of a cataplasme or liniment, it caseth the paine, and taketh down the swelling of the feet about the ankles. The some & froth that floteth about the water, causeth warts to flie off, if they be well rubbed therewith.

The very sand likewise vpon the sea shore, especially that which is small and fine, & the same burnt as it were with the heat of the Sun, is a foueraigne remedy to dry vp the watery humors in a droppe, if the body be couered al ouer therewith; and to that purpose it serueth also for rheums and catarrhs. Thus much may suffice concerning water it self: it remaineth now to treat of such things as the water yeeldeth. In which discourse, begin I wil (as my order and manner hath bin in all the rest) with those matters which be chiefe and principall, and namely, salt and spunges.

CHAP. VII.

¶ *The sundry kinds of salt: the making thereof: the vertues medicinable of salt: and diuers other considerations respectiue thereto.*

SALT is either artificiall or naturall: and both the one and the other is to be considered in many and diuers sorts, which may be reduced all into 2 causes: for salt commeth either of an humor congealed, or els dried. In the gulfe or lake of Tarentum, the salt is made of the sea water dried by the heat of the summer Sun, for then you shall see the whole poole converted into a masse of salt: and verily the water there, is otherwise very low & ebbe, and not about knee high. The like is to be seen in Sicily within a lake called Cocanicus; as also in another neare to Gelas: but in these, the brims & sides only about the banks, wax dry and turn into salt, like as in the salt-pits about Phrygia and Cappadocia. But at Alpenchum, there is more plenty of salt gathered within the poole there, for you shall haue the same turn into salt, euen the one halfe to the very mids. In which lake, there is one strange and wonderful thing besides, for look how much salt a man taketh out of it in the day, so much ordinarily will gather againe by night. All the salt of this sort is small, and not growne together in lumps. Now there is another kinde of salt, which of the owne accord commeth of sea-water, and it is no more but the some or froth which is left behind sticking to the edges of the banks, or to rocks. Both the one & the other become thick and hard in manner and form of a candied dew: howbeit, that which is found in the rocks, is more quicke and biting than the other. There is besides of salt naturall, a third distinct sort from the former: for in the Baetrians country there be two great and huge lakes, which naturally do cast vp a mighty quantity of salt: the one lieth toward the Scythians, and the other bendeth to the Ariens country: like as neere to Citium, a city in the Isle Cyprus, and about Memphis in Egypt, they draw forth salt out of lakes, and afterwards dry the same in the sun. Moreover, there be certain riuers which beare salt, and the same congealed aloft in their vpper part, in manner of yce, and yet the water runneth vnderneath and keepeth the course wel enough. As for example, about the sluices and straits of the mount Caspius; and thereupon they be called the Riuers of salt: as also in other riuers of Armenia, and about the Mardians country. Moreover, Oxus and Orthus, two riuers passing through the region Baetria, carry ordinarily downe with them in their streame, great peeces and fragments of salt, which fall from the mountaines adjoining vnto them. There are besides in Barbary, other lakes, and those verily thicke and troubled, which ingender and beare salt. But what will you say, if there be certaine Fountaines of hote Waters which breed Salt? And yet such be the Baynes or Springs called Pagafai.

Thus

A Thus far forth haue I proceeded in those kinds of salt which come of waters naturally. There are besides certain hills also which are giuen by nature to bring forth salt, and such is the mount Oromenus among the Indians, wherein they vse to hew salt as out of a quarry of stone, and out of it, than either by their mines of gold, or the pearles which those coasts do yeeld. Furthermore it is euident, that in Cappadocia there is salt * Minerall, digged out of the earth: and it appeareth plainly, that it is a salt humor congealed within. And verily, they vse to cut it out of the ground after the maner of * glasse stone in lumps: and those exceeding heauy, which the peasants commonly call * crums of salt. At Carrhae, a city of Arabia, all the walls thereof, as also the houses of the inhabitants, be reared & built of hard stones: and the same be laid by Masons worke, and the joints closed and foured by no other mortar but plain water. K. Ptolomaeus, at what time as he incamped about Pelusium, a city of Egypt, and cast vp a trench to fortifie the same, found such a mine or quarry of salt as these, which was a president to others afterward to sinke pits betweene Egypt and Arabia, euen in the waste and dry quarters, where vnder the delfe of sand they met with salt. After which manner also they practised to dig in the desert & dry sands of Africk, and found more as they went, euen as far as to the Temple and Oracle of Iupiter Ammen. And verily they might perceiue this salt to grow in the night season, according to ken of, for the salt * Ammoniacum, so called, by reason that it is found vnder the sands. In C in long lumps or pieces, and those not transparent: the tast is vnpleasant, howbeit, this salt is of good vse in Physicke. The clearest thereof is taken for the best, especially when it wil cleaue directly into streight flakes. A strange and wonderfull nature it hath if it be right: for so long as it lieth vnder ground within the mine, it is passing light in hand, and may be easily welded, take it forth once, and lay it abroad aboue ground, a man would not beleue or imagine how exceeding heauy it is. But surely the reason thereof is euident: for the moist vapors contained within those mines where it lieth, beare vp the said pieces of salt, and are a great ease to those that deale therewith, much like as the water helpeth much to the stirring and managing of any thing within it, be it neuer so weighty. Well, this Ammoniacke salt is corrupted and sophisticate, as well with the pit salt of Sicily called Cocanicus, as also with that of Cypresse, which is wonderfull like vnto it. Moreover, neare Egellata, a city in high Spaine, there is a kind of sal-gem or Minerall salt digged: the peeces or lumps wherof are so cleare, as a man may in a maner see through them: and this hath of long time bin in great request and of such name, as the Physitians giue vnto it the price and praise aboue all other kinds. But here is to be noted, that all places where salt is found, are euer barren, and will beare no good thing els. And thus much may be said concerning salt that commeth of the owne accord.

As touching salt artificiall, made by mans hand, there be many kinds thereof. Our common salt, and whereof we haue greatest store, is wrought in this manner: first they let into their pits a quantity of sea-water, suffering fresh water to run into it by certain gutters, for to bee mingled therewith for to help it to congeale, whereto a good shower of raine auaileth very much, but aboue all the Sun shining therupon, for otherwise it wil neuer dry & harden. About Vtica in Barbary they vse to pile vp great heaps of salt in manner of Mounes: which after that they be hardened and seasoned in the Sun and Moone, scorne all raine and foule weather, neither will they dissolue, inso much, as folke haue enough to doe for to break and enter in with pick-axes. Howbeit, in Candy the Salt is made in the like pits, but of Sea-water onely, without letting in any fresh water at all. Semblably, in Egypt, the Sea it selfe ouerfloweth the ground which (as I take it) is already foked and drenched with the water of Nilus, and by that means their Salt is made. After the same manner they make salt also out of certain wells, which are discharged into their Salt-pits. And verily in Babylon, the first gathering or thickening of the water in their salt-pits, is a certain liquid Bitumen or Petroleum, an oleous substance, which they vse in their lamps, as we do oile: and when the same is scummed off, they find pure salt vnderneath. Likewise in Cappadocia they do conuey and let in water out of certain wells and fountaines into their Salt-pits. In Chaonia there be certaine * Springs of saltish water, which the people of that country doe boile, and when it is cooled againe, it turneth into Salt: but it is but dull and weak in effect, and besides, nothing white. In France and Germany the maner is when they would make salt, to cast

Sea.

* Sal Gemma.

* Lapis specularis, vitrum vel glacies Martis Or Lapis Arabicus. Micra Salis.

* Or asper in Greek, which is sand.

This seemeth to be our Bay-salt.

* This is the order of salt with vs in our wiches here in England.

sea-water into the fire as the wood burneth. [In some parts of Spain there be salt springs, out of which they draw water in manner of that brine, which they call Muria.] But thoseverly of France and Germany be of opinion, that it skilleth much what wood it is that serueth to the making of such fire. Oke they hold the best, as being a fewell, the simple ashes whereof mixt with nothing els, may go for salt. And yet in some places they esteeme Hazell wood meeter for this purpose. Now when the said wood is on fire and burning, they poure salt liquor among, wherby not only the ashes but the very coales also will turne to be salt. But all salt made in this sort of wood, is black. I reade in *Theophrastus*, That the Islanders of Imbros were wont to boile in water, the ashes of reeds and canes, vntill such time as there remained little moisture vnconsumed, and that which was left they vsed for salt. The brine or pickle wherein flesh or fish hath bin kept salt, if it be boiled a second time vntill the liquor be spent and consumed, returneth to the own nature, and becommeth salt again. Certes, we find, That the salt thus made of the pickle of Pilchards or Herings, is of all others most pleasant in tast. As touching the salt made of sea-water, that of the Isle Cypres, and namely, that which comes from Salamis, is commended for the best. But of poole salt, there is none comparable to the Tarentine and Phrygian, especially that which they call Tarteus, of the lake Tatta: and in truth, both these kinds of salt be good for the eies. The salt brought out of Cappadocia in little earthen pipes, hath the name to make the skinne slick and faire; but for to lay the same plain and euen, and make it look full and plump without riuels, the salt which I called Citteius hath no fellow. And therefore women after they be newly deliuered of child, vsue to annoint and rub their bellies with this salt, incorporate together with Gith or Nigella Romana. The driest salt is euermore the strongest in tast: the Tarentine salt is taken for to be most pleasant and whitest withal. Otherwise, the whiter that salt is, the more brittle it is, and readier to crumble and fall to powder. There is no salt but raine water will make it sweet and fresh. The more pleasant it will be & delicat to the tast, in case the dew fall therupon: but North-east winds ingender most plenty therof. In a Southerly constitution of the weather, and namely when the wind is full south, you shall see no salt ingendered. The * floure of salt (commonly called Sperma-Ceti) is neuer bred but when the Northeast winds do blow. The salt Tragafæus wil neither spit, crackle, leap, nor sparkle in the fire; no more will Acanthus (so called of a towne of that name): neither doth the some of salt, nor the gobbets and fragments, ne yet the thin leaues or flakes thereof. The salt of Agrigentum, a city in Sicily, will abide the fire and make no sparkling; put it into water, it will keep a spitting and crackling. Great difference there is in salt, in regard of the colour. At Memphis [i.e. Caïre] in Egypt, the salt is of a very deep red: but about the riuier Oxus in Bactriana, more tawny or inclining to a russet. And the Centuripine salt within Sicily is purple. About Gela in the same Island, the salt is so bright and clear, that it will represent a mans face, as in a mirrour. In Cappadocia, the Minerall salt which they dig, is of a yellow Safron colour, transparent, and of a most redolent smell. For any vse in Physicke, the Tarentine salt was in old time highly commended aboue the best: after which they esteemed most, all the sea salts; and of that kind the lighter, and that which especially is of the nature of some: for the * eies of horses and Bœufes, they made great reckoning of the Tragafæan salt, and that of Granada or Boetica in Spaine. For dressing of viands and carnes; for to be eaten also with meat; the better is that salt, which sooner melteth and runneth to water. That also which by nature is moister than others, they hold to be better for the kitchen or the table (for lesse bitterness it hath) and such is that of Attica and Eubœa. For to powder and keep flesh meat, the dry salt, & quicke at tongues end is thought to be meeter than other, as we may see in the salt of Megara. Moreover there is a certain confite or condit salt, compounded also with sweet spices & aromaticall drugs: which may be eaten as a dainy kind of gruel or sauce; for it stirreth vp and whetteth appetite, eat the same with any other meats: in so much, as amongst an infinit number of other sauces, this carrieth away the tast from them all; for it hath a peculiar smatch by it selfe, which is the cause, that the pickle Garum is so much sought after for to giue an edge to our stomach: & not only we men are solicited & moued by salt more than by any thing els too: our meat, but muttens, Bœufes, and horses also haue benefit thereby in that respect: they feed the better, giue more store of milke, and the cheefe made thereof hath a more dainty and commendable taste by that means. And to conclude all in one word, the life of mankind could not stand without salt, so necessary an element (if I may so say) it is for the maintenance of our life, that the very delights & pleasures of the mind also are expressed by no better term than Salt: for such gifts and conceits

* *Malos-anthos* which he rendreth *flour-salt*: whereas indeed *Flour-salt*, the floure of salt, is another thing, as himselfe sheweth elsewhere by the name of *sennifima salis*.

* *Sennifima*.

A of the spirit as yeeld most grace and contentment, we vse in Latine to call Sales. All the mirth of the heart, the greatest cheerfulness of a lightsome mind, & the whole repose & contentment that a man findeth in his soule, by no other word can be better shewed. Moreover, this terme in Latine of Sal, is taken vp and vsed in war, yea, and diuers honours and dignities bestowed vpon braue men for some worthy seruice, go vnder this name, and be called Salaries. And how highly our ancestors accounted therof, it may appeare by the name of that great port-way or street Salariæ, so called, because all the salt that went into the Sabines country, passed that way. Moreover, it is said that *Ancus Martius* K. of Rome, was the first that erected the salt-houses, and gaue vnto the people a congiary or largesse of 6000 Modij of salt. And *Varro* writeth, That our ancestors in times past vsed salt ordinarily in stead of an household gruell: for they were wont to eat salt with their bread & cheefe, as may appeare by the common proverbe that testifieth so much. But most of all we may gather in what request and account salt was in sacrifices and oblations to the gods, by this, that none are performed and celebrated without a cake of meale and salt. Furthermore, where salt is truly made without any sophistication, it rendereth a certain fine and pure substance (as it were) the most subtile cinders of ashes: which as it is lightest, so none is so white as it. There is that also which is called the Floure of salt, altogether different from salt, as being a kind of dew, of a moister nature, resembling safron in yellow colour, or els inclining rather to a sad red or russet colour, and is as a man would say, the rust of salt: the strong & vnpleasant smell likewise, which commeth neere vnto that of the pickle Garum, bewraith, that it is a distinct thing from salt, as well as from the froth thereof. This Floure of salt came first from Egypt, and it seemeth as though it floted vpon the riuier Nilus, & were carried down the stream thereof. And yet there be some fountains which doe beare and put vp the same, vpon which it swimmeth aloft. Of this kind, the best is that which yeeldeth a certain fatty and vnctuous oyle: for this you are to think, that salt is not without a kinde of fattinesse, wonderfull though it be. This floure of salt is sophisticated & commonly coloured with red ocre, or els many times with portshards reduced into powder: but this deceit may be quickly known and found by water; for if it be a false and artificial colour, water will wash it off: whereas the true floure of salt indeed, will resolute by nothing but by oile, and verily the Apothecaries & confectioners of sweet oiles and ointments, vse it most of all for the colour sake, when they would giue a fresh & lively hue to their compositions. Being put vp in any vessell, it seemeth white & hoarie aloft: but the middle part within, is as I haue said, more moist ordinarily. As touching the properties of this floure of salt, by nature it is biting, hot, and hurtfull to the stomack; it moueth sweat, and looseth the belly taken in wine & water; good also it is for to enter into those ointments which are devised for lassitude and wearinesse: and by reason of the abstersiue faculty that it hath, fit for sope and scouring bals. Nothing so effectuall to cause the haire to fall from the eie-lids. As for the ressedence or grounds thereof, setting in the bottom of the pot where this floure is kept; they vse to shog and shake the same together, to bring it again to the colour of Safron.ouer and besides, there is in salt-houses another substance like brine, which in Latine is called Salsugo or Salsilago, altogether liquid; saltier in tast than sea-water, but in strength far short of it, and different, and yet is there one kind more of an exquisite and dainty liquor in manner of a dripping, called Garum, proceeding from the garbage of fishes, and such other offall as commonly the cooke vseth to cast away as it lieth foking in salt: so as if a man would speak properly, it is no other but the humor that commeth from them as they do lie and putrifie. In old time this sauce was made of that fish which the Greeks called Garon, where by the way this commeth to my mind, that if a woman sit ouer the perfume or suffumigation of the head of this fish while it burneth, it is of power to fetch away the afterbirth that staith behind when the child is borne.

CHAP. VIII.

¶ Of the fishes called * *Scomberi*. Of fish pickle: and the fish sauce, named in old time *Alex*.

NOW adaies the most dainty and exquisite Garum is made of the fish called *Scomberi*; and that in new Carthage, where there groweth such store of Spart or Spanish broome; and namely, in the stews and ponds by the sea side where fishes are kept salted. In times past, and yet it beareth the name of the * *Allies* sauce, as their Garum, so costly and so much in request,

* Commonly taken for *Maquerels*.

* *Gallus* being

quest, that every 2 gallons thereof might not be bought much vnder the price of a thousand sesterces. Certes setting aside sweet perfumes & odoriferous ointments, there was not a liquor almost in the world that began to grow vnto a higher rate & reckoning, in so much as some places and people carried the name thereof, and were innobled thereby. And verily in all Mauritania, Granada in Spaine, and Cartheia, the inhabitants lie in wait to fish for these Scombris, and to take them as they enter out of the Ocean into the straits of Gilbretar, and all for this Garum, being indeed good for nothing els. The city Clazomenæ in Asia, the townes Pompeij & Leporis, are much renowned for this sauce: like as Antipolis, Thurijs, and of late daies, Dalmatia for their pickle. The grosse grounds or dregs of this sauce, before it be strained, purified, and fully finished, is called Alex, even the very defect & imperfection thereof. Howbeit, of late time men haue gone in hand to make the said Alex or Garum of one kind of fishes apart by themselves, which otherwise are good for little or nothing, & of all others be smallest: this fish we in Latin call Apua, the Greeks Aphye, for that it is engendered of raine and showers. In the territory of Forojulium, the fish whereof they make this sauce they call * Lupus. But in proceſſe of time Garum arose to excesſe, both in price & varietie of vse: in so much as there grew an infinit number, of diuers kinds: for one sort there was of Garum that in colour resembled old honied wine, and became so cleare and sweet withall, that it might wel enough haue bin drunk for wine: another kind there was, which our superstitious votaries vse, for to keep themselves chaste & continent; & the Iews also in their holy sacrifices employed the same, especially that which is made of skaly fishes. In like manner, the other sauce, Alex, is come to be made of Oysters, sea Vrchins, sea Nettles, Crabfishes, Lobsters, and the liuers of sea Barbles. In sum, thus wee haue deuised a thousand waies to dissolue salt with the consumption of the substance of fish, and all to procure appetite to meat and to content the belly.

Thus much I thought good to note cursorily, as touching those sauces which are so greatly longed after in the world; & the rather for that in some sort they serue in the practise of Physick: for the grosse liquor or sauce Alex, healeth the scab in sheep, if the skin be scarified or skinned, and the same Alex poured thereupon. Also it is singular against the biting of a mad dog, or the prick of the sea dragon: the same likewise serues to loke linnen wreaths to be laid in wounds or rents made of lint to bee put into sores. As for Garum, it healeth any fresh burne, if a man drop it vpon the place, without naming it, or saying that it is Garum: good it is besides for the biting of mad dogs, but especially for the Crocodiles tooth: as also for running vlcers which be either corrosiue or filthy. Of wonderful operation & effect besides for the sores of the mouth, and ears, as also for their pains. The pickle Muria likewise, or that salt liquor that cometh from salt-fish, called in Latin Salsugo, is astringent, biting, discussive, and drying: singular for to cure the dysentery or bloody flux, yea, though there were an eating vlcere within the guts: for the Sciatica and inueterat fluxes of the stomach, it is soveraign: and to conclude, those that dwell far from the sea in the midland parts of a country, vse to bath and foment themselves with it in lieu of sea water.

C H A P. X.

¶ The nature of Salt, and the medicinable vertues thereof.

SALT, by nature standeth much vpon fire, & yet an enemy it is and contrary vnto fire, it flieth from iccating and consuming all things whatsoever: astringent it is, deficcative, binding, and knitting. It keeps from putrefaction, bodies that be dead, and causeth them to endure so a world of yeares. In physick it is held for mordant, burning, caustick, and mundificative. It doth subtiliat, extenuat, and dissolue. Contrary it is to the stomach, and serueth not but only to proue appetite. With origan, hony, and hyssope, it is singular against the sting of serpents: and more particularly of the horned serpent Cerastes, if it be applied with origan, cedar-rosin, pitch or hony. Being drunk with vineger, it helpeth those that be pricked with the Scolopendre: and applied as a liniment with oile or vineger, and a fourth part of line seed, it is good against the sting of scorpions: also with vineger alone, for the sting of hornets or wasps & such like. Incorporated with calues tallow, it serues much to cure the migrim, skals in the head, small pocks, meales, & werts which begin to breed: also for the accidents of the eyes, to wit, the excreſcence of superfluous flesh in those parts, or the turning vp of skin about naile roots of fingers or toes.

But

But principally for the eyes, and therefore it entrencheth into collyries and eie-salues. Howbeit for these purposes aboue named it is thought that the salt named Tattaues, of the lake Tatta, is most commended, as also the other lake like it, called Caunites. If the eyes be bloud shotten, or orels with * Hyssop & hot water, with this charge, to foment or bath the place afterward with a kind of salt brine. But aboue all, Spanish salt would be chosen for this effect: & it is also good against cataracts and suffusions of the eyes: if it be ground with milke vpon some touch-stone, whetstone, or hard porphyrit marble. More particularly, it is singular for the black bloud gathered in the eyes, if it be folded within a little linnen cloth, & so applied: but the same ought to be dipped oftentimes in hot water, and so the place to be oftentimes patted withall. For the cankers or sores in the mouth, it is good to lay salt vpon fine lint. In case the gumbs be swelled, it were not amisse to rub them therewith. Being beaten and reduced into small powder, it serueth for the roughnesse of the tongue. Moreover it is said, That whosoever hold euery morning vnder his teeth from being worm-eaten or rotten. The same incorporat in raisins without stones, and in boeuf suet, with a little origan, leuen, or bread, is soveraign for the leprosie, fellons, tetter, ringworms, and the wild scab. But in all these accidents, the salt of Thebais in high Egypt is most commended: and of this they make choice also to kill the itch. A gargarism or collution thereof of salt but it helpeth the squinancie, and the rather if it be vsed inwardly with oile and vineger, so as at the same time it be applied without the throat also in a liniment with tar. If a cup of wine be dressed therewith it softneth the belly being costive. The same also taken in Wine chaſeth out of the body all worms and any hurtful vermin besides. Held vnder the tongue, it incheate of bairns or stoues the longer. Singular it is for the grief of the sinues: but in the practise and vse of this receipt, it would be obserued especially, that there be applied about the shoulders and reins of the back, sachels or bags full of salt, and the same made hot oftentimes in seething water: for so it easeth the pain. Being giuen in drink, or laid to exceeding hot in the said bags, it asswageth the collicke and other wrings in the belly, yea and the Sciatica. Beaten small, and applied in manner of a cataplasme, with meale, honey, and oile, it is soveraign for the gout in the feet. Where I may not forget the obseruation of this soveraign receit, which putteth vs in mind, that there is nothing better for the whole body [of such especially as be subiect to the gout] than * salt and Sun together. For thus we see, That our fishers at sea ordinarily haue boiled downe for the gout in the feet. But salt moreover takes away cornes of the feet, and kibes in the heels. Being chewed in the mouth and so applied, or els with oile, it healeth any burn or skald, and keeps the skin from rising into blisters. With vineger and hyssop it cureth S. Anthonies fire, and all vlcers that be corrosiue. It heals likewise cankerous sores, if it be applied with wild vine grapes. Reduced into fine powder and laid to with barley meale, it is soveraign for vlcers corrosiue such as be called Volues, and do eat deep to the very bone; so there be laid ouer the same and the part affected, a linnen cloath well soked and bathed in wine. A proper remedy it is for the jaundise, and riddeth away the itch occasioned thereby, if the patient be rubbed all the bodie ouer with it, oile, and vineger, against a good fire vntill hee doe sweate. But with oile alone it serues for those that feel themselves weary. Many physitians haue cured those that be in a dropsie with salt, and haue ordained to rub their bodies with oile & salt together, who are in an ague, for to auoid the extremitie of heat: and they hold opinion, That there is not a better thing to dispatch an old cough, than to be licking euere and anon of salt. They haue giuen order also by way of elistre to minister salt vp into the body, for the Sciatica. To apply the same also to eat away proud or dead flesh in any vlcers. Being lapped within a linnen cloath, and applied to the biting of Crocodiles, it is soveraign, so that the place affected were well patted withall, and pressed hard before. Moreover, good it is to be taken in honied vineger against the dangerous Opium. Brought into a cataplasme with honey and meale, it is of great effect to rectifie any dislocation of bones which be out of joint: and in that sort it taketh downe all tumors or swelling bunches. A collution or fomentation therewith allayeth the tooth-ache: and a liniment also made with it and Rosin worketh the same effect. For all these accidents before named,

the

* Hyssope, Some read Oessopo.

* Salt & Sile.

the some of salt found sticking to rockes, or floating vpon the sea water, is thought to be more conuenient than any other salt. But to conclude, any salt whatsoever it is serueth well for those medicines that be ordained either to take away lassitudes, or to enter into those sope balls that are to polish the skin and to rid it from wrinkles. If either a boeufe or mutton be rubbed with salt, it will kill the skab or mange in them: for which purpose also they giue it vnto the sayd beasts for to lick: and more particularly it is spurted out of ones mouth into horses eies. Thus you see what may be said as touching salt.

CHAP. X.

¶ Of Nitre, and the sundry kindes thereof. The manner of making Nitre. The medicines and obseruations to it belonging.

I May not put off the treatise concerning the nature of Salnitre, approaching so neer as it doth to the nature of salt: and the rather am I to discourse of it more exactly, because it appeares evidently, that the physicians who haue written thereof were altogether ignorant of the nature and vertues of it: neither is there any one of them who in that point wrote more aduisedly, than *Theophrastus*. In the first place this is to be noted, That among the Medians there is a little Nitre ingendred in certain vallies which in time of drought became all hoary & grey therewith and this they call *Halmirhaga*. There is found also some of it in *Thracia* neere vnto the *Citie Philippi*, but in lesse quantitie, and the same all fouled and bewraied with the earth, & this they name *Agion*. In times past men haue practised to make Nitre of okewood burnt; but neuer was there any great store of it made by that deuise: and long it is since that feat was altogether giuen ouer. As for waters & fountains of nitre, there be enow of them in many places, howbeit the same haue no astrigent vertue at all. But the best Nitre is found about *Clyte* in the marches of *Macedonie*, where there is most plenty thereof, and they call it *Chalastricum*: White and pure it is, and commeth neereft to the nature of salt. And verily a lake or meer there is standing altogether vpon nitre, and yet out of the midst thereof there springeth vp a little fountain of fresh water. In this lake there is ingendred Nitre about the rising of the Dog-star for 9 dayes together: then it stayeth as long, and beginneth fresh againe to flote aloft: and afterward giues ouer. Whereby it appeareth that it is the very nature of the soile that breedeth it; for knowne it is by experience, That if it cease once, neither heat of Sun nor shoures of rain wil serue or do any good. Besides, there is another wonderful propertie obserued in this lake, that notwithstanding the foresaid spring or source do seeth and boile vp continually, yet the lake neither riseth nor ouerfloweth. But during those nine daies wherein it is giuen to yeeld Nitre, if there chance to fall any shoures, they make the nitre to taste the more of salt. And say that the North-East winds do blow the while, the Nitre is nothing so good and cleere, by reason of the mud mingled withall, which those winds do raise. Thus much of Nitre naturall.

As for artificiall Nitre, great aboundance there is made of it in *Egypt*, but far inferiour in goodnesse to the other: for brown and dusky it is, and besides full of grit and stones. The order of making it is all one in manner with that of salt, sauing onely that in the salt houses they let in sea water, whereas into the boiling houses of Nitre they conuey the water of the riuer *Nilus*. Whiles *Nilus* doth rise and flow, you shal haue the said nitre-pits or workhouses dry: but as it fallerh and returneth again toward the channel, they are seene to yeeld a certaine moisture, (which is the humor of nitre) and that for the space of forty daies together, with no rest or intermission between, as there is about *Clyte* in *Macedonie* aboue said. Moreover, if the weather be disposed to rain during that time, they employ not so much of *Nilus* water to the making of Nitre. Now so soon as the said humor beginneth to thicken, presently they gather it in all hast, for feare it should resolute again and melt in the nitre pits. In this nitre, as well as in salt, there is to be found between whites a certaine oleous substance; which is held to be singular good for the farkin and scab of beasts. The nitre it selfe is laid vp and piled in heaps, where it hardeneth and continueth a long time. But admirable is the nature of the lake *Ascanius*, and of certaine fountaines about *Chalcis*, where the water aboue, and which floweth vppermost, is fresh and potable, but all beneath and vnder it toward the bottome is nitrous. The lightest of the Nitre and the finest is reputed alwaies the best; and therefore the some and froth thereof is better than any other part. And yet for some vses the grosse and foule substance is very good, and namely,

A for the setting of any colour vpon cloth, and especially the purple die. As touching the vertues of nitre it selfe, & how it is imploied many wayes, I wil write in place conuenient. But to returne againe to our nitre pits, and their boiling houses, there be of them very faire and goodly in *Egypt*. In old time, they were wont to be about *Naucratis* and *Memphis* only, but those at *Memphis* were nothing so good as the other: for there, the nitre lying vpon heapes, groweth to the hardnes of a stone; insomuch, as by this means, you shal see mountaines thereof like rockes. Of this nitre they vse to make certain vessels to vse in the house: and many times they melt it with sulphur, & boyle it ouer the coles for to giue a tincture vnto the said vessels: look also when they would keep any * thing long, they vse this stone-nitre. Moreover, there be in *Egypt* other nitre pits also, out of which there issueth a reddish kind of nitre, resembling the color of the earth from which it sweateth and oofeth out. As for the some of nitre (which is commended for the best of all) the antient writers were of opinion, that it could not be made but when the dew fell: at what time as the nitre pits were (if I may so say) great bellied and full of nitre within, but not ready to be deliuered thereof: and therefore if they be neare (as it were) to their time, there can no such froth be gathered, notwithstanding the dew do fall. Others there be of this minde, that the said vppermost coat or crust aloft, is ingendred by reason of the fermentation of the sayd nitre: but the modern Physicians of late daies haue thought and taught, That * *Aphro-nitrum* is gathered in *Asia*, and found within certain soft and gritty caues distilling out of rocks: [These caues because they be vaulted and arched ouer head, the inhabitants call * *Cochlacas*] which afterwards they doe drie in the Sun, and the best is thought that of *Lydia*. The true marke to know good sal-petre, is to be very light in hand, exceeding brittle, & easie to crumble; inclining also much to the colour of purple: this is brought from thence to vs in trochichs. As for the *Egyptian* *Aphro-nitre* or *Sal-petre*, it comes in vessels wel pitched, because it should not melt and resolute into water. Those vessels also before named, ought to be thoroughly dried & dressed in the Sun. As for nitre, the best is chosen by these marks; namely, if it bee passing fine & cleere, but withall, spongius & very ful as it were of pipes and holes. Many do sophisticat it in *Egypt* with quicklime; but this deceit may be easily found by the tast: for the good and true sal-nitre will soone melt and dissolue at the tongues end, whereas the other that is not right, pricketh and biteth in the mouth: moreover, if it haue a sprinkling of lime among, it carrieth a strong smell with it. When it is calcined in some earthen pot, it ought to be well couered with a lid, lest it leap or fly out; otherwise, in the fire it selfe, it sparkleth not nor leape forth: neither groweth any thing els in those places where sal-nitre is ingendred, whereas in salt-pits grasse commeth vp. As for the Sea, what a number of liuing creatures breedeth it? and what plenty of reike and weeds besides? And not only by this argument appeareth it, that there is more acrimonie and sharpnesse in sal-nitre than in salt, but also herein, That no shooes will abide the nitre pits, but presently fret and weare; for otherwise wholsome they be and soveraign for the eies: neither was it euer seen, that any men who handled these pits of nitre, and wrought therein, were euer blind. Moreover, this commodity they haue, That if a man come thither hauing a fore or vlcere vpon him, the same will soone be healed vp and skinned cleane: but if one chance to bee wounded or hurt there, long it will be ere he be cured thereof. Salnitre prouoketh sweat, if the body be anointed with it and oile together; and it maketh the skin soft and tender. That which is called *Chalastrum*, serueth in lieu of salt, in making bread, whereas the *Egyptian* nitre is vsed with radishes, for it maketh them more tender. As for cates and meats, if they bee powdred withall, they will look white and be worse for it: whereas all woorts either for pot or sallad, will seeme the greener.

To come now vnto physick and the medicinable vertues of salnitre: hot it is of temperature, and doth extenuate, biting besides and astrigent: a great drier it is, & doth exulcerat. In regard of which qualities, imploied it is in those accidents which require either drawing to the exterior parts, or to be dissolued and resolued: such also as need some gentle mordication, or would be lightly extenuated, as meazils, small pocks, wheals, and pimples. Some for this purpose, first make it red hot in the fire, and then quench it with some astrigent wine: which done, they beat and reduce it to powder, and therewith rub and chaufe the body in the baines, without any addition of oyle to it: mixt with the powder of dried flour-de-lis, & incorporat in green oile oliue, it represseth immoderat sweats: a liniment made therewith & figs together, doth extenuate the films in the eies; and the asperity of the eie-lids it doth subtiliate: the same operation hath it besides,

* As dead boe dies.

* This is our Sil-petre.

* Some reade *Cochlacas*.

if it be sodden in wine cuit to the consumption of the one halfe: and so is it good for the spots G that arise in the eies. The decoction of nitre boiled within the rind of a pomegranat in wine cut- it, cure the fore nails and the raggednesse thereof: and reduced into an ointment with honey, it cures the eie-sight: a collution made thereof, sodden in wine with pepper, ease the tooth-ach if the mouth and gums be washed therewith: so doth the decoction thereof with leeks. Burn or calcine nitre into powder, it maketh an excellent dentifrice for blacke teeth, and reduceth them again to their naturall whitenesse: annoint the head with nitre & Terra Samia incorporat together in oile, it killeth the lice and nits that breed therein: dissolved in wine, and poured into the ears that run attyr, it cureth them: dropt into them with vineger, it ease the ringing & ringing therein. A liniment made of nitre and fullers earth, of each a like weight, incorporat with vineger, taketh away the foule morphew, if the skin be annointed therewith: mixed with rosin, or with raifons of white grapes stamped stones and all, it draweth vncoms and fellons to an head, and breaks them: reduced into an ointment with swines greafe, it preserueth the genitoirs from inflammation, & cureth them: good likewise for the meafils and small pocks which break out in all parts of the body: put rosin thereto, and incorporat them both in a liniment with vineger, it healeth the biting of a mad dog, so it be taken betimes at the beginning: and in this manner, it cureth also the sores occasioned by the sting of serpents, eating vlcers, which consume to the bone: such likewise as be corrosiue and apt for putrefaction, so it be mixed with quick-lime and tempered with vineger. Stamp nitre with figs, and bring it into the form of a cataplasme or liniment, it doth much good for the dropsie: the ventosities causing wringings and painful gripes of the belly, it discusseth, if the decoction thereof be drunk, namely, when to the weight of one dram, it is sodden with rue, dill, or cumin. Annoint their bodies all ouer who are weary, with nitre, oile, and vineger, you shal see how effectually it is to refresh them and driue away their lassitude. Rub and chaufe both hands and feet, with nitre & oile wrought together, is singular good against quaking and shiuering cold: giuen with vineger, especially in a swee, to those who are painted with the jaundise, it represteth the itch that troubleth them: if a man be poisoned with taking venomous mushrooms, he shall find means to auoid the danger thereof by drinking nitre in oxycrat or vineger & water mingled together. Hath one swallowed down the hurtfull fly Buprestis? let him take a draught of sal-nitre in water, it wil saue him, for it causes vomit: to those that haue drunk buls blood, it is vsually giuen with the spice Laser: incorporat with honey and K cow milk, it healeth the breaking out and the exulcerations in the face. Torriste nitre vntill it begin to look blacke, beat it then to powder and cast the same vpon a raw place that is burnt, it wil take out the fire and skin it vp again: for the pain of the belly and the kidnies, for the stiffness and starkness of the lims, the griuance also of the sinews, it serueth well in a clystere: lay it to the tongue with bread, it is souveraigne for the palsie or resolution of the sinews: it helps those that be short-winded, if they take it in a Ptsan, or with husked barley. The floure of nitre incorporat in Galbanum, and the rosin called terpine, of each an equal weight, and reduced into a lochoch, so as the patient swallow down the quantity of a Bean at once, cures an old cough * Burn or calcine nitre, temper it afterwards with liquid pitch or tar, and giue it to drink, it cureth the squinancy. The floure of nitre incorporat with the oile Cyprinum, makes a pleasant L. liniment to annoint the body withal in the Sun, for the gout or any paine of joints: drunk in wine it doth exterminat and driue away for euer, the jaundise, it scattereth and discusseth ventosities, it stoppeth bleeding at the nose, if the patient receiue into the nostrils the vapour of it out of boiling water: mixed well with alume, it riddeth away an itch: foment or bath the arme pits duly every day therewith in water, it correcteth the ranke smell thereof. Make a liniment or cerot of nitre and wax tempered together, it healeth the vlcers occasioned by fleame: after which maner it is good also for the sinews. Being injected by a clystere, it helpeth the flux of the belly, proceeding from a feeble stomack. Many Physitians haue giuen direction to annoint the body all ouer with sal-nitre and oile, before the cold fits of agues: which ointment serueth likewise for the leprosie, and the vnseemly spots or freckles that blemish the skin. To sit in a tub of nitre within M the baine, & therewith to bath the body, is a souveraigne thing for those that haue the gout, be in consumption, and either draw backward with the crampe, or stretched and plucked so strait and stiffe therewith, that they seeme all of one entire piece. Sal-nitre, if it bee boyled together with sulphur, turneth to be as hard as a stone.

* Pritur, not
Coquitur, &
distillat.

CHAP

CHAP. XI.

¶ The nature of Spunges.

Many sorts there be of Spunges, according as I haue shewed already more amply in my treatise of water-beasts, and those especially of the Sea, and their seuerall natures: howbeit some writers distinguish them after another manner, into male and female: for some of them they haue thought to be of the male sex, to wit, those which haue smaller pipes or concauities, and those growing thicker and more compact, whereby they sucke vp more moisture; and these, our delicat and dainty people, die in colours, and otherwhile giue them a purple tincture. Others they count of the female sex, namely such as haue bigger pipes, & the same running throughout one continuity without interruption. Of the male kind, some be harder than others, which they call Tragos; the pipes whereof are the finest, and stand thickest together. There is an artificiall deuise to make spunges look white; to wit, if the softest and tendrest of them be taken while they be fresh in summer time, and so bathed & soked wel in the some of salt: after which they ought to be laid abroad in the moon-shine, to receiue the thick dew or hoary frosts (if any fall) with their bellies vpward into the aire, I meane that part whereby they cleaue fast to rocks or sand where they grew, that thereby they may take their whitening. That spunges haue life, yea and a sensible life, I haue proued heretofore; for there is found of their blood settled within them. Some writers report, that they haue the sense of hearing, which directs them to draw in their bodies at any sound or noisemade, and therewith to squeeze out plenty of water which they contained within; neither can they easily be pulled from their rocks, and therefore must be cut away; whereby they are seen to shed a deale of blood, or that which resemblith blood very neer. Many do prefer the Spunges growing in places exposed to the North-wind, before any other: neither doe any hold and maintaine longer in any place their owne breath, as Physicians doe hold; who affirme, that for this regard they be good for our bodies, namely, if wee entermingle their breath with ours by application: for which purpose, the fresher taken and the moister they be, the better they are thought: but this their operation is lesse perceived, in case they be wet in hot water, and so applied: likewise if they be soked in any vnctuous liquor, or bee laid vpon any part of the body annointed. This also is obserued by them, that the thickest of them, to wit, such D as haue the least pipes, sticke not so hard to a place as others. As touching the softest and finest spunges, called Penicilli, if they be applied vnto the eies after they haue bene soaked in honied wine, they do allay and bring down any swelling in them. The same are abstersiue and singular good to clarifie and cleanse the eies that be giuen to bleerednesse: but those (I say) ought to be of the finest and softest kind. For to stay the violent flux of rheumaticke humors into the eies, there is nothing better than to apply spunges of any sort with oxycrat, that is to say, vinegre and water: but with vinegre alone actually hot, they be singular for the head-ach: and otherwise, any sponge that is fresh gotten, doth discusse, mollifie, & mitigat. Old spunges do conglutinat and foulder any wounds. There is a generall vse of all spunges, to wipe and mundifie any place, to foment and bath withall: to keep off the aire also and to couer it after fomentation, vntill another E medicine be made ready for to be laid on fresh. Moreover, they be desiccative, & therefore if they be applied to rheumatick and moist vlcers, and namely in old folke, they dry vp the superfluous humors that find a way thither: neither is there any thing so fit for to foment a fracture or green wound, as spunges. Also, when any part of the body is cut off or dismembred, what is so handsome to suck and soke away the blood quickly, (that the cure may be thoroughly seen, & the order thereof) as a sponge? Furthermore, spunges themselves serue to be laid to wounds, sometime drie and sometime dewed or sprinkled with vinegre, one while wet in wine, another while moistened with cold water, and all to defend them from inflammation: but if they be bathed in raine water, and so applied to members new cut, they will not suffer them to swell and impositumat. They are besides laid vsually to the found parts, where no skin is broken, if there be any hidden F and secret humor that runs vnder the place, and puts it to paine and trouble, such as needeth to be discusse and resolved: also to impostumes, if they be first annointed with boyled hony. In like manner, for the paine of the joints they are proper to be applied, one while wet in vinegre with salt, another while dipped in vinegre and water: and if the gout be hot, they would be laid to soked in water only. The same spunges ought for the dissolving of hard callosities, to be wet with

Co 2

fale

salt water: & against the sting or prick of scorpions, with vinegre. In the cure of wounds, sponges may be vsed in stead of vnwashted greasie wooll, somtimes applied with wine and oile, and somtimes also with the said wooll: this only is the difference, That such wooll doth mollifie, whereas sponges do restrain and smite back: and yet a facultie they haue, to fetch out and sucke away the filthy excrements, attyr, and quitter, that gather in fores and wounds. They may be bound about the body of those that haue a drop sicke, either drie, or else wet in warme water or vinegre; according as need requireth, either to goe gently to worke, or to couer and dry the skin.ouer and besides, good it is to apply sponges to those accidents and infirmities of the body which require euaperation; namely, if they be well foked and thoroughly wet in hot water, and then pressed and strained between two tables or bords. After which manner, they are good to be laid to the stomack; and in a feauer, against extremitie of heat. For those that be troubled with the oppilation or hardnes of the spleen, there is not a more effectual remedy, than to apply sponges to the place affected, wet in oxycrat or vinegre & water together: like as for shingles and *S. Anthonies* euill, with vinegre only. But in this application of them, consideration must be had that they couer the found parts also round about as well as the other. Sponges wet in vinegre and cold water, staunch any flux of bloud. If there be any place of the skin blacke and blew, vpon a fresh or new stripe, lay thereto sponges well drenched in salt water, changing them often one after another, and it shall recouer the naturall colour againe: in which order, they bring down the swelling of the coles, and allay their paine. Being hacked and cut small, they serue to good purpose for to be laid to the biting of mad dogs; so that eftsoones and euer and anon they bewet and refreshed with vinegre, cold water, or hony good store, one with another. The sponges of Africke or Barbarie being burnt or calcined, doe make soueraigne ashes for to be drunke with iuice of vnset leeks in cold water (so there be put vnto a draught thereof, a quantitie of salt) by such as cast or reach bloud vward at the mouth. The same ashes reduced into a liniment, either with oile or vinegre, and so applied as a frontall to the forehead, driue away tertian agues. These African sponges haue this peculiar qualitie, to discusse any tumors, if they be applied to them well foked in oxycrat or water and vinegre mixed together. The ashes of any sponges whatsoeuer, burnt together with pitch, staunch the bleeding of any wound: and yet some there be who in this case burn those only with pitch which are of a grosse and loose making, and not so compact as the rest. Moreouer, for the accidents of the eies, sponges are many times burnt and calcined, in an earthen pot vnbacked, and the ashes which come thereof, do much good also vnto the pilling and asperitie of the eie lids, the excrescence of flesh, and whatsoeuer in those parts needeth astriction, or otherwise to be vnited, fowdred or incarnat: and for these effects, it is much better to wash the said ashes. Furthermore, sponges, in friction and rubbing of crasse bodies, may well stand in stead of currying combs, and course linnen cloaths: besides, they serue right handsomely and fitly, to couer and defend the head against the extreame heat of the Sun. Moreouer, the ignorance of our Physitians, is the cause that all sponges be reduced to two only kinds, to wit, vnder the name of African, which be of more tough and firme substance; and the Rhodiacke, which are softer, and therefore meet for fomentations. At this day the tendrest and most delicate sponges are found about the walls of the citie Antiphellus. And yet *Trogus* writeth, that about Lycia, the softest sponges called *Penicilli*, do grow in the deep sea, and namely in those places, from whence other sponges beforetime had been plucked and taken away. Finally, *Polybius* doth report, that if sponges be hung about the neck or feeling of a bed ouer sicke persons, they shall take the better rest and repose all night for it. Now is it time for me to returne vnto Beasts of the Sea, and other creatures liuing and bred in the waters.

THE

THE XXXII. BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS
SECVNDVS.

The Proem.

¶ Medicines taken from liuing creatures of the Sea.

Having so far proceeded in the discourse of Natures historie, that I am now arrived at the very height of her forces, and come into a world of Examples, I cannot chuse but in the first place consider the power of her operations, and the infiniteness of her secrets which offer themselves before our eies in the Sea: for in no part else of this vniuersall Frame, is it possible to obserue the like majestie of Nature: in so much as we need not seeke any further, nay we ought not to make more search into her diuinitie, considering there cannot be found any thing equall or like vnto this one Element, wherein she hath surmounted and gone beyond her owne selfe in a wonderfull number of respects. For first and foremost, Is there any thing more violent than the Sea, and namely, when it is troubled with bloustring winds, whirlpuffs, stormes, and tempests? Or wherein hath the wit of man become more employed (seeke out all parts of the whole world) than in seconding the waves and billowes of the Sea, by saile and oare? Finally, Is there ought more admirable, than the innarrable force of the reciprocal sides of the Sea, ebbing and flowing as it doth, whereby it keepeth a current also, as it were the streame of some great river?

CHAP. I.

¶ Of the fish *Echeneis*, and her wonderfull propertie. Of the Crampe-fish *Torpedo*, and the Sea-hare. The wonders of the Red sea.

The currant of the Sea is great, the tide much, the winds vehement and forcible; and more than that, ores and sails withall to helpe forward the rest, are mighty and powerful: and yet there is one little sillie fish, named *Echeneis* that checketh, scorneth and arresteth them all: let the winds blow as much as they will, rage the stormes and tempests what they can, yet this little fish commandeth, their fury, restraineth their puissance, and mauge all their force as great as it is, compelleth ships to stand still: A thing, which no cables, be they neuer so big and strong, no ankers, how massie and weightie soeuer they be, sticke they also as fast and vnmouable as they will, can performe. Shee bridleth the violence, and rameth the greatest rage of this vniuersall world, and that without any paine that she putteth her selfe vnto, without any holding and putting backe, or by any other meanes, saue only by cleauing and sticking fast to a vessell: in such sort, as this one small and poore fish, is sufficient to resist and withstand so great power both of sea and nauie, yea and to stop the passage of a ship, doe they all what they can possible to the contrary. What should our fleets & armadoes at sea, make such terrors in their decks and forecastles? what should they fortifie their ships in warlike maner, to fight from them vpon the sea, as it were from mure and rampier on firme land? See the vanity of man! alas, how foolish are we to make all this ado: when one little fish, not about halfe a foot long, is able to arrest and stay perforce.

perforce, yea and hold as prisoners our goodly tall and proud ships, so well armed in the beake-head with yron pikes and brassen tines, so offensive and dangerous to bouge and pierce any enemye ship which they do encounter. Certes, it is reported, that in the nauall battell before Actium, wherein *Antonius* and *Cleopater* the queene were defeated by *Augustus*, one of these fishes staied the admirall ship wherein *M. Antonius* was at what time as he made all the hast & means he could deuise with help of ores, to encourage his people from ship to ship, and could not preuaile, till he was forced to abandon the said admirall and go into another galley. Meane-while the armada of *Augustus Caesar* seeing this disorder, charged with great violence, and soone inuaded the fleet of *Antonius*. Of late daies also, and within our remembrance, the like happened to the roial ship of the Emperour *Caius Caligula*, at what time as he rowed back and made saile from *Astura* to *Antium*, when and where, this little fish detained his ship, and (as it fell out afterward) presaged an vnfortunat euent thereby: for this was the last time that euer this Emperour made his returne to Rome: and no sooner was he arriued, but his owne souldiers in a mutinie fell vpon him, and stabbed him to death. And yet it was not long ere the cause of this wonderful stay of his ship was knowne: for so soon as euer the vessel (and a galliace it was, furnished with fise banks of ores to a side) was perceiued alone in the fleet to stand still, presently a number of tall fellows leapt out of their ships into the sea, to search about the said galley, what the reason might be that it stirred not; and found one of these fishes sticken fast to the very helme: which being reported vnto *Caius Caligula*, he fumed and fared as an Emperour, taking great indignation that so small a thing as it, should hold him back perforce, and checke the strength of all his mariners, notwithstanding there were no fewer than foure hundred lusty men in his galley that laboured at the oere all that euer they could to the contrary. But this prince (as it is for certaine known) was most astonied at this, namely, That the fish sticking onely to the ship, should hold it fast; and the same being brought into the ship and there laid, not worke the like effect. They who at that time and afterward saw the fish, say, it resembled for all the world a snail of the greatest making: but as touching the forme and sundry kindes thereof, many haue written diuersly, whose opinions I haue set downe in my treatise of liuing creatures belonging to the waters, and namely in the particular discourse of this fish. Neither do I doubt but all the sort of fishes are able to doe as much: for this wee are to beleue, that Pourcellans also be of the same vertue, since it was well knowne by a notorious example, that one of them did the like by a ship sent from *Periander* to the cape of *Gnidos*: in regard whereof, the inhabitants of *Gnidos* doe honour and consecrate the said Pourcellane within their temple of *Venus*. Some of our Latine writers do call the said fish that thus staieth a ship, by the name of *Remora*.

As touching the medicinale properties of the said stay-ship *Echeneis* or *Remora* (call it whether you will) a wondrous matter it is to see the varietie of Greek writers: for some of them (as I haue shewed before) do hold, that if a woman haue it fastened either about her neck, arme, or otherwise, she shall go out her full time if she were with child: also, that it will reduce her matrice into the right place, if it were too loose and ready to hang out of her body. Others againe report the contrary, namely, That if it be kept in salt and bound to any part of a woman great with child and in paine of hard trauell, it will cause her to haue present deliuerance; for which vertue, they call it by another name **Odinolion*. Well, howeuer it be, considering that mighty puissance which this fish is well known to haue in staying ships, who wil euer make doubt hereafter of any power in Nature her selfe, or of the effectual operation in Physicke, which she hath giuen to many things that come vp by themselves. But say we had no such euidence by the example of this *Echeneis*, the Cramp-fish *Torpedo*, found and taken likewise in the same sea, were sufficient alone to proue the might of Nature in her workes, if there were nothing else to shew the same: for able she is to benum and mortifie the arms of the lustiest & strongest fishers that be; yea and to bind their legs as it were, how swift and nimble soeuer they are otherwise in running: and how euen by touching only the end of a pole, or any part of an angle rod, which they hold in their hands, although they stand aloft and a great way from her. Now if we cannot will nor chuse, but must needs confesse by the euident instance of this one fish, that there is something in nature so penetrent and powerfull, that the very smell only or breath and aire proceeding from it, is able thus to affect, or infect rather the principall lims and members of our bodies, what is it that we are not to hope for and expect from the vertue of all other creatures that Nature (through her bounty) hath endued with medicinale power for the remedy of diseases?

And

And in very truth, no lesse admirable be the properties which are respected of the sea-Hare: for to some a very poyson it is, taken inwardly either in meat or drinke: to others againe, the onely aspect and sight thereof is as venomous. For if a woman great with child chance but to see the female only of this kind, she shall sensibly therupon feelee a sickle wambling in her stomacke, she shall presently fall to vomiting, and anon to vntimely labour, and the deliuerie of an abortiue fruit. But what is the remedy? Let her weare about her arme in bracelets, any part of the male, which ordinarily for this purpose is kept dry and hardened in salt, these shall passe these dangerous accidents. The same fish is hurtfull also in the sea, if it be touched only. Neither is there any liuing creature that feeds vpon this fish, but it dieth thereon, vnlesse it be the sea Barbell onely: al the harme that this fish catches by eating of it is this, that the flesh is more tender by that means, and nothing so fast as it was before; besides, the meat is more vnpleasant, & not so much set by in the market, nor bought vp by Caters for the kitchen. If man or woman chance to be infected by eating of the sea-Hare, they presently smell and sent of the said fish; and this is the first signe and argument to proue that they be impoisoned thereby; howbeit, they die not immediately but may continue so many daies as the said Hare liued after it came out of the sea. And therefore (according as *Licinius Macer* hath left in writing) this poyson hath no set and prefinir time wherein it killeth any body. As touching the sea-Hares among the Indians, it is constantly affirmed, that taken they cannot be aliue; and that by way of counterchange, a man is their poyson: for if he do no more but touch one of them with his finger in the sea, it will forthwith die: And it is said withall, that far bigger he is there than in other seas: like as all other beasts whatsoever. King *Iuba* in those booke which he wrote to *C. Caesar*, sonne to *Augustus* the Emperour, as touching the historie of Arabia, saith, That their limpins, muskles and cockles, are so big in those seas, that one of their shels will contain a measure of three hemines. Also that there haue been known Whales six hundred foot long, and carrying a breadth of three hundred and sixtie foot, to haue shot themselves out of the sea into the great riuers of Arabia: the fat of which Whales, (like as the grease of all other sea-fishes there) is much set by and sought after by merchants, who in all those quarters vse it for to annoint their traueiling cammels, for to driue away the Breefe or Gad Bee from them, which indeed cannot abide the smell of that oile.

CHAP. II.

The naturall wit, docilitie, and gentlenesse of some fishes. Also where they be so tractable, that they will take meat at a mans hand. Finally, in what part of the World fishes giue answer by way of Oracle.

Wonderfull in my conceit is the wit and subtiltie of some fishes, if all bee true which *Ouid* the Poet hath reported of them, in that booke of his which he intituled *Halieuticon*: For first and formost he saith, That the Goldenie *Scarus* perceiuing himselfe to be taken in a weire, or enclosed within a wicker-net or leape, neuer striueth to get out againe with the head forward, or to thrust his muffle betweene the oisiers, for feare he should be caught by the head: but turning his taile vnto them, keepeth such a flapping therewith, that he makes himselfe way by that means, and so breakes forth of prison backward. Now, in case whiles he strugleth and laboureth thus to get out, another Goldenie that is without happen to espie him thus a prisoner, the same will take hold with his mouth of his fellowes taile, and helpe to get him forth out of the said net, which he endeauoures to break through. Also that the sea pike *Lupus*, when he seeth that hee is compassed about with nets, maketh a furrow with his taile into the sands, wherein he coucheth and lieth close, that when the fishers draw their nets vnto them, they may glide and passe ouer him. As for the Lampreis, knowing what a smooth, round, and slipperie back they haue, they make no more adoe, but seeing themselves within the net, get between the very meshes, which with their much winding and wrigling they will wrest wider and wider still, vntill they be gotten through and escaped.

The Pulpe fish or Pourcuttill, maketh at the very fishhooks which hee searcheth after, and those he biteth not at, but claspeth hard and gripeth round about with his clees and armes that he hath: and neuer letteth he his hold goe, vntill hee hath gnawne and eaten off the bait cleane, vnlesse before he haue done, he perceiue that he is like to be drawne vp out of the water by the angle;

angle. The Mullet also knoweth that the bait hath a hook within it, neither is he ignorant that it is laid for to entrap and catch him; howbeit, so greedie he is thereof by nature, that he neuer linneth beating it with his taile, vntill he hath shaken off the meat from the hook. The Pike is not so wary and prouident in forecast, as to keep himselfe from the danger of the hooke: but of great strength and force he is, when he bethinketh himself and repenteth that he was so foolish as to be caught: for no sooner hangs he by the hooke, but he runneth and girdeth with it in his mouth too and fro, forcing and wresting his wound so wide, vntill the said hooke which had fast hold on him before, be fallen out of his mouth againe.

The Lampreies deuoure the hooke, yea, they gobble in and swallow more than so, vntill they come to the very lines, which they set their sharpe teeth vnto, and neuer rest vntill they haue fretted and gnawne them asunder. And *Pytheas* is mine Authour, who writeth thus of them besides, That if they find themselves to be once vpon the hooke, they turne their bodies and writh sides, as knowing the same to be armed with trenchant and keene edged fins like with their backs, as knowing the same to be armed with trenchant and keene edged fins like kniues, & so with their very sharp chine & fins cut the lines atwo. *Licinius Macer* writes of Lampries, that they be all of the female sex onely, and doe conceiue by serpents engendering with them, as I haue heretofore obserued: which is the cause, that fishes lure them with hissing like vnto serpents, and by that meanes call them forth of their holes and catch them. Hee saith moreover, That they will feede fat with milk: and if a man giue them a good knock with a cud-gill, they will not die thereupon: rap them onely with a Fennell stalke or some such wand, you shall see them dead forthwith. And verily it is held for certaine, that their life lieth in the taile: which if it be smitten, they are very soone gone and bereft of vitall breath: strike them vpon the head, you shall hardly and with much adoe kill them.

There is a fish called a Rafoir: looke whatsoeuer toucheth it, senteth presently of yron.

Confessed it is and knowne for certaine, that the Lompe, Paddle, or sea- Owle, a fish called in Latine *Orbis*, of all others hath the roughest and hardest body. Shaped round it is without scales: a man that looketh vpon it, would say it were all head.

Trebius Niger mine authour affirmeth, That so often as the sea Kite is seene to lance himselfe and flie without the water, it threateneth tempests.

The Sword-fish, called in Greeke *Xiphias*, that is to say in Latine *Gladius*, i. a sword, hath a beake or bill sharpe pointed, wherewith hee will driue through the sides and planks of a ship, and bouge them so, that they shall sinke withall. The experience wherof is seene in the ocean, & the neere vnto a place in Mauritania called Gorta, which is not farre from the riuer *Lixos*. And the foresaid writer *Trebius Niger* reporteth, That the sea-cats or Cuttle fishes, called *Loligines*, will flie out of the sea, and settle vpon ships in such multitudes, that they force them vnder water and so drowne them.

The Emperour *Cesar* had many faire houses of pleasure in the country, where he kept fishes that would ordinarily come to hand and take meat. Our ancestors made no such maruell thereat, namely, that they should be so gentle & tractable in small stewes and fish-ponds where they are kept to feed: but they haue written the like of fishes in great lakes and standing pooles: And namely, about *Florus*, a castle in Sicilie, not farre from *Syracusa*: likewise, in a well or fountaine of *Iupiter Labradium*, there be yeels will take meat at ones hand, & these wear ear-rings also about them. Semblably, in *Chios* neere vnto the chappell of the ancients or elders called *Veterum Delubrum*: as also in a certaine spring of *Mesopotamia*, called *Cabura*, whereof I haue already written. As for the fishes which keep about *Myra* in *Lycia*, within the wel or fountain of *Apollo*, called *Curius*, they will shew themselves of purpose to giue presage & foreknowledge of things to come: and the manner is, to call them to the top of the water with three whistles, of a fife or such like pipe. The order is among those that come to be resoled by them in some future euents, to cast peeces of flesh to them: if they snatch the same & swim away therewith, it is a lucky and fortunat signe, presaging a good issue of their affaires about which they come; but in case they reject the same, & flurt the meat from them with their taile, that is an ominous token, and they sheweth some vnhappie euent to follow. About *Hierapolis*, a citie in *Syria*, the fish within the lake or poole of *Venus*, obey the voice of the wardens or sextons who haue the keeping of her chappell there; and orderly they come at their call, garnished with their ornaments of gold about them: they will abide to be scratched and clawed, they will wag their tails like a dog in a fawning and flattering maner; nay, they will gape with their mouths wide open, and suffer them

A to thrust their hands or fingers into them. At *Stabianum* neere to the rocke or cape of *Hercules*, the blacke-tailed ruffles or sea-breames, which the Greekes name *Melanuri*, if a man cast crums of bread into the sea to them, they will catch the same, and scud away wishall: throw them any other meat or bait with a hooke in it, they will not once come neer therto. Neither are these to be reckoned among the least wonders and in the last place, namely, That about the Island *Pele* and the citie *Clazomenæ*, all the fish that is, tasteth bitter: Contrariwise, those that keep about the rock *Scylla* in *Sicilie* be sweeter, as also at *Leptis* in *Affrick*, *Euboea*, and *Dyrrhachium*. Again some are so salt, that they may well be taken for salt fish that hath lien in brine or pickle, to wit, neer the Islands *Cephalenia*, *Ampelos*, and *Paros*: likewise about the rockes and clifles of *Delos*: and yet in the Bay or hauen of the said Island, their meat is sweet ynough. This difference B in the tast of fish, proceedeth no doubt from the diuersitie of their food. Moreover, *Apion* saith, That the greatest of all other fishes is the Mole-bout, which the Latines call *Porcus*, the Lacedæmonians *Orthagoriscos*; and that when he is taken, he will grunt like an Hog, whereupon it should seeme he tooke the name *Porcus*. But as touching the foresaid accident of the variety in the tast of fish, how some be sweet, others salt, that it should be a naturall thing (and therefore the more to be marvelled at) appropriat to certaine places, it may appeare by this instance, which fitly proueth the same: For take the salt fish of *Italie*, what kind soeuer you will, for certaine it is knowne, That at *Beneuentum* they may be made fresh againe, as if they had neuer bene salted.

C That sea-fish hath been vsed at *Rome* from time to time, and euer since the very foundation of the citie, it may appeare by the testimony of *Cassius Hemina*: which I will set downe word for word as touching that point, in this very place. King *Numa* (quoth hee) ordained, That fishes without scales should not be bought vp by *Caters* for the furnishing of any solemne funerall feast. By which inhibition his policie and purpose was, that the great dinners, as well publike as priuat; the feastiuall suppers also which were kept at the shrines of the gods, should not be so costly and chargeable: for scarce also least the caters who made prouision for such sumptuous feasts, sparing for no cost, nor sticking at the price were it neuer so high, might forestall the markets and buy the same vp beforehand.

As touching *Corall*, we (here at *Rome*) set not more by the Indian orient pearles (whereof I haue written at large in place conuenient) nor esteem them at a greater price than those Indians do our *Corall*. And verily, if we deeme aright, it is the opinion and perswasion of people only, that setteth the price of these and such like things. True it is verily, that there is *Corall* bred in the red sea, but blacker it is than that which we haue: likewise in the Persian gulfes, & that is named *Iace*. Howbeit, the best simply is that which is found in the gulfes of *Marfiles* in *France*, about the Islands *Stœchades*: as also in the narrow seas of *Sicily*, toward *Helia* and *Drepanum*. There is also therof growing at *Grauiſca*, & just before *Naples* in *Campaine*. But the reddest of all other, soft & tender withall, and therefore most commodious, is engendred about *Erythræ* in *Barbary*. *Corall* resembles a bush or shrub in forme, & of it selfe within the water, is of color Greene. The berries therof vnder the water be white and soft: no sooner be they taken forth, but presently they wax hard and turne red: much like both in shape and in bignesse to the grains or fruit of the gentle garden *Cornel* tree. It is said that this plant whiles it grows and is aliue, if a man touch it neuer so little, becomes as hard immediatly as a stone. The fishers therefore to preuent that inconuenience (as knowing the nature therof) either pluck it vp with their nets, or cut it with some sharpe edged yron tooles: which is the cause that it is commonly called **Curalium*, as some make interpretation of the word. The reddest *Corall* is taken to be the best: the same also branched most, is nor rough and ragged vnder the hand to feele to, or stone-hard: so- E like likewise it is and masse, not void and hollow. The berries or beads which it beareth, is of no lesse account & price with the men of *India*, than the *Indian* pearles with our costly dames here. And verily among them, their *Wisards*, *Southsaiers*, *Priests*, & *Prophets*, haue a religious opinion of them, and attribute great holinesse to the vse thereof: as being perswaded, that whoeuer F weare them, shall be secured against all perils and dangers whatsoeuer; and therefore a speciall reckoning they make of them, as wel in regard of beautie as deuotion. Before that it was known in what estimation *Corall* was with the *Indians*, the *Frenchmen* adorned & set out their swords, targuets, shields, morrions, and head peeces therewith: But since time that there was a vent into *India* of this commoditie so vendible, great scarcitie there is of it, and hardly shall a man meet

with

*I shall write some
reade *salutem*
others *salutem*,
i. with much
striving and
struggling.

*It is the super,
because it is
cut and thorne
(as it were) in
the sea.

with any Corall, even in that part of the world where it growes naturally. The branches of Corall hang about the neckes of infants and young children, are thought to be a sufficient pre-
 servative against all wither and forcerie. Calcined by fire, and so reduced into ashes or pou-
 der and given to drinke in water, it helpeth those who are troubled with the wringing paines of
 the belly, the griefe of the bladder, and the disease of the stone. The like effect it hath if it be
 drunk in wine, or if the patient have a feaver upon him, in water for to procure sleep. This would
 be noted, that Corall doth withstand the power of fire, and long it is before it be burned and
 reduced into ashes: But surely a singular medicine it is, so prepared and vsed, inasmuch as (by re-
 duced into ashes) if a man keepe to it still and continue it long, the same will consume the hardnesse and
 schirrositie of the spleen. The powder of Corall is soueraign for such as reach and cast vpon
 at the mouth. The ashes enter into many mixtures and medicines for the eyes: for astringent
 they be, and cooling withall. Hollow vlcers and fistulae they incarnate and fill vp againe with
 new flesh. Skars and cicatrices they do extenuate.

If I should speak of the repugnance and contrariety in Nature (which the Greekes call an-
 tipathie) found in many creatures, there is not to be seen in the whole world any thing more ve-
 nomous and aduersive to plants than the Puffins or Forke fish of the sea, called *Pastinaca*: for as I
 heretofore noted, it hath a pricke in the tail, which is able to kill any trees that be pierced or
 wounded withall. And yet a concurrent and enemy this hath, which doth persecute & plague
 it, and namely the Lamprey called *Galeos*; so eager is it and greedy of the venome and poyson
 of that fish. There be other fishes also which it pursueth, but those Puffins especially: and no
 Weazill hunteth more after serpents. In summe, whosoever be hurt or wounded by the said
 Puffin, this *Galeos* is a present remedy; so is the Barbe also, and the gum Lafer or Benjoin.

CHAP. III.

¶ Of certaine creatures which liue as well upon the land as the sea. Of *Castoreum*,
 or the generators of a Beuer: the medicinable vertues thereof, and
 other properties observed therein.

The power and majesty of Nature is very conspicuous and visible, even in those creatures
 also which liue indifferently on land and in the water: and namely in the Beuers, which
 commonly the physicians call *Castores*, like as their stones also *Castorea*. Some hold, that
 these Beuers when they be neer driuen and pressed by hunters, and at the point to be taken, bite
 off their owne stones. But *Sextus*, who hath written most exactly in Physicke, denieth it flatly.
 He saith moreover, that these cods be small, knit short and trussed vp, so as they stick close vnto
 the chine bone, and cannot possibly be taken from the beast but the life goes away withall. By his
 saying also they are sophisticated, and the kidnies of the Beuer which are big, be obtruded and
 foisted to vs many times in stead of their stones, which indeed are neuer found but very little &
 slender. Furthermore he affirmeth, That they be not the right stones of a Beuer when they are
 seene without a twofold burse or skin, which no living creature hath besides. In these two bags
 there is found (saith he) a certain oleous liquor, which ordinarily is kept & preserved with salt:
 And therefore among other marks to know false and sophisticat *Castoreum*, is this, If you see a
 paire of cods, hanging (as it were) knit together by one string in one bag. And yet the best may
 be falsified by the fraud and cunning of such as put gum thereto with salt *Ammoniack*, because
 the true Beuers stones ought to beare the colour of *Ammoniack*; to be enclosed also within
 their seuerall tunicles; and to lie in a certaine liquor resembling cerous hony, standing much
 vpon wax; to haue a strong and rank smell, a bitter, hot and fiery tast; and withall, apt to crumble
 between the fingers. The best *Castoreum* & most effectually, is brought out of *Pontus* and *Gala-*
tia: next to it is that of *Affrick* or *Barbarie*. The vertue of *Castoreum* is to prouoke sneezing, if a
 man hold it to his nose and smell thereto. If the head be annointed with *Castoreum* incorporat
 with oile of roses and *Harstrang*, it will procure sleep: so will it do alone by it selfe given in wa-
 ter to drinke: in which respect, proper it is for the frensie. And yet the perfume or vapor there-
 of will raise those that lie in a sleepe lethargie: like a suffumigation* or pessarie put vp into the
 natural parts of women, is soueraign for the rising of the mother, in which fit they lie as it were
 in a trance and out of the world. *Castoreum* given to the weight of two drams with *Penitroyall*
 in water to drink, moueth womens monthly sicknes, and forceth the afterbirth to com away. It

* *Saluarum*,
examinationes
et subsidii.
 We practise
 the contrary.

helpeth those that haue the dizziness or swimming of the braine; bee drawne backward with
 cramps, tremble and shake; are plucked with spasmes and convulsions, diseased in their signers;
 troubled with the *Sciatica*, sick of a weak and feeble stomacke that keepeth nothing which it
 takes, and lie bed-ridden of the palsey, if they be annointed thoroughly therewith in parts conueni-
 ent. Or if *Castoreum* be reduced into powder, and together with the seed of *Agnus Castus*, be
 incorporat with vinegar or oile of rose, and so reduced to the consistence of hony, which being ta-
 ken as an electuarie, is singular not only for the former maladies, but also for the falling sicknes:
 and if the same be given in drink, it dissueth ventosities, appeaseth the wrings and torments of
 the belly, yea, and represseth the malice of any poisons. But in this case of poisons it ought to
 be prepared, mixed, and vsed diuersly, according to the sundry kinds thereof: for against the ve-
 nome of scorpions it would be drunk in meere wine. To withstand the danger of the *Phalangia*
 and such venomous spiders, it ought to be given in honied wine especially, if the intention bee
 to cast vp the said poysons by vomit, or with *Rue*, if the drift and purpose be to hold and retain
 all still. To prevent the perill of the Lizards or venomous wormes *Chalcidica*, it should be ta-
 ken in Myrtle wine. Against the sting of the horned serpent *Ceraastes*, or the fierie vermine *Pre-*
ster, with *Panax* or *Rue* in wine. But generally for all other serpents, the only liquor to receive it
 in, is wine. Two drams at a time is thought to be a sufficient dose of *Castor* it selfe, in any of these
 compositions, but of other drugs that are put thereto, there ought to be a proportion of the half;
 to wit, one dram. Moreover, a peculiar vertue it hath, if it be drunk in vinegar, to resist the veno-
 mous gum *Ixias*, growing vpon the plant *Chamaeleon*: but soueraigne it is for the poyson
 of the herb *Aconitum* or *Libard* base, in milk or faire water. Against white *Ellebores* it is good to
 be taken with mead or honied water and sal-nitre. Also, if it be puluerized and incorporate with
 oile, a soueraigne remedy it is to ease the tooth-ach, if it be dropped or poured into the eare of
 the same side where the griefe is: but better it were to temper it with the juice of Poppy for pain
 of the ears. Mix *Castoreum* with the best hony of *Attica*, and bring it into an eie-salue, it is pas-
 sing good for to cleare the sight. Given in vinegar, it staieth and keepeth downe the yex or hic-
 quet. Furthermore, the vrine of a Beuer is a good counterpoyson: and therefore it goeth to the
 making of Antidotes and preseruatiues. But the best way of keeping it (as some think) is in the
 owne bladder.

CHAP. IIII.

¶ Of the Tortoise. The medicines taken from many fishes, and diuers observations
 to them pertaining.

SEmblably, Tortoises liue in two places, and haunt both land and waters. Their effectual pro-
 perties besides are such as deserue like honour, as well in regard of their manifold vses in
 sumptuous buildings (whereby they carry a great price) as of their sundry vertues and ope-
 rations which Nature hath giuen them: now of these Tortoises there be many kinds, to wit, land
 Tortoises, and sea Tortoises. Tortoises found in muddy waters & marraies: Tortoises also that
 keep in fresh riuer water; and these last named, some Greeke writers call *Emydes*. The flesh of
 land Tortoises serueth well in perfumes & suffumigations, for so it is as good as a countercharm
 to put by and repell all forceries and enchantments: a singular counterpoyson also to resist any
 venome whatsoever. Great store of Tortoises be found in *Affricke*: where they vse to cut away
 the head and feet, and then employ the rest of the body as a soueraigne remedy against all poy-
 sons. If their flesh be eaten together with the broth wherein they are sodden, it is held to be very
 good for to dissuise and scatter the wens called the kings euil, & to dissipat or resolu the hard-
 nesse of the swelled spleene: likewise to cure the falling sicknes, and to driue away the fits there-
 of. The blood of Tortoises clarifieth the eyesight & dispatcheth the cataraacts, if they be anoi-
 nted therewith. Many incorporate the said blood in meale, and keep them reduced into the forme
 of pills, which when need requirerh, they giue in wine as a present help for the poyson of all ser-
 pents, spiders, and such like, yea, and the venome of toads. The gall of Tortoises mixt with *Ar-*
ticke hony, serueth to cure the fiery rednesse of the eyes, if they be annointed therewith: The
 same is good to be dropt into the wounds inflicted by the prick of scorpions. The ashes of the
 Tortoise sheli incorporat with wine and oile and so wrought into a salve, heals the chaps & vl-
 cers of the feet. The scales scraped lightly from the vpper part of the shell giuen in drink, coole
 the

the heat of lust. And I maruell the more hereat, because the powder of the whole shell indeed bath the name to heat the appetite and desire to ventry. As touching their vrin, I hold it impossible to meet with the same, vnlesse it be found in their bladder when they be cut in twaine. And yet the Magicians hold this to be one of the most rare things in the world, and that which worketh wonders, saying it is right soueraigne for the biting or stinging of the Aspis, howbeit, much more effectually (say they) if punaises be mixed with it. Tortoise eggs dryed and hardened, are good to be applied to the wens called the kings euill; to any exulcerations, caused either by extreme cold or burning: The same being soft, are singular to be supped off in the paine of the stomacke.

The flesh of sea Tortoises, mixed and incorporat with the flesh of frogs, is a souverain remedy against the venome of Salamanders: neither is there any thing more contrary in nature to the Salamander, than is the Tortoise. The blood of the sea Tortoise serueth to recouer haire in the places naked and bare, by occasion of the disease called Alopecia: it riddeth away likewise the skales and dandruffe, yea, and healeth all the scalds of the head: but the same must dry vpon the head, and be washed off at leisure by little and little. If it be dropped into the eares with breaste-milk, it easeth their paine. If it be chewed or eaten, tempered with the fine floure of wheat, it cureth the falling sicknes. But for the better preparing and ordering of this blood in these cases, it ought to be mingled in 3 hemines of vineger, one hemine of wine put thereto, with an addition also of Barly meale, and the same tempered with vineger: of which composition the patient is to take and swallow down the quantity of a bean every day, morning and euening; and after some daies past, in the euening only this blood is likewise singular to be dropt into the mouths of those that be fallen of the epilepsie or falling sicknes, so the fit be but smal, for which purpose they must be forced to gape. In case of cramps & convulsions, the same is to be clysterized with Castoreum. Whosoeuer rubbeth their teeth with Tortoise blood, and vse so to do a whole yeare together, shal be freed from the pain therof for euer. If it be mixed with barly groats, and giuen to them that draw their winde short, it discusseth the cause of that difficulty; yea, helpeth such as cannot breath but sitting vpright. The gall of Tortoises cleareth the eyesight, it doth subtilize the cicatrices and films that grow in the eyes: the inflammation of the tonsils it represseth, assuageth the squinancy, and helpeth all the accidents of the mouth: and more particularly, a property it hath to heale the cankerous and corrosiue sores there breeding: as also to cure the inflammation of the genitoirs. The same conueied vp into the nostrills, fetcheth those again to themselves who are in a fit of the falling sicknesse, and setteth them vpright vpon their feet. And with the slough of a serpent incorporat in vineger, and dropt into the ears that run, it is an excellent medicine to scoure them. Some put a Bœufes gall among, together with the broth of the Tortoise flesh sodden, and an addition of a snakes slough in equall quantity; but first they seeth the said Tortoise a long while in wine. Moreouer, the gall of Tortoises mixed with hony, amendeth all the imperfections incident to the eies, if they bee annoiued therewith: yea, if it were a cataract, the gall of a sea Tortoise tempered with the blood of a riuier Tortoise and womans milk, riddeth and scoureth it away. The said gall is very proper to giue a yellow die or colour to womens haire. Against the poison of Salamanders, sufficient it is to drinke the broth or decoction of a Tortoise.

As touching those kind of Tortoises that liue and breed in mud and moorie waters, which I reckoned to be the third kind: broad they be and flat in the backe as well as vpon the brest: neither doth their shell arise arch-wise in manner of a vault: these are il-favored to see to, and yet as loueleffe as they be, they are not without some medicinable vertues and remedies: for take 3 of them and throw them into a fire made of Vine twigs, or their cuttings; when their shells or co-uers begin to diuide in funder and part one from another, pull them hastily out of the fire, pluck the flesh out of their shells, feeth them in a gallon of water, with a little quantity of salt put thereto; thus let them boyle vntill a third part of the liquor be consumed: This broth or decoction if it be drunken, is thought to be soveraign for those that be troubled either with the palse, gout, or paine of joints. The gall of these Tortoises purgeth also phlegmaticke humours and corrupt bloud out of the body. And after that this medicine hath don his part, and set the belly in a loofenesse, a draught of cold water knitteth it againe, and staeth all.

To come now vnto the fourth kind of Tortoises which keepe in fresh riuers, they affoord an excellent remedy for to rid away a quartane ague, in this manner prepared and vsed : first take certaine

A certain tortoise, diuide one piece from another & take out the fat within, stamp the same with the herb called houleek and Lincseed, incorporate all into an ointment, let the patients be anointed therewith before the fit commeth, all ouer the body saue the head only, and when they be well lapped with cloathes about them, giue them some hot drink: This (I say) is thought to be a foueraigne medicine against the said ague. But a tortoise to be applied for this purpose, ought to be taken at the full of the moone, because there may be more fat found in her. Many the sick body must not be anointed (men say) at any time but two daies after. The blood of tortoises which are of this fourth kinde, if it be dropped on the head by way of embrochation, appeaseth the head-ach that vseth to return and come often by fits: the same also applied vnto the kings euill cureth it. Some are of opinion, that the better to let tortoises blood, and according to art, (as requirit it is in such cases of physick) they ought to be laid along with their bellies upward, and so their heads to be cut off with a brasen knife: and then they giue order to receiue the blood in a new earthen vessel neuer occupied before: which blood is excellent to anoint the shingles, or any kind of *S. Ambrosies* fire: likewise the running scalls of the head, and alswerts. The same Authors doe promise and warrant, That with the dung of all sorts of Tortoises, the bites called *Pani* may be discussed and resolued. And although it be incredible and not to be spoken, yet some there be who haue written, That any thip maketh way more slowly at Sea, that carrieth within it the right foot of a Tortoise. And thus much shall suffice as touching Tortoises.

And now from henceforth as touching the fishes and other water creatures, I meane to discourse of them and their medicinable properties, according to euerie disease which they seru for. And yet I am not ignorant, that many a one will be desirous to know all at once, the vertues of each living creature, which indeed maketh them to seem more admirable a great deal. Howbeit this course that I meane to take, I hold to be more expedient and profitable to this life; namely, to set downe receipts and remedies digested by order, of each disease and malady: considering that one thing may be good for this Patient, and another for that; and some medicines are sooner found and gotten than others.

CHAP. V.

¶ Sundry medicines and receipts taken from those living creatures which conuerse in waters, and the same digested orderly into diseases. And in the first place, such as be appropriat to poysons and venomous beasts.

Heretofore haue I written of venomous honey, and the countie wherein such is gathered and made: now if any be poisoned therewith, good it is to eat the fish called Arata, *i. a*

Guilt-head. Or say one be gluttered with pure hony, or haue taken a surfet thereof, being of all other most dangerous, whereby the appetite is cleangon, and the stomack oppressed with crudities: for to preuent farther danger, *Pelops* ordained for a speciall antidote or defenfatue the meat of tortoises boiled, after the head, feet, and taile were cut away. But *Apelles* in this case attribureth as much to *Scincus*. Now what this *Scincus* is I haue declared heretofore. Shewed also I haue oftentimes in many places, how venomous the monthly fleurs of women are, but yet (as hath bin said already) the fish called a Barble is a singular remedy against the poison thereof: like as, both applied outwardly in a liniment, and taken inwardly as meat, it is a soweraigne thing for the pricke of the Puffin or Forkish, of Scorpions as well of the land as the sea, and of the malicious spiders Phalangia. The ashes of a Barble fresh taken and calcined, is a generall counterpoison; but more particularly it helpeth those who haue eaten deadly Mushrooms. Also it is said, That if the fish called a Sea-star, wel besmeared and anointed all ouer with the bloud of a Fox, be fastned to the lintell, or hanged to the brazen nail or ring of a dore, it will put by all charmes, forceries, and witchcrafts, that none shall come into the house, or if any doe, yet they shall not worke any harme. As for the pricke or sting of sea-dragons and scorpions, a cataplaine of Sea-stars flesh applied thereto healeth them: so it doth also the venomous bit of spiders. In sum, the broth of their decoction is thought to be a soweraigne remedie against all

Pp manner

manner of poisons; whether it be that a man haue taken it by the mouth, or be stung and bitten G by any venomous beast.

As touching fishes kept in salt, they are not without their medicinable vertues: for to eat salt fish is very good for them who are stricken with serpents, or otherwise bitten or stung by any venomous beast, so they drink to it estoons pure wine of the grape, and withal be sure to cast vp again by vomit toward euening their foresaid meat which they did eat that day. The same salt fish more peculiarly serueth for them who haue bin hurt and wounded with the venomous Lizard * Chalcis, the horned serpent Ceraustes, or the venomous horn-fretters called Sepes: being otherwise singular to heale those who haue bin smitten with the serpent Elops, or bitten with the thirsty tooth of the worrne Diplas: but if a man be pricked by the Scorpion, good it is for him to feed fully of saltfish, howbeit in no wise to vomit the same vp again, but rather to indure the drinnesse & thirst occasioned thereby: and many hold, that it is a proper remedy to apply to the sore a cataplasme made of the foresaid saltfish. Verily against the biting of Crocodils there is not thought to be a more present and effectual remedy, than it. But to grow vnto particulars, Sprouts salted haue a special propertie to heal the biting of the beetle or venomous fly Prester: also in case a man be bitten with a mad dog, it is very good to lay salt fish vnto the sore; yea although the wound were not cauterised with a red hot iron, nor the patients body emptied by a clystire, this cataplasme alone of saltfish is thought sufficient to cure it: the same soaked in vinegar serues also to be laid vnto the place that is hurt with a sea dragon. Of the same operation and effect is a * square piece or canton of the fish Tuny salted and condired. And since I haue named the sea-Dragon, this would be noted, That himself outwardly applied, is a remedie for the venom inflicted by the prick or fin of his ridge bone, wherewith his manner is to strike: yea & his very brains also, if you take nothing els, are as effectual. The decoction of sea frogs sodden in wine and vinegar, is a souerain drink for all poisons, but especially for the venome of the hedge toad and salamander. As for the frogs of riuers and fresh waters, if a man either eat the flesh or drink the broth wherein they were sodden, he shal find it very good against the poison of the sea-hare, or the sting of the serpents abouenamed; but more particularly against the prick of scorpions they would be boiled in wine. Moreouer, Democritus saith, That if a man take out the tongue of a sea frog aliue, so that no other part thereof stick therto, & after he hath let the frog go again into the water, apply the said tongue vnto the left pap of a woman while she sleepest, in the very place where the heart beateh, she shall answer truly and directly in her sleepest, to any interrogatorie or question that is put vnto her. But the magitions tell more wonders than so of the frog, which if they be true, certes frogs were more commodious & profitable to a Commonwealth, than all the positiue written lawes that we haue. For they would make vs beleue, That if the husband take a frog and spit her (as it were) a length vpon a reed, so as it go in at the skut or mature behinde, and come forth againe at the mouth, and then pricke the said Reed or broch in the mensuall bloud of his wife, she shall neuer haue minde afterwards to entertaine any adulterers, but dereft and loath that naughty kinde of life. Certaine it is, That if froggs flesh be put within a net, or that a hooke be baited therewith, Purple fishes about all others will come flocking thither. Moreouer, it is commonly said, That a Frog hath a double liuer, the which ought to be layd before Ants, and looke which of the two lobes or flaps thereof they make vnto, and seeme to gnaw, the same is a most singular antidote against all poysons whatsoever.

Some frogs there be that liue only among bushes and in hedges, which thereupon we call in * Our Toads. Latine by the name of * Rubeta; and the Greeks term them Phrynos: the biggest they are of all other, with two knubs bearing out in their front like horns, and full of poison they be. They that write of these toads, striue a-vie, who shal write most wonders of them: for some say, that if one of them be brought into a place of concourse where people are in great number assembled, they shall be all hushed and not a word among them. They affirme also, that there is one little bone in their right side, which if it be thrown into a pan of seething water, the vessel will coole presently, and boile no more vntill it be taken forth again. Now this bone (say they) is found by this means: if a man take one of these venomous frogs or toads, and cast it into a nest of Ants, for to be eaten and deuoured by them, and looke when they haue gnawed away the flesh to the very bones, each bone one after another is to be put into a kettle seething vpon the fire, and so it

A it will soon be known which is the bone, by the effect aforesaid. There is another such like bone (by their saying) in the left side, cast it into the water that hath done seething, it will seeme to boile and waulme again presently: this bone (forsooth) is called Apocynon: and why so? because ywis, there is not a thing more powerfull to appeale and repress the violence and furie of curst dogs than it. They report moreouer, that it inciteth vnto wanton loue; and yet nathelesse if a cup of drinke be spiced therewith, it will breed debate and quarrels among those that drinke thereof: also, whoeuer carrieth it about him, shall be prouoked to fleshly lust: and contrariwise, if the bone in the right side be likewise vsed, it will coole as much, and take downe the pride of flesh and heat of concupiscence. Others there be who are of opinion, that if it bee but worne about one, either hanging to the necke, or fastened vnto any other part of the body, infolded within a little piece of a new lambs skin, it will cure a quartane ague, or any other feuer besides. The same also represseth the affection of loue. Moreouer, they beare vs in hand, that the milt of these toads is a counterpoison against their owne venome: but the heart (say they) is much more effectual.

There is a certaine kind of serpent or Snake haunting the water, called in Latine Coluber; the fat and gall of which Serpent, if they haue about them who vse to hunt after Crocodiles, it is wonderfull (say they) how they be armed and defended against them, for they will not attempt to turne againe vpon the hunters and giue any assault: and yet of greater effect and force they shall finde it, in case there be incorporat withall, the pond-weed or water-speeke called Potamogiton.

C The riuer Crefishes, if they be taken fresh, stamped and giuen in water to drinke, are soueraine against all poisons: so is their ashes also a counterpoison; but more particularly against the sting or pricke of Scorpions, if it be drunke in asses milke; or for default thereof, in goats milke, or any other whatsoeuer: but then the patient ought to drinke wine vpon it. And verily, so aduerse and contrary are they vnto Scorpions, that if they be punned with Basill into a certaine composition, it will kill them, if the same be but laid vpon them. Of the same force they are against the sting or biting of any other venomous beast besides, and more especially of the pernicious hardi(hrew Seytale, of snakes, sea-hares, and hedge-toads. Many there be who vse to saue the ashes of Crefishes calcined, as a soueraine remedy for all such as be in danger to fall into the symptome of fearfulness to drink, incident to those that are bitten by mad-dogs: some D adde thereto the herbe Gentian, and giue both together in wine to drink: but if the said symptome of Hydrophobie haue surprized them already, then the said ashes or powder ought to be reduced (by the meanes of wine) into trofches or pills, which they prescribe vnto their patients for to be swallowed downe. The Magitians proceed farther and affirme, that if a man take ten Crefishes and tie them all together with a good bunch or handfull of basill, all the Scorpions that be thereabout, will assemble together to that one place: and they giue order, that if a man be hurt already with a scorpion, there should be a cataplasme made of them, or at leastwayes of their ashes mixed with Basill, and so applied to the place affected. The sea-crabs are nothing so good of operation in all these causes, as the Land-crabs or Crefishes aforesaid, according as Thrasillus mine Authour doth report. Howbeit, hee sayth neuerthelesse, that there are no such enemies to serpents, as Crabs; and he affirmeth moreouer, That if swine be stung or hurt by serpents, they helpe and cure themselves by feeding vpon sea-Crabs onely, and seeke for no other helpe or remedie. Hee addeth furthermore and auoucheth, that serpents are ill at ease, yea and much tormented with paine when the Sunne is in the signe of the crab, called commonly Cancer.

To come now to the riuer shell-snails: most certaine it is, that their flesh, whether it be raw or boyled, is singular good to resist the venome of scorpions inflicted by their pricke or sting: and some there be, who for to haue them in a readinesse to serue in those cases, keep them in salt: and they ordaine them to be applied vnto the very sore it seife, occasioned by their foresaid sting.

F As for the [blacke] fishes named Coracini, they are peculiar and appropriate vnto the riuer Nilus: howsoeuer my determination and purpose is to deliuer medicines profitable and beneficiall to all parts of the earth in general. Their flesh is good to be applied vnto the sores caused by scorpions.

The Sea-swine or Porpus, bath prickly fins vpon his back, and those are counted amongst other venomous things that the sea yeeldeth, putting them to much paine that are wounded or hurt thereby: but what help therfore? surely the very muddy slime that gathereth about the body of the same fish, is the onely remedy.

The Sea-calfe, otherwise named a Seale, hath a certaine greace, wherewith it is good to anoint the face or visage of those, whoby reason that they are bitten with a mad dog, are afraid to drink and cannot away with water: but it will worke the better, if there be mingled therewith the marrow of an Hyena, the oile of the Mastich tree and wax, that all may be reduced into a liniment.

As for the biting of a Lamprey, there is not a better thing to heal it than the ashes of a lampreys head. The Puffin likewise or Fork-fish, cureth the wound that himselfe inflicted; namely, if the place be annointed with his own ashes, tempered with vineger, or mixt with the ashes of any other fish. If a man would make meat of this fish, there ought to be taken out of the backe whatsoeuer is there found like to saffron: likewise the head all and whole would be taken away: and yet to maintain and keep the tast thereof, the same must be washed but a little and no more than all shell fishes, for otherwise all the pleasantnesse in the eating would be cleane gone.

The mischieuous venome of the sea-hare, [called otherwise Imbrago] is quenched cleane and mortified, by taking the flesh of the sea-Horse any way in drinke.

*Named after
ward Opossum
psum.

Against the poison of deadly dwale, the meat of sea-urchins is soueraigne: & whoeuer haue drunk the dangerous juice of * Carpasum, find much ease and help especially by supping their decoction. To conclude, the broth of sea-crabs likewise taken, is thought to be effectual against the foresaid dwale named Dorycnium.

CHAP. VI.

¶ Of oysters and Purple shell-fishes: of Sea-musse, or Reits: and the remedies which they afford.

Moreouer, Oysters haue a speciall vertue to resist the venome of the sea-hare. And albeit I haue written already of oysters, yet me thinks I cannot speak sufficiently of them, seeing that for these many yerres they haue bin held for the principal dish & daintiest meat that can be serued vp to the table. This fish loueth to haue fresh water, & joiet to be in those coasts where most riuers do run into the sea: which is the reason, few of them are found in the deep, called therupon Pelagia; and those thriue not, but are in comparision very small. Howbeit, they breed and ingender otherwhiles among rocks, & in such holes which want the recourse of sweet waters; as for example, about Grynna and Myrina. They wax big and full according to the encrease of the Moon, as I haue shewed already in my treatise of creatures liuing in waters: but principally about the spring prime, when they be full of a certain humour or moisture like vnto milk; and in those shallow places where the sun pearceth with his beams to the very bottom of the water. And this seemeth to be the reason, that in other coasts and parts of the sea, they bee found far lesse: for shade hindreth their growth, and for want of the cheerfull sight of the sunne, they haue lesse appetite to meat & feed not: moreover, this is to be noted, that oysters differ one from another in colour. In Spaine they be reddish, whereas in Sclauonia they be brown and dusky: but about the cape Circeij in Italy, their shell and flesh both, be blacke. In what coast or countrey soeuer they be found, the best and principall those are held to be, which be massie and compact; not glib and slippery without, with their owne humour and moisture: and rather bee they chosen which are thicke, than broad and flat: such also as bee taken neither in muddy nor yet in sandie places, but vpon the sound and firme ground in the bottome; hauing their white meat ruffed vp short and round, and not flaggie as flesh: the same not jagged and fringed about in the edges with smal strings, but lying all close vnited together as it were couched within the belly. They that be more expert and practised in the choice of oysters, adde one marke more to chuse them by, namely, if there be a purple thread or string that compasseth them about the edges: and by this signe they know the oysters of the best kind and race, from others, and call them by a proper name Calliblephara. Oysters delight (as I may so say) to trauell into strange quarters, to be transported from their naturall seat into other vnknown waters. Thus the oysters bred about Brindis, and remoued from thence to the lake Auernus; and beeing there fed, are suppo-

posed by that means to keep still their own natieue juice and humidity, and besides to gain nouriture by the moisture of Lucrinus. Thus much as touching the substance and body of Oysters: it remaineth now to speake of those parts and tractes where the best oysters are to be had; to the end that such coasts may not be defrauded of the honour due and appertaining vnto them. But of this point speake I will by the tongue of another, and alledge his speech who is thought to haue written hereof with best iudgement of any man in our time. These therefore bee the verie words of Mutianus, which I will put downe as followes: The oysters (quoth he) of Cyzicum taken about the straights of Callipolis, be the fairest of all other, and bigger than those which are fed or bred in the lake Lucrinus, sweeter than those of Brittain, more pleasant in the mouth than the Edulian, quicker in tast than those of Leptis, fuller than the Lucensian, drier than those of Coryphanta, more tender than the Istrian, and last of all, whiter than the oyster of Circeij: and yet there haue not bin found any oysters either more sweet or tender than these last named. The Historiographers who wrote of Alexanders voiaiges and exploits, haue left in writing, that within the Indian sea there be oysters found a foot long euery way. Moreover, there is among vs a certain Nomenclator or Controller belonging to one of our prodigall and wastfull spendthrifts here at Rome, who haue giuen a proper name to certain oysters, and termed them Tridacna: his desire was by that significant name, to expresse thus much, That they were so big as that they would make three good bits or mouths-full a piece.

Now proceed I will to their medicinable vertues, & before I go any further, in this very place set down how far forth they serue in physick. First and formost, they be the only meat to comfort and refresh a decayed stomack: they recouer an appetite that was cleane gone. But see the practise of our delicat wantons! to coole oysters forsooth, they must needs whelm & couer them all ouer with snow; which is as much as to bring the tops of mountaines and bottom of the Sea together, and make a confused medley of all. This good moreover do oysters, that they gently loose the belly, and make a body soluble: seeth the same with honied wine, they cure the Tisicne, which is an inordinat and bootlesse desire to the stoole without doing any thing, especially if the tiwil (which is the place affected) be not exulcerat: oysters likewise so prepared, cleanse and mundifie the vlcers of the bladder: eat them in their shel with their water, as they came clofed and shut from the sea, you shall find them wondrous good for any rheumes or distillations. The ashes of an oyster shell calcined, and incorporat with honey, be singular for the paine of the vula, and assuage the inflammation of the tonsils: semblably, they repress the swelling kernels that rise vnder the ears, assuage the biles and botches called Pani, mortifie the hard tumours of womens breasts, and heal the fores or scalls of the head, if they be applied accordingly with water: and in the same order prepared, they rid away wrinkles, and make womens skin to lie smooth and euen. These ashes are a soueraigne powder to be cast vpon any place that is raw, by reason of a burne or scalding: and the same is commended for an excellent dentifrice to cleanse & whiten the teeth withall: temper the said ashes with vineger, it killeth the itch, and healeth angrie wheales; the small pocks also and meazils. Oysters punned raw and reduced into a cataplasme, heale the kings euill and kibed heels, if they be applied accordingly.

Moreover, the Shell-fishes called Purples, are very good against poison.

As for the reits Kilpe, Tangle, & such like sea-weeds, Nicander saith, they are as good as treacle. Sundry sorts there be of these reits, going vnder the name of Alga, as I haue already declared: some are long leaved, some large; others of a reddish colour, and some haue curled and jagged leaves: the best simply of all others, be they of the Island Creta, which grow near the ground vpon rocks; and namely for to dye wooll & woollen cloth; for they set so sure a colour, as neuer will shed or be washed off afterwards. Nicander giueth direction, to take the said treacle in wine

CHAP. VII.

¶ Medicines against the shedding of haire. For to colour the haire of the head. Also against the accidents of the eares, teeth, and visage.

If by occasion of some infirmity the haire be fallen off or grow very thin, the ashes of the fish called the Sea-horse, mingled with sal-nitre and swines grease, or applied simply with vineger, replenish the bare places with new haire, and cause it to come vp thick again: and for to apply such medicines for this purpose, the powder of a cuttle bone prepareth the skinne well beforehand.

Maris marini hand. Also the ashes of the sea-Tortoise incorporat with oile of a sea-vrchin likewise burnt and calcined flesh and all together as also the gall of a scorpion, be appropriat medicines to recover haire that was lost. In like maner take the ashes of 3 frogs burnt together aloue in an earthen pot, meddle them with hony, it is a good medicine to cause haire to grow: but the operation will be the better, in case the same be tempered with liquid pitch or tar. If one bee disposed to colour the haire of the head black, let him take horse-leeches which haue putrified and been resolved together in some grosse red wine for the space of 60 daies, he shall find this to be an excellent medicine. Others there be who giue order, to put as many horse-leeches as a sextar will hold, in two sextars of vineger, and let them putrifie within a vessell of lead as many daies together, and when they be reduced into the form of a liniment, to annoint the haire in the sunshine for the same purpose. And *Sornatius* attributeth so much power vnto this composition, that vnlesse they that haue the annointing of the haire with it hold oile in their mouths all the while, their teeth also (by his saying) who haue the doing of it, wil turn black. The ashes of Burrets or Purples shels incorporat in hony, serue passing well in a liniment to heale scald heads: and the powder of the foresaid fish shels (although they be not burnt and calcined) tempered with water, is as good for the head-ach. Of the same operation is Castoreum, incorporat with Harstrang in oile rosat. The fat or grease of all fishes whatsoever, as well those of the sea as riuers, beeing dissolved in oile and tempered in honey, is soueraigne for to cleare the eyes: and of the like effect is Castoreum applied with hony. The gal of the fish Callionymus, healeth the cicatrices or scars that ouergrow the skin about them: and the same eateth & consumeth the excrecence of superfluous flesh in the corners of the eies. And verily there is not a fish that hath more gall than it, as testifieth *Menander* the Poet in his comedies: the same fish is otherwise called **V-ranoscopus*, by reason of the eies which he hath in the vppermost part of his head. Semblably the gall of the black fish *Coracinus* quickneth the eie-sight. Also the gall of the reddish sea-scorpions, mixt with old wine or the best hony of Athens, serueth to discusse the filmes of the eies like to breed a cataract: and thrice must the eies be annointed therewith, letting a day goe euer betweene. The same cure serueth likewise to take away the pearle in the eie. As for Burrets, it is commonly said, that if one do feed ordinarily vpon them, hee shall sensibly feeble his eies to decay and wax dim thereby. The sea-hare it selfe verily is venomous; but the ashes keep the disorderly and hurtfull haire of the eie-lids from growing any more, if they be once pluckt vp by the roots: and for this purpose, the least of this kind are the best. In like manner, the little Scallops kept in salt, and stamp together with the rosine or oile of cedar: the small frogs likewise which vsually they call *Diopetes* and *Calamitæ*, haue the like effect to hinder the coming vp of hairs in the eielids, after they be once pulled vp; in case their bloud be tempered with the gum of the vine-tree, and therewith the edges of the said eie-lids be annointed. The swelling and rednesse of the eies is by nothing better delaid and discussed, than by a liniment made of a cuttle bone puluerized and mixt with womans milk. And in very truth, the said cuttle bone simply by it selfe, cureth the asperity and roughnesse of the said eie-lids. But to worke this cure, the chirurgeon vseth to turne vp the said eie-lids, and to apply therto the medicine, which he suffereth not to stay there long, but taketh it away within awhile: he annointeth the place also with oile rosat, and ouer night laieth thereto white-bread crums [with breist milke] for to assuage the paine. The selfe same shell or couer of the cuttle-fish beaten to powder and brought into a liniment with vineger, cureth those who can see neuer a whit towards night. The ashes of the sayd cuttle-bone draw forth the scales or films which grow in the eies: the same incorporat with hony, heale the skars of the eies, but tempered with salt or brasse-ore, of each one dram, they rid away the pin and web growing in the eie: the same help horses of the haw that offendeth their eies. Some say moreover, that the little bones within the cuttle, if they be stamped to powder with vineger, taketh away the accidents of the eies called *Epinyctides*. The Magitians giue direction to burne the same with vipers skins and frogs, and to spice the drink with the ashes that come thereof, assuring those who vse to drink the same, that they shall haue a very cleare sight. [A fish there is named *Ichthyocolla*, which hath a glewfish skin, and the very glue that is made thereof, is likewise called *Ichthyocolla*. The same glue taketh away the night-foes, commonly named in Greeke *Epinyctides*. Some affirm, That the said glue *Ichthyocolla* is made of the belly and not of the skin of the said fish, like as Buls glue. This fish glue is thought to be best that

* Looking
vp to heauen

A is brought out of Pontus: the same also is white without any veines, strings, or scales; and verie quickly melteth and resolueth. Now the same ought first to be cut or shred small, and then to lie infused or in steep a whole day and a night in water or vineger, which done, to be panned and beaten with the pebbles found about the sea-shore, that the same may the sooner mele and dissolve. This glue thus ordered, is held to be soueraigne for the head-ach; and a good thing to enter into those medicines or compositions which are deuised to smoothe the skin & rid away the wrinkles. Take the right eie of a frog, lap it within a piece of selfe russet cloth (such as is made of black wooll as it came in the fleece from the sheep) and hang it about the neck, it cureth the right eie, if it be inflamed or bleared. And if the left eie be so affected, do the like by the contrary eie of the said frog, &c. Now, if it were possible to pluck out these eies as the frog is ingendering, it would heale also the white cicatrices or scars in the eie, if it were hung about the necke of the patient in like sort within an egge-shell. The rest of the frogs flesh applied to the eie, sucketh out and consumeth the bloud that is congealed vnder the tunicles of the eie, and lies there black and blew. They affirme moreover, That the eies of a crab or craifish being hanged about the neck, are a soueraigne remedy for bleared eies.

A little frog there is, delighting to liue most among grasse & in * reed plots: mute the same is and neuer croaketh, green also of colour: if kine or oxen chance to swallow one of them down with their grasse, it causeth them to swell in the belly, as if they were dew blown. And yet (they say) that if the slime or moisture wherewith their bodies be charged outwardly, be scraped off with the edge of some penknife, it clearerth the sight, if the eies be annointed therewith. As for the flesh it selfe, they lay it vpon the eies for to mitigat their pain. Furthermore, some there are who take 15 frogs, pricketh them with a rish, & draw the same through them, that they may hang thereto; which done, they put them in a new earthen pot: and the humour or moisture that passeth from them in this manner, they temper with the juice or liquor which in manner of a gum issueth out of the white wine Brionie, wherewith they keep the eielids from hauing any haire growing vpon them. But first they pluck vp those disorderly haire which grew there to offend and hurt the eies: & with a fine needle point drop the foresaid liquor into the very places where the haire were fetched out by the roots. *Megetes* the Chyrurgian deuised another depilatory for to hinder the growing of hairs, made of frogs which he killed in vineger, and permitted them therein to putrifie and resolve into moisture: and for this purpose his manner was to take many fresh frogs, euen as they were ingendered in any rain that fel during the Autumne. The same depilatory effect, the ashes of Horse-leeches are supposed to haue, if they be reduced into a liniment with vineger, and vsed accordingly: now must they be burnt and calcined in a new earthen vessel that neuer before was occupied. And of the like operation is the liuer of the sea-fish *Tænia*, if the same be dried, and thereof the weight of foure deniers Romane incorporate in oile of Cedar to the forme of a liniment, for to annoint the haire of the eie-lids by the space of nine moneths together.

The fresh gall of a Ray or Skeat, yea, and the same preserved and kept long in old wine, is an excellent medicine for the eares: so is the gal likewise of the fish * *Bancus*, which some call *Myxon*: also of *Callionymus* the fish aforesaid, if it be dropt into the eares with oile rosat: semblably Castoreum with the juice of Poppie. There be also in the sea certaine creepers ingendered, called *Pedunculi*, i. sea-lice, which being stamped and tempered with vineger, they giue counsell to drop into the eares. Also a lock of wooll died in the bloud of the purple shell-fish *Conchylium*, of it selfe alone is a very good thing to be applied to the eares: howbeit, some doe wet the same in vineger and salniter mixed together. But the soueraigne remedy in the opinion of most Physitians for any grievance and infirmity of the eares, is this, namely, *Recipe* of the best fauce or pickle called *Garum Sociorum* that may be gotten, one cyath, of hony one cyath and an halfe, of vineger one cyath, seeth them all together gently ouer a soft fire in a new pot, eftsoo skimming it in the boiling with a feather, and when it hath left casting vp a scum and is sufficiently purified, take it from the fire: and of this decoction warm drop into the pained eares. If the eares be swelled withall, they ordain and prescribe to mitigat & assuage the same first, with the juice of Coriander. The fat of frogs dropt into the eares, allaieth their paine presently. The juice or decoction of craifishes incorporat with fine Barly meale, is a singular and most effectual salve to heale the wounds of the eares. As for swellings and inflammations rising behind the eares, there is not a better thing to cure them, than to apply therto the ashes of Burrets shels tempered with hony,

* *Calamitæ*

* *ganchi*, some
reade *Bacobi*.

hony, or of the Purples Conchylia, with honied wine.

If the teeth ake, the ready means to assuage them, is to scarifie the gums and let them bloud with the sharp bones of the sea-dragon: and withall, to make a collution with the brains of the sea dogfish boiled in oile and faued for the purpose, to wash the mouth and teeth therewith once in a yere. Likewise in the pain of the teeth, found it is most souveraigne to scarifie the gums with the prickly bone or fin of the Puffin or Forkfish, vntill they bleed againe. The same also being puluerized, brought into a liniment with white Ellebore, and applied to the teeth, causeth them to fall out of the head without any great paine. Moreouer, the ashes of salt fish burnt in a new earthen vessell, and mixt with the poudre of the marble stone, is reckoned among the remedies for the teeth. In like maner the quadrants or square cantons of the old Tuny fish, burnt to a cole in a new earthen pan, and afterward beaten to poudre, are thought to be good for the tooth-ach.

Of the like operation and effect (they say) be the pricks and fins of all kindes of salt fish, if they be first burnt to a coale, then puluerized, and therewith the teeth well rubbed. Furthermore, to make a collution to wash the teeth withall, and to hold the liquor in the mouth, some seeth frogs in vineger, with this proportion, that to euery frog they take one hemine of vineger. But because many a mans stomack lothed & abhorred such a medicin, *Salustius Dionysius* found the means to hang many of them by the hinder legs ouer the vessell or pan of seething vineger, that out of their mouth there might fall the humor within their bodies into the said vineger. But to those who had good stomacks & were of stronger complexions, he prescribed to eat the very frogs broth & all wherein they were sodden. And in very truth, many are of this opinion, that if the grinders and great jaw teeth do ake, this is a speciall medicine for them, but in case they be loose in the head, then the best way to confirm and set them fast, is a collution with the vineger aforesaid. And for this purpose some there be, who after they haue cut off the feet of 2 frogs, lay their bodies to infuse and steep in one hemine of wine, and so aduise their patients to wash their vnsteady teeth with the said infusion. Others apply them whole as they be, legs and al outwardly to the chawes, and keep them fast thereto. Whereas some again seeth ten of them in 3 sextars of vineger, vntill a third part of the liquor be consumed, and with this decoction thinke to fasten the teeth sure that shake in their sockets. Moreouer, others you shall haue who take the hearts of 36 frogs, and bake or boile them in one sextar of old oile vnder a pan or ouen of brasse; the graue or liquor whereof they poured into the eare of that side where the cheek or jaw doth ake: whereas many others besides seeth the liuer of a frog, and when they haue stamped and incorporat it with hony, put it into the hollow teeth, or apply it thereto. But all these medicines abovesayd you must thinke to be more effectually, if they be made of sea-frogs. Now if the teeth bee worne eaten and stinke withall, they giue order to dry a hundred of them in an ouen all night long: afterwards to put vnto them as much salt in proportion as they come to in weight, and therewith to rub the said faulty teeth. There is a kind of serpent or water-snake called in Latine Coluber, and of the Greeks Enhydri: diuers there be, who with foure of the vpper teeth of this serpent, scarifie the gums of the vpper chaw, in case the teeth therein do ake: and semblably with foure of the nether teeth, if the other bee in paine: and yet some there bee who content themselves with the eye-rooth onely. They vse also the ashes of Sea-crabs, and no maruell: for the ashes of Burrets is a dentifrice well knowne for to keepe the teeth cleane, and make them neat and white.

The fat of a sea-Casse or Seale taketh away the foule terrors called Lichenes, and the filthy leprosie: so do the ashes of Lampreys, if the same be incorporat with hony to the weight of 3 oboli. The liuer also of the Puffin boiled in oile. Finally, the ashes of a sea Horse and a Dolphin mixt with water, so that the part affected be well rubbed withall vntill it blister. Now, when it is thus exulcerat, it must be followed with that manner of cure which is appropriat thereto, and namely, vntill it be healed and skinned againe. Some take the liuer of a Dolphin, and fry or torrefie it in an earthen pan, vntill there come from it a kind of greafe in manner of oile, & therewith annoint the patients in the cases abovesaid.

If women desire to be rid of the foule freckles, spots, and morpew that do injury vnto their beautie, if they would looke young, and haue their skin plump and void of all riuels, let them take the ashes of Burrets and purple shells calcined, incorporat the same with honey into the form of a liniment: within one weeks space if they ply it with annointing, they shal see the effect thereof; namely, the skin cleare and neat, euen and smooth without wrinkles, & the cheekes

not

not hollow, but faire and full. Mary vpon the 8 day they must not forget to foment and bath the place with the white of an egge wel beaten. Among the kinds of Burrets called Murices, are to be ranged those shell-fishes which the Greeks some call Colycia, others Corythia, shaped in the shell like to the rest in manner of a turbant, but that they be far lesse, howbeit more effectually: for that besides the other properties abouenamed, this speciall gift they haue, to maintaine a sweet breath. As for the fish or glue called Ichthyocolla, it hath vertue to lay the skin euen without riuels, and to make it rise and appear firm, but then it ought to boile in water the space of 4 houres, afterwards to be stamped, strained, and wrought to the liquid consistencie of hony and no more. Thus prepared, it must be put vp into a new vessell neuer occupied, & there kept. When time serues to vse it, to euery 4 drams weight thereof proportion two of brimstone, of Orchanet as much, of litharge of siluer 8 drams: put them all together, and stampe them, with some sprinkling of water among. Herewith let the face bee annointed, and after foure houres wash it off againe. For the spots and pimples in the face, called Lentils, as also for all other deformities, the ashes of Curtill bones are thought singular, if the skin be rubbed therewith: and the same consume the excrescence of proud and rank flesh, like as they dry vp any moist and rheumaticke vlcers.

CHAP. VIII.

¶ *Diners receipts, set downe disorderly one with another, for sundry maladies.*

One Frog boiled in five hemines of sea-water, is singular to cause the scurfe of the mange or wild scab to fall off: but sodden so long it must be, vntill the decoction bee risen to the height of hony.

There is ingendred in the sea also that which is called Halcyoneum, made as some thinke of the nests of the birds Halcyones and Ceyces: but as others suppose, of the filthy some of the sea thickened and indurated: and according to the opinion of some, it proceedeth from the muddie slime or a certaine hoary dry scum or froth of the sea. Foure kinds there bee of it. The first of an ash colour, thick and massie, of a quick and hot smell. The second is soft and more mild, favouring in manner like to sea weeds. The third resembleth the whiter kinde of chequer worke in marquettry. The fourth is more hollow and fuller of holes in maner of a pumish stone, & in that respect resembleth a rotten sponge, inclining much to the colour of purple: and this is simply the best, called also by the name of Halcyoneum Milesium; yet in this kind the whiter that it is the worse it is to be liked. The property of them all in generality, is to exulcerat and mundifie. Vsed they are being torrifed, euen without any oile. Wonderfull is their operation, if they bee tempered with Lupines, and the weight of two oboli in sulphur, for to take away the wilde scab or leprosie, the foule terrors Lichenes, and the pimples or spots of the skin called Lentils. Halcyoneum also is commonly emploied about the scars or thick filmes appearing in the eyes. Andreas the Physitian vsed much the ashes of a sea-crab incorporat with oile in curing the leprosie. *Astalus* occupied as vsually the fat of a fresh Tuny, new taken, for the healing of vlcers. The pickle of Lampreies, together with the ashes of their heads calcined, and brought into a liniment with hony, healeth the kings euill. And many are of opinion, that to prick the wenches named the Kings euill aforesaid, with the small bone or pricke that sticketh in the taile of that sea fish which is called *Rana marina*, with this gage and rule of the hand that it wound not deep, is very good for that disease: but the same must be done euery day vntill they bee thoroughly cured and whole. Of the same operation is the sharp prick in a Puffen: of the sea-hare also applied to them, so as neither the one nor the other be suffered to lie long to the place, but bee soone renewed. Also the shelly skin of the sea-Urchin stamped to poudre and brought into a liniment with vineger: as also the ashes of the sea Scolopendre incorporat with honey: and the riuier crai-fish either puluerized or calcined, and the dust or ashes thereof likewise tempered with honey, are good to be applied to the same disease. Wonderfull effectually be the bones also of the curtill fish beaten to poudre, and with old swines greafe brought into the form of a liniment: and in this manner they apply this medicine to the tumors behind the eares: like as the liuers of the sea fish Scarus. Moreouer, the sheards of such earthen vessels wherein salt fish was poudred & kept, beaten to poudre, & tempered with old swines greafe: the ashes also of Burrets shells incorporat in oile, serue in right good stead for the swellings behinde the eares, and the tumors or wenches called

¶ The Frenchmen terme it *Diable de mer*, i. the diuell of the sea.

¶ *Exusta, not Rusta, according to Galen.*

called the kings euill. The stiffe cricke in the neck is mollified and made pliable againe, so as it G
may turne which way a man would haue it, with drinking of one dram weight of those creepers
or insects which be called sea-lice; and yet some take for the same Castoreum in honied wine,
adding thereto a little pepper, and drinke this composition in the broth of frogs boiled in oyle
and salt. After which manner, many Physitians cureth the crampe that draweth the neck back-
ward: the generall conuulsion also that stretcheth the body so, as if it were of one piece: and o-
ther particular spasmes and cramps of any part, so there be some pepper put thereto. The ashes
of salt Cackerels heads burnt and reduced into a liament with honey, discusse and resolueth the
Squinancy cleane, like a, the broth of frogs boiled in vinegar; and the sayd broth is singular al-
so for the inflammation of the tonsils. The Creisfishes of the riuer dried and beaten to powder, H
then put into water (so as there be to euery one a hemine of water) make a good liquor to garga-
rize withall for the squinancy. The same also drunke in wine or hot water, worke the like effect.
The sauce made of Maquerels called Garum, put with a spoon vnder the uvula, and there held a
while, putteth it vp, and reduces it again to the right place. The fish * Silurus eaten at the table
either fresh or powdered, helpeth the voice much. The barbels kept vntill they be dried, & then
puluerized, prouoke vomit, if a cup of drinke be spiced with the powder. If a man or woman be
short winded, there is not a medicine again so good to helpe that difficulty of breath, as to drinke
whiles they be fasting, Castoreum, with a little quantity of Ammoniack in honied vinegar. The
same potion taken likewise with honied vinegar hot, allaieth the conuulsion of the stomack pro-
ceeding from excessiue yexing or hiccups. Item, it is said, that Frogs boiled in some broth be-
tween two platters after the manner of fishes, are good, for a cough: and beeing hanged by the
heeles, after that their saluation and humidity is dropt from them into a pan or platter vnder-
neath, they are to be rid of their garbage, & when the same is flung away, they ought to be kept
and preferred for the purpose aforesaid. There is a little Frog that vseth to climb trees, & from
thence crieth and croaketh: if a man spit into the mouth of one of them, & then let her go again,
it is thought hee shall bee deliuered by that meanes from the cough. To conclude, many giue
counsell for the cough that bringeth vp bloud withall, to drinke in hot water the flesh of a raw
perwinckle well punned.

CHAP. IX.

¶ Proper receipts for the accidents of the Liver and the Sides : for the infirmities also of the Stomack and Belly. Besides other medicines huddled together confusedly.

MAny vse to suffocate and kill in wine a sea Scorpion, and to drink thereof for the paine of the liuer. For the same purpose many are wont to take in honied wine and water of each a like quantity, the flesh of the long muskles or shell fishes: or if they haue a feuer, in honied water. In case of pleurisie or paine of the sides, the flesh of the sea horse roasted, eates the same: so doth the fish Tethea, which resemblesh an Oyster, taken as meat. I the pickle of the fish Silurus injected by way of clystire allaieth the paine of the sciatica. To the like effect there are giuen for 15 daies together, Cockles, or Muskles, to the weight of 3 oboli infused in two sextars of wine. The broth of Silurus softneth the belly: like as the crampefish Torpedo, eaten as meat. The * sea-wort is like to that of the garden, hurtful to the stomach, but most easily it purges the belly. In regard of the acrimony that it hath, they vse to seeth it with some fat flesh. The broth of any fish whatsoever is laxatiue: the same prouokes vrine, especially if it be made of wine. The best fish broth comes from the Sea Scorpions, and those which they call Iulides: of stonefishes also that keep about rocks, and haue no rank or strong taste; and such must be sodden with dill, parsley, coriander, and leeks, putting thereto oile and salt. The Squares also or cantons of the Tunie, that haue bin old kept, are purgatiue, for particularly they euacuate crude and waterish humors, besides flegme and choler. The shell-fishes also named Myaces, haue a quality purgatiue: as touching whose nature I purpose to write fully in this very place. They gather together by heaps after the manner of Butrets; they liue in places giuen to breed reits and sea mosse; most delicate and pleasant meat they be in Autumne, & especially in those coasts where good store of fresh water is intermingled in the sea, which is the reason that those of Ægypt bee most commendable: as winter grows on, they begin to gather a kind of bitteresse, & a red colour besides. The

*Olive mariner: haply he meaneth *Brassica marina*, i. *olustanella*, yet it is nothing like to our Colewort

A The broth of these fishes hath the name to euacuat both the belly & bladder, to scour & mundifie the guts, to open any obstructions whatsoever, to purge the reins, to take down the rankness of blood and fat. In which regards they be soverain for the dropsy, for the monthly termes of women, the jaundie, all gouts and dileases of the joints whatsoever, and ventosities. Singular they are holden to be for to cleanse the humors either cholerick or phlegmatick, which annoy and stuffe the lights, or which ingender obstructions about the liuer: likewise to cure infirmities of the spleen, and all rheums or descent of humors to any place. Only they be hurtfull to the throat, and make a man to lose his voice, this is all the harm they do. The vlcers that corrode, and be full of filthy matter, and require mundification, they heal: so do they all cankerous sores. Being calcined after the order of Burrets, they cure the biting both of dog and man, if their ashes be incorporat in hony: and so they cleanse the leprosie, and rid away the pimples or spots in the skin called Lentils, Their ashes * taken in drinke, haue a vertue to discusse the dimnesse and mistinesse of the eie-sight, to cure the accidents of the gums and teeth; and besides, to drie vp the small pocks and such like breaking out of wheals by occasion of flegm. Moreover, they are as good as a counterpoison against the iuice of the deadly Dwale called Dorycnium, or of Carpasum, which is commonly named Opocarpasum. Besides, this would be noted, that they grow all to be of two kinds of them; the one * Mituli [*i. Limpins*] which haue a raste of salt, & cary a strong fauor; the other * Mysæ, which differ from the other in roundnesse: lesse also they be a good deal, and hairy: and as their shels be thinner, so their flesh is more firm and hard. The said Limpins also, as well as Burrets, yeeld ashes when they be calcined, which haue a caustick quality, whereby they serue properly to mundifie the skin from leprosie, lentils, and other pimples and ifsauored spots. The same being washed after the maner of lead, be singular for to subtiliat the thick eie lids, to scatter and discusse the pearls in eies, to dissipat the cloudy & misty dimnesse, to cleanse filthy vlcers in any part of the body, and namely the puthes and blisters that arise in the head. As touching the flesh that they haue, it serueth in a cataplasme to be laid vnto the biting of mad dogs. The Palours also do soften and mollifie the belly: so doth Castoreum, being drunk to the weight of two drams in honied water. They that would haue this medicine more quick in operation, and to work thoroughly, put thereto of the garden cucumber root dried one dram, & of salt-petre two drams. As for the fishes named Tetheæ, they are singular against the wringing torments [and gripings] of the belly and all ventosities. These fishes be found ordinarily about the rocks of the sea, sucking the leaues of Keits and such like weeds, more like indeed to Mushrooms and Puffes, than to fishes. But the same haue a special propertie to cure the Tinefme and the accidents of the kidnies.

* *Potius*, rather
illitus, & is
brought into
liniment, & is
used outwardly.
* *Salem*. Some
read *Scilla*.
i. sea Onion or
Squilla.
* *Muskles*.
* *Haply Coc-*
cles.

Moreover, there grows in the sea a kind of Wormwood, which some call Seriphium, and principally towards * Taposiris in Egypt, the which is more smal and slender than that of the land: it loofeth the belly, killeth the worms in the guts, and expelleth them. The Cuttil fish also is laxative: and ordinarily giuen it is to be eaten, after it hath bin sodden with oile, salt, and meal. Salt Cackerels likewise prouoke vnto the stoole, in case they be reduced into a liniment with blurs gall, and therewith the nauil anointed. Generally, the broth of fish stewed betweene two platters with Lettuce, dispatcheth those sharp and fretting humors which are the cause of the Tinefm. Crafishes of the riuier stamped and drunk in water, stop a lask, and be diureticall. But yet in wine they moue appetite to the siege. Take away their feet and armes whereby they crawl, then pun and incorporat the reft of their body with Myrrh, they driue out the stone. But this proportion must be obserued, that to euery dram weight of them there be put three oboli of Myrrh.

* Таблица 2:

To appease the painfull passion called Iliaca, to allay and resolve ventosities also and inflammations, there is not a better thing than to take in 4 cyaths of mead or honied wine hot, Castoreum, with carot and parsl seed, as much as may be comprehended with 3 fingers. The same is singular to allay the wrings and torments of the belly, with vineger & wine mixt together. The fishes named Erythini eaten as meat, stay the loosnesse of the belly. For to cure the dysenterie or bloody flux, seeth frogs with the sea onion commonly named Squilla, and thereof make certain trochisks to be given to the patient in that case. The same effect hath their gall or heart stamped and incorporate with honey, as *Niceratus* myne author doth testifie. Eat salt fish with Pepper, so as you abstain from all flesh besides, if you would be cured of the jaundise. Lay the fish named a Sole to the region of the spleene, it doth cure the oppilation and hardnesse thereof.

of:

of: so doeth the cramp-fish Torpedo: and a Turbet in like manner, being applied alive; but afterward you must let it keepe againe into the sea. A sea scorpion killed in wine healeth the infirmities of the bladder; is breaketh and expelleth the stone. The same effect hath the stone which is found in the tail of a sea scorpion, if it be drunk to the weight of one obolus: the liuer also of the water-snake Enhydriis, and the ashes likewise of those kind of Mulletts called Blennij, if they be taken with Rue. Moreouer, there be found also in the head of the fish Banchus, certain little stones as it were, which if they be drunke in water, are soueraigne for them which be troubled with the gravel and the stone. And it is commonly said, That the sea fish called a Nettle taken with the gravel and the stone. And it is commonly said, That the sea fish called a Nettle taken in wine, is very good therefore: like as another named in Latine Pulmo Marinus, boiled in water. The eggs of spawne that the Cuttill fish doth cast be diureticall, and prouoke vrine, whereby also they cleanse the kidnies from the phlegmatick humors there gathered. Riuer crabs or crabs fishes stamped and taken in asses milke especially, doe cure ruptures and inward convulsions. And as for sea Vrchins, if they be stamped prickes and all, and so drunke in Wine, they expell stone and gravel: but to euery Vrchin there must be taken one hemine of Wine, and the Patient ought to drinke it continually vntill he find help: and otherwise their meat is good to be eaten ordinarily for this purpose. To feed also vpon Cockles and Scalops is wholesome for to scour the bladder. Of these shell-fishes those of the male sex be called by some Donaces, by others Auli, whereas the female are named Onyches. The male do prouoke vrine, but the female are the sweeter in tast, and of one colour. The eggs or spawne also of the Cuttill fish moue vrine, as the hath bin said before, and purge the reins. For that rupture wherein the guts fall downe into the cods, it is said, That the sea Hare punned and applied to the place in form of a cataplasme with hony, is singular to reduce them vp into their place. The liuer also of the water-snake or adder, called otherwise Hydrus or Enhydriis, beaten to powder and put in drinke, helpeth those that be giuen to breed the stone and gravel. The pickle that comes of the fish Silurus salted, infused or injected by a clistre into the guts, so that the belly were before emptied from the grosse excrements, cureth the Sciatica. The ashes of Barbles and Mulletts heads calcined, heale and skin vp the galls and frets of the fundament. Now the manner of burning or calcining them is in an earthen pot: and reduced they ought to be into a liniment with hony, before the place be there-with anointed. The ashes also of Cackerels burnt do cure and close vp againe the chaps in the seat: which also are good for the swelling piles and bigs in those parts: Like as the ashes of the tyong Tunies heads salted, called Pelamides: or the Squares named Cybia, with hony. If the tyong will be slipped down and ready to hang out of the body, apply thereto the cramp fish Torpedo, it presently reduceth it and staieth it vp. The ashes of craiffishes brought into a liniment with oile and wax, healeth the chaps and fissures in those parts: so doth the fine powder of the Sea-crab dried and puluerised. The pickle also of the fishes Coracini discusseth and resolueth the biles called Pani. The same effect work the ashes of the garbidge and scales of the shadow-like Sciatha. The sea Scorpion also boiled in wine, so that the said biles or impostumes be fomented therewith: But the hard and shell-like skins of sea Vrchins being wel stamped, and with water brought into a liniment, keepe the said biles downe and repercusse them in the beginning. The ashes likewise of Murrets or Purple fishes serue both waies, whether it be needfull to discusse them in the beginning, or to ripen them, and after they be brought to maturation, for to break them and let them forth. Some physitians for this intent compound a medicine or ointment in this maner: *Recipe* of wax and flax 20 drams, of litharge of siluer forty drams, of Burrets ashes ten drams, of old oile one hemin, *fiat unguentum*. The very fishes alone by themselves, salted, foddren, and so applied, serue in this case. Craiffishes of the riuers punned into a cataplasme and applied vnto the secrete parts, resolute & discusse the puihes that there arise: so do the ashes of Cackerels heads: their flesh also boiled and laid to the place affected. In like manner, the ashes of Perches heads salted and reduced into a salve with honey. The ashes of yong Tunies heads, whiles they are Pelamides, or the rough skin of the fish called * Squatina, burnt. This is the skin which, as I said before, is proper to polish wood and make smooth any workes made thereof: whereby you may see, that euen the sea also doth afford instruments to fit the Joiners and Carpenters hand. The small fishes named Smarides applied vnto the puihes of the sayd priuy parts in the forme of a liniment, do much good. As also the ashes of Burrets or Purples shells incorporate with honey: and the same would be more effectuell, in case that the Fishes bee burned whole, shell, fish and all. Salt fish foddren in honey, and applied, serueth particu-

* Some take it for a Sole, others for a Skate.

larly to extinguish the heat of carbuncles & botches in the said secrete parts. If one of the cods hang down flaggung vnseemely lower than his fellow, some would haue it annointed with the troth that cometh from shell-snails or periwinkles. The flesh of the sea horse roasted, helpeth them that cannot hold their vrine, in case they vse ordinarily to eat therof: likewise the little fish called Ophidion, so like vnto a Congre, if it be taken with a Lillie root. The small fishes found in the bellies of the greater who haue deuoured and swallowed them down, taken forth & burned to ashes, are good in this infirmity to be drunk in water. The ashes of shell-snails, meat and all, burnt, are prescribed by some physitians to be giuen in Signine wine against incontineney of vrine, but principally of Barbary snails. For the gout in the feet, & the diseases of other ioints, the oile wherein a frog was boiled, is soueraigne: so are the guts of the said frog, and the ashes of a toad incorporat with old oile: some put thereto the ashes of all the three kinds of barley, of each an equal weight. And they giue direction to rub also the goutie feet, with a Sea-hare: also to be shod with the skins of Beuers, especially those which are bred in Pontus: like as to wear shoes made of Seals skin: the fat of which fish, is likewise very good. Also the sea-mosse or reits called Bryon, like to lettuce, but that the leaues be more riueled, and grow to no stalke; whereof I haue written heretofore: of a styprick and astringent nature it is; no maruell therefore, if being applied vnto the gout, it mitigat the fury and violence thereof. Moreouer, the common sea-weeds named Alga, of which also I haue treated already; but this caution there would be in the application thereof, That it be not dry. The sea fish called Pulmo-Marinus, cureth the kibes in the heels: the ashes also of the sea-crab, tempered with oile: yea, and the riuer-crabs or Creiffishes burnt and calcined to ashes, if the same be incorporat with oile: like as the fat of the fish Silurus. Moreouer, if other ioints be diseased, it were very good for the easement of their grieffe, effsoons to lay thereto frogs, fresh and new taken: may the best way, by the direction of Physitians, is to split them through, and so to apply them warme. The broth of Limpins, Mussels, cockles, and Wilkes, is very nutritiue, and maketh them fat that vse it. Those that be subject to the falling sicknesse, vse ordinarily (as hath bin said before) to drinke the rennet of the Seale or Seacalf, either with mares milke or asses milk, or els with the juice of the pomgranat: and some are wont to take it in oxymell or honied vinegar: and yet there be others that swallow the same downe by it selfe in forme of pills. And for the same purpose, Castoreum is usually giue vnto such patients fasting, to be drunke in 3 cyaths of honied vinegar or oxymell afore said: but those that effsoons be surprized with the fits, and oftentimes fall thereof, find wonderfull much good by this clistre following: Take of Castoreum two drams, of honey and oile one sextar, and of water as much. But say that one be presently in a fit, the ready meanes to raise him and set him vpright vpon his feet again, is to present vnto his nostrils Castoreum with vinegar, for to smell vnto. The liuer also of the fish named the Sea-cat or Weazill, is giuen in like case: euen as the blood either of Sea-mice or Tortoises.

CHAP. X.

¶ Remedies for feuers of all sorts: also for diuers other infirmities.

THE liuer of a Dolphin eaten before the accesse, cureth all those agues which be not continually, but returne by fits and keep their course. Oile rosat wherein the fishes called Seahorses were suffocated and killed, is singular good to annoint those that be sicke of such agues as come with a cold fit: and the very fish it selfe is most effectuell to rid away the same, in case it be hanged about the necke, or to the arme of the patient. Semblably, the little stones which are found in a Haddocks head at the full of the moone, if they be taken forth and hung about the patient, lapped handfomly in a little linnen bag, serue to drive away such feuers. Moreouer, it is said, that the longest tooth in the head of a riuer Fish called Pagrus, tied to one of the hairs of the patients head, so as he do not see the party who fastened or hung it therto, in 5 daies space will doe the deed: as also the oile wherein a frog hath bene boyled in some carrefour or croffe street turning three waies, cureth those who are sicke of a quartane ague, if they be all ouer annointed therewith; provided alwaies, that the flesh be first throwne away. And yet some ordaine, that they should be strangled or stifled in oile, and then the bodies hung priuily about some part of the patient without his knowledge, and that he be afterwards well rubbed and annointed with the foresaid oile. If one carry about him the heart of a frog either hanging by his necke

But the hollow fores commonly knowne by the name of Fistuloes, are enlarged, kept open, yea G and brought to drines, with tents made of saltfish conueied into them within fine linnen rags: and within a day or two at most, they will rid away all the callositie, together with the dead and putrid flesh within the fores, yea and repress the eating and corrosiue humor in them, if they be wrought into the forme of a salve or emplaster, and so applied. To mundifie vlcers, there is not a fitter thing than stockfish made into a tent with fine lint of rags, and so put into the fore. Of the same effect are the ashes of the sea-vrchins skin. The pieces of the fish Coracinus salted, discusse and resolueth the horapostems named carbuncles, if they be applied: so doe the ashes of the Barble salted and calcined. Some vse the ashes of the head of the said fish onely with hony, or els the very flesh of Coracinus. The ashes of murets tempered with oyle, delay & take down any swelling. The gall likewise of the Sea-scorpion, taketh off the roufe of sores, and bringeth skars that ouergrow the flesh vnto the leuell of the other skin. The liuer of the fish Glanus, causeth werts to fall off, if they be rubbed withall. Also, the ashes of Cackerell heads do the like, if they be tempered with garlick: but for the thyme werts particularly, they vse them raw: the gall likewise of the reddish sea scorpion, and the small sea fish Smarides, punned and brought into a liniment do the like. The grosse pickle sauce called Alex, if it be made through hot, cures the raggednesse of nails: the ashes also which come of Cackerell heads, do extenuat and make them fine. The fish Glauciscus eaten in the own broth, causeth women to haue store of milke: so doe the small fishes called Smarides, taken with ptisan or barley gruell, or els boiled with fennell: and in case they haue sore breasts the ashes of Burrets or Purple shells incorporat with honey, doe heale effectually. A liniment made of Sea-crabs or fresh-water Creiffishes, takes away the offensive haire: that grow about womens nipples or breast heads: the fleshy substance also of the Burrets applied to them, work the same effect. A liniment made of the fish called a Skate, will not suffer womens paps to grow big. A candle-wicke or match made of lint, and greased al ouer with the oyle or fat of a dolphin, and so set a burning, yeeldeth a smoake which will raise women againe, lying as it were in a trance and dead vpon a fit of the mother: the same do Macquerels putrified in vinegre. The ashes either of Pearch or Cackerell heads tempered and incorporat with salt, fauerie and oyle, serue for all the accidents of the matrice, and more particularly in a perfume, bring down the after-birth. Semblably, the fat of a Seale or Sea-calf, conueighed by meanes of fire in a perfume vp into the nostrils of a woman lying halfe dead vpon the rising and suffocation of the matrice, bringeth her to her selfe againe: so doth it also, if with the rennet of the same Seale, it be put vp in wooll after the manner of a pessarie, into the priue parts. The ashes of the Sea-fish called Pulmo, applied conueniently to the region of the matrice, and kept fast thereto, purgeth women passing well of their monethly fleurs: of the same operation are Sea-vrchins stamped alieue, and drunk in some sweet wine: but the riuier Creiffishes likewise punned and taken in wine, do contrariwise stay the immoderat flux thereof. Likewise it is said, that a suffumigation of the fish Silurus, especially that which breedeth in Africa, causeth women to haue more speedie and easie deliuerance in childbirth: as also, that Crabfishes drinke in water, doe stop the excessiue ouerflowing of their monethly terms; whereas with *hyssop they set them a going and purge them away. Say that the infant sticke in the birth, and by reason of painful labour be in danger of suffocation, let the mother drinke the same in like manner, there will present help ensue. Women with child vse also either to eat them fresh, or drink them dried, that they may go out their full time, and not slip an abortiue fruit. Hippocrates vseth the same, and prescribeth vnto women for the bringing down of their sicknesse, and likewise to thrust out the infant dead in their wombs, to drinke them in honied wine with fine dock roots, stamped together with rue and foot: and in very truth, foddren with sorrel or docks and parley, they force womens months to come downe speedily, if the broth be drunke; and withall, bring plentie of milke into nurres breasts. If women haue an ague, and the same accompanied with head-ach & much twinkling or inordinat palpitation of the eies, it is thought they shall find much good by drinking them in some hard and austere wine. Castoreum taken inwardly in honied wine, is singular to helpe forward womens monethly purgation: the same being held to their nostrils with vinegre and pitch to smell vnto; or put vp beneath in manner of a suppositorie, after it is reduced into the forme of trochitques, helpeth them when by rising of the mother they are in danger of strangulation. For to bring away the after-birth, it auaileth much also for women to drinke the said Castoreum with Panaces in foure cyaths of wine: as also it is certaine, that who-

*Hyssop, other-
wise Oxypp,
is the tried
greace of vn-
washed wooll.

A Souer take the weight of three Oboli thereof, shall auoid the danger that may come to them by extremitie of cold. Moreouer, if a woman great with child chance to goe ouer a place where lieth Castoreum, or to step ouer the Beuer it selfe (which is the beast that beareth it) she shall be deliuered before her time; yea she shall be in great danger vpon her deliuerance, if the same be but born ouer her where she lieth. A wonderfull thing it is that I read of the crampfish Torpedo, namely, That if it be taken while the moone is in the signe Libra, and be kept for three daies together abroad in the open aire; so often afterwards as it is brought into the rounce where a woman is in trauell of childbirth, she shall haue easie and speedie deliuerance. In this busines also it is thought expedient, that the prick which a Puffin or Forkfish hath in the taile, be applied and tied fast to the nauell of a woman; provided alwaies, that if it be taken forth of the fish alieue, and then the same fish be let goe againe and throwne into the sea. I read in some writers of that which they call Ostracium, to be the same that others name Onyx; but call it what you will, a suffumigation made thereof, is of wonderfull effect to ease the pain and grieve of the matrice. I find, that it hath the smell of Castoreum, and if it be burnt together therewith in a perfume, the more good will ensue: as also that the ashes thereof calcined, heale all inueterat vlcers, and such as are morimals and come any ordinary cure. And verily, the same authors doe report, that for carbuncles, cancers, and such vntoward sores, as arise sometimes about the priuities of women, the most present & assured remedy that is to heale them, is the female Sea-crab, stamped after the full of the moone with the finest powder of salt, called the flour thereof, and water together, and so reduced into the forme of a salve or liniment. The bloud, gall, and liuer C of the fish Tunie, ether taken fresh or old kept, be all of them depilatories, for they fetch away hair and hinder it from growing: the liuer therof punned, and together with the rosin or oyle of cedar incorporat and kept in a leaden box, hath the same effect. This was the deuise that the famous midwife Salpe had for boies, to make them beardless and appeare alwaies young, and to set them out the better for sale. Of the same operation is the fish called Pulmo Marinus, the Sea-hare likewise, I meane the bloud and gall of them both: and as for the said Sea-hare, being but stifled & killed in oyle, it is as effectual. The ashes of the Sea-crab and Scolopendre both, the Sea-nettle (a fish so called) incorporat with vinegre squillitick, the brains of the crampfish Torpedo tempered with alume, be all depilatories, if the place be anointed therewith the morrow after the moon is at the full. The bloody moisture that comes from the little frog, which I D describer heretofore in the cure belonging to eies, is the strongest depilatorie that is, and worketh most effectually, in case the part be dressed therewith while it is fresh and new: and the frog it selfe dried and stamped, and anon after boiled in three hemins of vinegre till one of them be consumed, or in oyle after the same manner in some brazen pan, is a sure medicine to take away haire, and hinder the coming vp of it againe. In the same measure of liquor, some put fiftene frogs, and make thereof an excellent depilatorie, like as I haue said already among the remedies appropriat to the eies. Moreouer, horsleeches torrified in some earthen pan, and brought into a liniment with oyle, worke the same effect in the hairs: the very perfume or smoke which they cast as they be burnt or torrified, killeth Punaifes, if they either flie or be brought into the aire thereof. Furthermore, diuers haue bene knowne to vse Castoreum and hony in a liniment for E many daies together, as a notable depilatorie. But in vsing any depilatorie whatsoeuer, this one point is generally to be obserued, That the haire be first pulled vp by the roots, in any place, where they would not haue them to grow.

To come now vnto the gumbs of children, and their breeding of teeth: the ashes of dolphins teeth mixed with hony, is a souerain medicine: yea, or if you do but touch their gumbs with a dolphins tooth all whole as it is, the effect thereof is admirable: the same hanged about their necks, or tied to any part of the body, riddeth them of sodain frights, wherunto infants are much given. Of the same effect is the tooth also of a dogfish. As for the vlcers or sores incident to their eares, or any other part of their body, the broth of riuier creiffishes thickned with barley meal, heales them. For other diseases also of breaking out, a liniment made of them and oyle F incorporat together in a mortar, is singular good, if they be anointed all ouer therewith. Touching the hot distemperatures and inflammations of the head, wherto little babes be much subiect, a sponge actually cold applied to the place, and oftentimes wet, is a good meane to cure the same: but a frog turned inside outward hath no fellow, if it be bound fast vnto the head: for they say, that it may be found all drie vpon the head with drawing the heat so forcibly to it.

A Barbledrowned in wine, or the fish called a Rocher, or also two Eeles, likewise the fish named the Sea-grape putrified in wine, do infuse this vertue into the foresaid wine, That whosoever drinke thereof, shall haue no mind afterwards to any wine besides, but fall into a dislike and loathing thereof.

The stay-ship Echeneis, the skin of a Sea-horse forehead, especially toward the left side, wrapped within a little linnen cloth, and so hanged about one; or the gall of a liue Crampe-fish, applied vnto the genital members in manner of a liniment, be all means to coole the wanton lust of the flesh: contrariwise, the flesh of riuer Creffishes powdred and kept in salt, giuen in wine to drinke, do stir and prouoke the appetite vnto venerie. Moreouer, to feed vpon the fishes called Erythrines ordinarily at the table: to hang about the necke the liuer of the frog called Diope-tes or Calamita, within a little piece of a cranes skin; or the jaw tooth of a Crocodile fastened to any arme; either els the Sea-horse, or the sinewes of a Toad, bound to the right arme, incite greatly to wantonnesse and lecherie. Put a toad within a piece of a sheeps skin newly flaid, and let one weare it tied fast about him, he shall forget all loue and amitie for euer.

The broth of frogs boiled in water, do extenuat the scurvie thicke rouse in the farcins or mangé of horses, and make way that they may be bathed and anointed: and verily it is credibly affirmed, that if they be cured after this manner, the scab will neuer returne againe. The expert midwife *Salpe* affirmeth for certain, That doggs will not barke, if there be giuen vnto them in a morcell of bread or gobbet of flesh, a liue frog.

In this discourse of Warer, and the things concerning it, somewhat ought to be said as touching Calamochnus, which otherwise in Latine is named Adarca: it groweth about small canes or reeds, and is engendered of the froth of sea water and fresh water together, where they both meet and are intermingled: a causticke qualitie it hath; in regard whereof, it entrench into the compositions called Acopa, which serue for lassitude, and those that are benumbed with cold. It is employed also in taking away the pimples or spots in womens faces like to lentils.

As for Reeds and Canes, this is their very proper place also, wherein they should be treated of. And to begin with that reed or cane called Phragmitis, which is so good for mounds & hedges; the root thereof Greene gathered and punned, is singular for dislocations, and the paine of the backebone, if the place affected be annointed with it, incorporat in vinegre. But the rind of the Cypryan cane, which also is named Donax, burnt into ashes, is singular for to recouer haire againe where it was shed by occasion of sicknesse, and to heale old vlcers. The leaues also serue very well to draw forth any spills, pricks, or arrow heads that sticketh within the flesh, yea and to extinguish *S. Anthonies* fire. As for the floure or downe of their carkins, if it chance to enter into the eares, it causeth deafenesse. The blacke liquor resembling inke, which is found in the cuttle-fish, is of that force, that if it be put to the oile of a lamp burning (*Anaxilaus* saith) it will cuttle-drown and put out the former cleare light, and make all those in the room to looke like black-mores or *Aethiopians*. The hedge frog, otherwise called a toad, boiled in water and giuen to swine among other drasse to drinke, cureth all their diseases: and of the same effect are the ashes of any other frogs besides. Rub a piece of wood with the fish called Pulmo Marinus, it will seem as though it were on a light fire; in so much as a staffe so rubbed or besmeared with it, may serue in stead of a torch to giue light before one.

CHAP. XI.

¶ That there be of fishes and other creatures living in the Sea, one hundred seventie and six severall and distinct kinds.

HAuing thus treated before sufficiently of the natures and properties of Fishes, and such creatures as the water doth yeeld; it remaineth now for a final conclusion, to present vnder one view, all those fishes name by name, which are engendered and nourished not only in those mediterranean and inland arms of the sea, which for many a mile take vp a great part of the continent and firme land, but also in that vast and wide ocean without the main, bounded as it were limited only by the compasse and circumference of the heauen: and those, namely as many as be knowne, may be reduced all into 176 kinds: a thing which cannot be done either in the beasts of the land or foules of the aire. For how is it possible to decipher & particularize the wild beasts and foules of India & *Aethyopia*, of the desarts, and of *Scythia*, which we are not

come

A come to the knowledge of, seeing we haue found so many different sorts in men, of whom wee haue some notice and intelligence: to say nothing of *Ta probane*, and other Islands lying within the Ocean, whereof so many fabulous reports are deliuered: certes, there is no man but hee prize all sorts of creatures which the earth & aire do yeeld. Howbeit, those that are bred in the Ocean, as huge and vast as it is, may be comprehended vnder a certaine number: a wonderfull matter that we should be better acquainted with those, considering how Nature hath plunged and hidden them in the deepe gulfs of the maine sea!

To begin then with the greatest monsters and beasts that this vnruely Element of the water doth breed: we find therein the sea-Trees, Whirlepooles, greater Whales, Priests, Tritons [*i. sea Pipes*], Rams, and smaller Whales accompanying the bigger. Besides, other Rams that resemble the ordinary shape of fishes; Dolphins, and the sea Calues or Seales, whereof the Poët *Homer* writeth so much. Furthermore, the sea Tortoises, which serue for roioir, wantonnesse, and excessse: the Beuers, which are so much in request among Physicians. As for the Otters, albeit a kind of Beuers they are, yet because I neuer heard that they came into the salt water, I make no great reckoning of them; for my purpose is to rehearse those only which inhabit or haunt the sea: moreouer, the sea Dogs: the Curriers, Pofts, or Lacquies of the sea: the horned fishes: the Swordfish or Emperour of the sea, and the Sawfish.ouer and besides, those which liue indifferently in the sea, the land, & the riuer, to wit, the water Horses and the Crocodiles: others againe that ordinarily keepe in the sea, and yet come vp into the riuers, but neuer land, to wit, the Tunnies, as well the growne Thunnies, as the yonger sort, Thunnides or Pelamides. The Siliuri, the blacke Coracini, and Perches. As touching those that neuer came forth of the sea, the Sturgeon fish Box, Baris, Banchus, Barrachus, and Belone, with all the kind of those which wee call Needle fishes, and also Balanus. The sea Raven Corvus, and Cytharus: all the sorts of the Chrombi: the Carpe, Chalcis, and Cobio: Callarius of the Cods kind, but that it is lesse: Corbatica, a fish resembling Lizards: of which and of the young Tunie Pelamis (both bred in Mæotis) being chopped and cut into pieces & so salted, are made those Quadrants or Square rands, called Cybia. For this you must vnderstand, that the Tunie is called Pelamis, when after 40 daies he returneth out of Pontus or the Euxine sea into Mæotis: whereas the said smal Pelamis taketh the name of Cordylus, when it goes first forth of the said great lough or lake Mæotis, and enters into the sea before named. Moreouer, in this said meer Mæotis be these fishes be- tides, to wit, Cantharus, Callionymus, otherwise named Vranoscopus, and Cinædi, which bee the only fishes that be all ouer yellow; Cnide, which we in Latin call Vrtica, the Nettle, al the sorts of Crabs, the gaping smal Cockles and Muskles, whether they be the rough Chamæ-trachæ, the smooth Cnamæ-leoi, or the Chamæ-peloridae: which be of diuers kinds distinct from another, both in forme of roundnesse, and variety of colours: as also the Cockles named Chamæ-glycimerides, which be bigger than the former Pelorides, together with those that the Greekes call Colycia or Corophya. Moreouer, sundry sorts of other shell fish, and among them those that engender and beare pearles, and thereof be called Mother-pearls. The wilkes also and winckles which resemble shell-shailes: of which kind are the Pentadaetyles, Melicembales, and the prickly Echinophoræ, whose shells serue to sound or wind withal.ouer & besides these shell fishes, are those winkles of a round forme, the shells whereof are much vsed to lade vp oyle. Furthermore, the sea Cucumber and Cynopus, the sea Craffish Cammarus, Cynoflexia, and the sea Dragon. As for that which is named Dracunculus, some are of opinion, That it differeth from the foresaid Draco, and like it is to the Chough-fish Gracculus, sharpe pricks it hath in the gills, and those pointing toward the taile: like as the sea Scorpion, which thereby woundeth and hurte those that would seem to take it vp in their hands. There is besides the Erythinus, the stay-ship Echeneis, and the sea Vrchin. The black Elephants also, which be the black kind of the Lizards, hauing foure feet, and those clouen & two-forked; besides two arms with two joints apiece, and each of them armed with a little forked cleve, and closing in manner of teeth. Then haue you the fish called Faber or Zeus, that is, the Goldfish or Doree. All the sorts of Glaucifus, the Glanis, the Gonger, or Conger, the Hearing or Pilchard Gerries, Galeos, and *Garus, *Which some take for the Pike eel, Also

* Which are a
kind of oysters

Also the coast Crabfish called Hippeus, or Sea-horseman Hippuros; the sea Swallow fish, Halieupomus, or Pulmo Marinus; the sea-lights, heart-fish, the liuer of the sea, and Helacathenes. All the sorts of the sea-Lizards: the flying Calamari: the Locusts and Lanternes of the sea, Lyparis, Lamyrus, the sea Hare and sea Lions, which haue cleies or armes in maner of Crabfishes, but in other respects resembling Locusts. The Barble, the Merling or Whiting (among stone-fishes well esteemed) and the Mullet: the black taile Perch (which some take for a Ruffe, others for a sea Bream:) the Cackerell, the Meryx, the Lamprey, the little Muske, the Limpin, the Myfcus, and the Burret. The seven-eye Oculata, the Ele-pout Ophidion, the Oistre, the * eares of the sea called Otia, & Orcynus. This fish of the Tunie kind named Pelamides is the biggest, and neuer returneth again into Mæotis, like vnto a Triton; & the meat thereof is the better for age. The Lompe, Paddle, or sea Owle, and the grunting Molebout: moreover, the fish Phager, the Mole or Lepo counted among stonefishes, and the Pelamis, the greatest of which kind is called Apolectus, and harder it is than the Triton, also the sea-god Phorcus, and Phritharus: the Plaice or Hallbut, & the Puffin: all the kinds of Pulpes or Pourcuttills. The greatest Scallops also, and those which during Summer be blackest, whereof the best sort be those which are taken about Mytlenæ, Tyndaris, Salona, Altinum, Antium, and the Island Pharos neere to Alexandria in Ægypt. Also the little Scallops, the Purples, & the sea Perches, named Percides: the Nacres and their hunters, called Pinnothere. Ouer and besides, the fish called Skate, which some will haue to be Rhina in Greek, & named by vs in Latine, Squatus, and the birt or Turbot: the Guilthead Scarus, which at this day is thought to be a principal fish: the Sole, the Sargus, the Shrimp, and the Sarda, for so they call the long Pelamis when he comes out of the Ocean. The Maquerel or Scomber, the Stockfish, the Sparus, Scorpæna, Scorpions, Sciadeus, Sciæna, the Scolopendra, the serpent fish Smyrus, the Scepines, the shel-fish pointed like a Turbant, Strombus: & Solen, otherwise called Aulus, Donax, Onyx, or Dactylus, all shel-fishes made like kniues: the aff-house oyster Spondilus, and the shel-fish Smarides, the Star, and the Sponge. Then follow the noble stonefish Turdus, and the Thomus Thurianus, sold in pieces or rands cut forth, which fish some call Xiphia, or the Sword-fish. The Theffa, Torpedo or Crampfish, and Tethea. Triton also, which is reckoned among the greater kind of the Pelamides, whereof are made thre square taile-pieces of the Tunie, called Vrea Cybia. Last of all, the Vrenæ, the sea Grape or the Empeurour with a sword, called Xiphias. And here I thinke it not amisse to annex the names of diuerse fishes set downe by the Poet *Ouid*, which are not to be found in any other Authour: But haply those breed in the great sea of Pontus, in which realme he began that booke *De Ponto*, in his later daies. In the first place he nameth * Bopgyrus, which liueth among the rockes: the red Orphus, and the blacke Rhacinus, the painted and streaked Mormyræ, and the golden coloured Chryfos. Moreover, the little Teragus, and Labrus with the faire & pleasant raile. Likewise the Epodes, which are of the broad or flat kind, named Lati. All these be notable fishes: but ouer and besides, he reports the speciall properties and nature of some: as namely that the Chaune doth conceiue of it selfe without a male: that the Glaucus neuer is to be seene in Summer: that Pompilus alwaies accompanieth the ships vnder saile: and Chronius buildeth a nest in the very water. He saith moreover, That Helops is a stranger to vs in this part of the world, and not known in our seas: whereby it is euident that they be deceived who take it for the Sturgeon Acipenser, and yet many reckon this Elops to haue the daintiest tast, and to be the most delicate meat of all fishes. There are ouer and besides other fishes, named as yet by no writer, to wit, that which in Latinewe call Sudis, the Greekes Sphyræna, which (as it should seeme by the name) hath a snout or muffle resembling a sharpe stake or spit, and may for quantitie be counted among the biggest: a rare fish, but of no base and bastard kind. There be also of the Nacres those which are called Pernæ, taken and gathered in exceeding great plenty about the Islands of Pontus: their manner is to stand or sticke fast planted vpon the sea sand, and made they are in fashion of the long shanke of a wine; they gape alwaies toward the coast which is cleare; and neuer doe they hunt for their food, but they yawne at least a foot wide. Teeth there be growing round about the edges of a shell, and those stand thicke together, and when they M shut or close their shels, the foresaid teeth run one betweene another in manner of a combe. In stead of a callostic within, they haue a great lump of flesh. As for the fish Hyæna, I my selfe haue seen one of them taken in the Island Ænaria, which vsed to put forth and draw in his head at his pleasure.

Thus

A Thus much of Fishes worth the naming. For besides these, I am not ignorant that there be other base excrements that the sea voideth and purgeth, which I hold to be very vnfit and not worthy to be ranged among Fishes and liuing creatures, but rather to be reckoned as Kilpes, Reike, and other sea weeds.



THE XXXIII. BOOKE OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIVS SECVNDVS.

C Of Mettals and Minerals, and their natures.

The Proem.

D **N**ow is it time to enter into the discourse of the Mettals and Minerals, the very riches and precious treasure of the World, which men so curiously and carefully seeke after, as that they sticke not to search into the very bowels of the earth by all the means they can deuise: for some you shall haue (to enrich themselves) for to dig into the ground for mines of gold and siluer, base metall Electrum, Copper and Brasse: others againe vpon a desire of daintie delights and brauerie, to lay for gems and precious stones, for such Minerals (I say) which may serue partly to adorne their fingers, and partly to set out the walls of sumptuous buildings with costly colours, rich marble, and porphyries. Lastly, there bee many, who maintaine rash quarrels, and audacious bloudie murders. In summe there is not a vaine in the whole earth but wee prie and search into it: we follow it also so farre as it goeth. Thus hauing undermined the poore ground, wee lye and goe aloft vpon it, as ouer hollow vaults and arches vnder our feet: and yet we would seeme to wonder, that otherwhiles she cleaueth asunder into wide and gaping chinkes, or else trembleth and quaketh againe: and wee will not see how these be apparant signes of the wrath of this our blessed mother, which we bring and force from her, to expresse the indignation that she taketh for this wrong and misusage. We descend into her entrails: we goe downe as far as to the seat and habitation of the infernall spirits, and all to meet with rich treasure: as if the earth were not fruitfull ynough and beneficiall vnto vs in the upper part thereof, where she permiteth vs to walke and tread vpon her. Howbeit, in all this paines that wee take to ransacke the mines thereof, the least matter of all other is to seeke for any thing that concerneth Physick and the regimēt of our health: For among so many masters as there be of mines, where is there one that would be at such expence of digging, in regard of any medicines. And yet I must needs say, that as the earth otherwise is no niggard, but bounteous and liberall, readie also and easily entreated to bring forth all things good and profitable for vs: so in this behalfe she hath furnished vs sufficiently with whole some drougs and medicinal things that shee hath hidden aboue and fit for our hand, without need of digging deepe for the matter. But these things shee drine and send vs to the duell in hell (as it were) into the bottome, those be they that presse vs downe, grow at all. In such sort, as to consider the thing aright, and not to captiue our spirits to such base matters, How farre I thinke we, will conscious minded men pierce and enter into earth? or when will they make

at:

an end of these mines, hollowing the ground as they doe in all ages from time to time, and making it void G
and emptye? Oh how innocent a life, how happy and blessed, nay, how pleasant a life might we lead, if we
conetted nothing else but that which is about the ground: and in one word, if we stood contented with that
which is ready at hand and euen about vs. But now, not sufficed with the gold which we fetch out of the
mines, we must seeke for the greene earth *Borras* also, which lieth hard by, yea, and giue it a name respectiue
vnto gold, whereby it might be thought more deare and pretious. For why? we thought not the inuention
and finding out of gold alone to be enough for to infect and corrupt our hearts, vnlesse we made great ac-
count also of that vile and base minerall, which is the very ordure of gold and no better. Men vpon a co-
netous mind would needs seeke for siluer, and not satisfied therewith, thought good withall to find out Mine-
rall vermilion, deuising meanes how to vse that kind of red earth. Oh the monstrous inuentions of mans
wit! What a number of waies haue we found to enhance the price and value of euery thing! for painters H
of the one side with their artificiall painting and enameling: the grauers on the other side with their cu-
rious cutting and chasing, haue made both gold and siluer the dearer by their workmanship: such is the
audacitie of man, that hee hath learned to counterfet Nature, yea, and is so bold as to challenge her in her
workes. And wherein is the art and cunning of these artificers so much scene, as in the workmanship
of such pourtraires vpon their gold and siluer plate, which might incite and prouoke men to all kind of vi-
ces: for in proceesse of time we tooke pleasure to haue our drinking boles and goblets engrauen all ouer with
those workes which represent lust and wantonnesse: and our delight was to drinke out of such beastly cups
which might put vs in mind of sinfull and filthy lecherie: but afterwards these cups also were cast aside
and laid away, men began to make but bafe account of them; gold and siluer was so plentifull and common,
that we had too much thereof. What did we then? Forsooth we digged into the same earth for *Cassidonic* I
and *Cryfall*, and we loued to haue our cups and other vessels of such brittle minerals; and the more preci-
ous we held them, as they were more subiect to breaking: so as now adaiies hee is thought to haue his house
most richly furnished, who hath his cupboards best stored with this ticklish ware: and the most glorious
shew that we can make of excessse and superfluitie, is this, To haue that which the least knocke may breake,
and being once broken, the pieces thereof might be worth nothing. Neither is this all, for stay we cannot
here, we are not yet at cost enough, vnlesse we may drinke out of a deale of precious stones. Our cups other-
wise chased, engraues, and embossed in gold, must be set out with *hemerauls* besides: to maintaine drun-
kennesse, to make a quarrell to carouse and quasse, we must hold in our hand and set to our mouth the riches
of *Indi*. So as, to conclude, our golden plate comes behind pretious stones and pearles, and we count it but
an accessarie and dependant, which may be spared.

CHAP. I.

¶ When mines of gold grew first into request. The beginning of gold rings. The quantitie
of gold in treasure among our ancestors in old time. Of the Cavallerie and
Gentrie of the Romanes. The priuledge of wearing
golden Rings.



H that the vse of gold were cleane gone: Would God it could possibly
be quite abolished among men, setting them as it doth into such a cursed
and excessiue thirst after it, if I may vie the words of most renowned writ-
ters: a thing that the best men haue alwaies reproched and railed at, and the
onely meanes found out for the ruine and ouerthrow of mankind. What
a blessed world was that, and much more happier than this wherein wee
liue, at what time as in all the dealings betweene men, there was no coine
handled, but their whole trafficke stood vpon bartering and exchanging

ware for ware, and one commoditie for another, according as the practise was in the time of the
Troiane war, as *Homer* (a writer of good credit) doth testifie. And in that manner (as I take it)
began first the commerce of negotiation among men for the maintenance of their society and
liuing together: for so he reporteth, That some bought that which they stood in need of, for
Bœufes hides, others, for yron or such commodities as they had gotten in bootie from their e-
nemies. And yet I must needs say, that euen *Homer* himself esteemed gold of great price, as may
appear by the æstimate that he made thereof in comparison of brasse, when he saith, That *Glauc-*
cus exchanged his golden armour, worth 100 * oxen, for the [brasse] harness of *Diomedes*,
which

* It is thought
that hereby are
meant certaine
pieces of siluer
coine, stamped
with the por-
traiture of a
bull or ox, cal-
led *Didrachma*
& were worth
two drams or
diners Roman.
Ætymologia
etymologia
etymologia

A which was valued but at nine *Bœufs*: according to which manner practised in those daies, euen
at Rome also (as may appeare by the old records) there were no other penalties and fines impo-
unded that name passed all the amercements that were leuiued. Well, a bad example and prefi-
dent gaue he vnto the world, who first deuised to wear rings vpon the fingers: but who he was
the reports that go of *Prometheus*, I hold them all but fabulous tales: and yet in all the antient
pictures and portraitures of him, he is to be seen by a generall consent of antiquity, with a ring
of yron: howbeit, I suppose that they represented thereby his bonds and his imprisonment, ra-
ther than any custome that he had to wear a ring as an ornament vpon his finger. And verily
B concerning the ring of K. * *Midas*, which if the collet were turned about toward the palm of the
hand, caused them to go inuisible that so wore it: is there any man (thinke you) that judgeth it
not more fabulous than the other of *Prometheus*? But to come more particularly vnto gold, the
greatest credit and authority that it got, was by wearing it in rings vpon the fingers, and those
only and altogether vpon the left hand. And yet this was no fashion at first among the Romans,
whose manner was to vse no other but of yron, to shew that they were good fouldiers, skilfull
and expert in feats of arms. Whether the antient kings of Rome were wont to haue gold rings
vpon their fingers, I am not able to say for certaine. Sure it is, that the statue of king *Romulus* in
the Capitoll hath none. Neither is there any to be seen in the other statues of the Roman kings,
saue only of *Numa*, and *Servius Tullius*; no nor in that of *Lucius Brutus*: Whereat I maruel much,
and especially at the two *Tarquines* kings of Rome, considering that they were descended of the
Greeks, from whence came vp the first vse of these gold rings, how soeuer yet at this day in
Lacedæmon there be none wore but of yron. Howbeit, this is recorded and known for a truth,
That *Tarquinius Priscus*, the first of all the *Tarquins*, honoured a sonne of his with a brooch or ta-
blet of gold pendant at his neck, for that whiles he was vnder 16 yeares of age, and as yet in his
Prætexta, hee had killed an enemy in plain fight. And thereupon was taken vp the manner first,
(which also continued afterward) to hang that * ornament about the necks of those gentlemen
sonnes who were men at armes and serued in the wars on horse-backe, in token of knighthood
and cheualrie: whereas other mens sonnes wore a riband onely. And therefore great *maruell* I
haue at the statue of the said prince king *Tarquine*, surnamed *Priscus*, that it should be without a
D ring on his finger. And yet besides all this, I read, that there hath been some variance and diffe-
rence in old time about the naming of rings: The Greekes imposed a name deriued from the
finger, and called it *Dactylus*. The Latines here with vs in old time named it *Vngulus*: but af-
terwards, as well we as the Greekes termed it *Symbolum*. Certes, long it was first (as appeareth
evidently by the Chronicles) ere the very Senators of Rome had rings of gold. For plaine it is,
that the State allowed and gaue rings only to certain especial lieutenants when they were to go
in embassage to forein nations: and in mine opinion, it was for their credit and countenance,
for that the most honorable personages in strange countries were distinguished from others by
that ornament. And verily, no person (of what degree soeuer) was wont to wear rings, but such
as had received them first from the common-wealth vpon that occasion: & so it serued them or-
E dinarily in triumph, as a token and testimoniall of their vertue and valour. For otherwise, he that
triumphed in Rome, although there was a Tuscan coronet al decked with spangles of gold, born
vp behind and held ouer his head, had no better than a ring of yron vpon his finger, no more than
the slave at his back, who haply carried the said Tuscan chaplet. For certainly in that manner tri-
umphed *C. Marius* ouer *K. Jugurtha*: and as the Chronicles do shew, receiued not a golden ring,
nor tooke vpon him to wear it before his third Consulship. And euen those also who from the
State had golden rings giuen them, in regard of embassage aforesaid, neuer vsed them but when
they came abroad into open place, for within doores they might wear none but of yron: which is
the reason, that euen at this day the wedding ring which the bridegroom sendeth as a token * of
espousals to his bride, is of yron simply without * any stone set in it. Neither, so farre as I can
F finde by reading, were there any golden rings in vse and request about the time of the Troiane
war: for sure I am, that the Poet *Homer* maketh no mention of them at all, who otherwise spea-
keth of the brauery and rich attire of those times. And when he talketh of writing tabletts, sent
ordinarily in stead of letters missiue, when he writeth of cloths and apparels bestowed in chests
and coffers, when he telleth vs of vessels, as well gold as siluer plate, he saith they were all bound
and

* Gyges rather,
as appeareth
by *Plato*, and
Cicero.

* Called *Bulla*,
which was in
forme of the
heart: & atter
they were
growne to be-
come, at 17
yeares of age
they offred it
vp to the La-
res: like as
young maidens
marriageable
presented *Ve-*
nia with yong
babies or clowts
such as they
were wont to
make and play
withall, as be-
ing now desi-
rous to haue
babes indeed
of their owne
bodies. *Alex.*
ab Alex. lib. 2.
cap. 25. et lib. 5.
cap. 18.

* It was called
*Vronibus An-
nus*.
* *Ætymologia*

and trussed fast with some sure knot, and not sealed vp with any mark of a ring as the order is in these daies. Moreouer, when he reporteth of any challenge made by the enemy to single fight, and sheweth how the captains fel to cast their feuerall lots for the choise of them which should performe the combat, this was neuer done by the signet of rings, but by some other especiall marks that euery one made. Also, when he taketh occasion to speak of the workmanship of the gods, he rehearseth buckles, clasps, and buttons of gold, other jewels and ornaments also belonging to the attire of women, as eare-rings and such like of their making, which at the beginning were commonly made, but he speaketh not one word of golden rings. And verily in my conceit whoeuer began first to weare these rings, did it couertly by little and little, putting them vpon the fingers of the left hand, the better to hide them, as if they were ashamed to haue them openly seene: whereas if they might haue auowed the honouring of their fingers by that ornament, they should haue shewed them at the first vpon the right hand. Now if any man object and say, that the wearing them on the right hand might be some impeachment to a soldier for vsing his offensive weapon which he beareth in that hand; I alledge again, that the hinderance was more in the left hand, which serueth to hold and manage the targuet or buckler defensiuely. I read in the same Poet *Homer* aforesaid, that men vsed to plait & bind vp the tresses of their haire with gold: and therefore I wot not well whether men or women first began the manner of such braiding the locks of the haire.

As touching gold laid vp for treasure, little was there of it at Rome for a long time; for surely, when the city was taken & sacked by the Gauls, and that the Romans were to buy & redeem their peace for a sum of money, there could not be made in all Rome aboue one thousand pound weight of gold. Neither am I ignorant, that in the third Consulship of *Cn. Pompeius* there was embezeled and stolne 2000 pound weight of gold out of the throne or shrine of *Iupiter* within the Capitoll, which had bin there bestowed and laid vp by **Camillus*: whereupon many men haue thought, that there was 2000 pound weight of gold gathered for the ransom of the city. But surely looke what ouerplus and surcrease there was aboue the foresaid weight of one thousand pound, it was of the very booty and pillage of the French, and taken out of the temples and chappels in that part of the city whereof they were masters. Moreouer, that the Gauls themselves were wont to goe to the wars brauely set out and enriched with gold, it appeareth by this one example of *Torquatus*, who slew a Gaule in combat, and tooke from him a massie collar of gold. Apparent it is therefore, that all the gold, as well that of the Gauls, as that which came from the temples abouesaid, amounted to the said sum, and no higher: to the light and knowledge whereof we come by means of reuelation from *Augurie*, which gaue vs to vnderstand, that *Iupiter Capitolinus* had rendered againe the foresaid sum in duple proportions. And hereby the way there cometh to my remembrance another thing, not impertinent to this place: considering I am to treat againe of rings: when the sexton or keeper of this cell was apprehended, and the question demanded, What was become of the treasure aforesaid of 2000 pound which *Iupiter* had in custody, and which now was out of the way and gone? Hee tooke the stone that was in the collar of his ring which he ware, crackt it between his teeth, and presently dyed thereupon: whereby the truth was not bewraied and reuealed, as touching the theefe that robbed the said treasure. Wel, reckon the most that can be, surely there was not aboue 2000 pound weight of gold to be had in Rome, when the city was lost, which was in the 364 yere after the first foundation thereof, at what time (as appeareth by the rolls of the Subsidie booke) there were in Rome to the number of 152580 free citizens. And what was 2000 pound in proportion to such a multitude of people. Three hundred and seuen yeres after, when the temple of the Capitoll was on fire, all the gold to be found therein, as also in all the other chappels and shrines arose to thirteen thousand pound weight, which *C. Marius* the yonger seized vpon and conueied away to the city *Prænestæ*. And all the same was recovered againe and brought backe againe by *Sylla* his enemy, who vnder that title carried it in triumph, besides seuen thousand pound weight of siluer, which he raised out of the spoile of *Marius*. And yet neuertheless, the day before hee had caused to be carried in a pompe of triumph fiftene thousand pound weight of gold, and one hundred and fiftene thousand pound of siluer, which came of the rest of the pillage gotten by that victorie of his.

But to returne againe vnto our discourse of gold rings: I doe not read that they were ordinarily vied, before the daies of *Cn. Flavius* the sonne of *Annus*: This *Flavius* beeing otherwise a

A man of mean and base parentage, as whose grandfire by the father side had bin no better than a slave infranchised: howbeit hauing a pregnant wit of his own, he brought vp daily vnder a good schoolmaster *Appius Claudius* surnamed the Blind (whom he serued as his Scribe, Clerke, or Secretary) he grew into inward credit and fauor with his master, that for his better aduancement he opened vnto him the whole course of dayes pleadable and not pleadable, exhorting and persuading him withal, to publish that secret and myserie to the view & knowledge of the whole city: which the said *Flavius* (after much conference and consultation had with *Appius*) did, and effected accordingly: wherupon he became so gracious with the whole body of the people (who were alwaies before wont to hang euery day vpon the lips of some few of the chief & principal Senators, for to haue the information and knowledge of the said daies) that in the end a bill promulged by him, passed by generall assent of them all, for to be created *Edile Curule* together with *Annicius* of *Prænestæ* (who not many years before had bin a professed enemy, and borne armes against the Romanes) without any regard had in this election, either of *C. Petilius*, or *Domitius*, who were nobly born, & had two Coff. to their fathers, who notwithstanding stood for the said dignitie and honorable place. Nay more, This *Flavius* had a speciall grace besides granted, To be at the same time one of the Tribunes also or Prouosts of the *Communitie*. At which indignitie the Senat took such disdaine, and chafed so for despight and anger, that as we read in the antient Annals and Chronicles of our city, there was not one Senator of them all but laid away his golden rings and gaue vp his place. Many are of opinion (although they be farre deceiued) that the knights and men of arms also did the semblable, and left off their rings the same time.

C And this likewise goeth currant and is generally receiued, That they cast aside the caparisons and trappings of their bard horses; for these be the two badges or markes which cause them to be called Equites, as one would say, knights, men of arms, or horsmen. True it is besides, that in some annals we find it recorded, that it was the nobility only of Rome that gaue ouer their gold rings, and not generally the whole body of the Senat. Wel, how soeuer it was, this hapned when *P. Sempronius Longus* and *L. Sulpitius* were Consuls. But *Flavius* abouesaid, seeing what trouble and discontentment was risen hereupon throughout the city, vowed to erect and build a temple in the honor of *Concord*, if he could reconcile the estate of the Senat, and the order of the gentlemen againe to the common people. And seeing that he could not be furnished with money out of the common treasure of the city, for defraying of charges requisite to this piece of work, he made means to haue certaine extreme vsurers condemned to pay good round sums of money: & with these fines a little chappell he caused to be made all of brasse, and reared it in the place appointed for Embassadors out of strange countries to wait and giue attendance in, called *Græco-stasis*, the which was at the head of the publique grand place or hal of assemblies called *Comitium*: where in a table of brasse he rooke order there should be cut and engrauen the verities of the dedication of the said temple, which was 104 yeres after the temple in the Capitoll was dedicated, and in the 448 yere from the foundation of the city. This is the first and most antient euidence that may be collected out of all the antiquities of Rome now extant, as touching the vsage and wearing of Rings. Another testimony we haue thereof in the second Punicke War; which implieth, that rings in those daies were vsed more ordinarily, as well by commons, as gentlemen and Nobles: for otherwise, if they had not bin so vsually worn as well by one as another, *Annibal* could neuer haue sent to Carthage those three Modij of rings, which were pluckt from the fingers of those Romans who were slain in the battell of Cannæ. Moreouer, the Chronicles beare witnesse, that the great quarrell betweene *Cæpio* and *Drusus* (from which arose the sociall war of the Marrians, and the ruin of the state) grew by occasion of a ring sold in portsale, which both of them would haue had, the one as well as the other. Neither at that time verily did all Senators weare gold rings; for known it hath bin within the remembrance of our grandfathers, that many of them (and such as beare the Pretorship) in their old age, and to their very dying day, neuer wore any other rings but of iron. The same doth *Fenestella* report of *Calpurnius*; and of *Manilius* also, who was Lieutenant vnder *Caius Marius* in the war against King *Tugurtha*. And many other historians affirme the like of *L. Fufidius*, him I meane vnto whom *Scæurus* dedicated that Booke which he compiled of his Life. There is a whole house or family at Rome of *Quinij*, wherein (by antient custome and order) there was neuer any known, so much as the very women, to weare any gold about them. And euen at this day, the greater part of those nations and people who liue vnder the empire of Rome, know not what these rings mean. All the coun-

tries of the East throughout, and Egypt generally, at this time content themselves with simple writings and bare scripts, without any seale or signe manuel set vnto them. But so far off are we in these daies from keeping vs to the plain hoop rings of our ancestors, that as in all things els, so in them also we loue to change and alter euery day, so giuen we are to excesse and superfluitie: for now, many ^{men} haue curiously set in their rings, pretious stones of excellent beautie: for now, many ^{men} haue curiously set in their rings, pretious stones of excellent beautie and most exquisite brightnesse; and vnto their fingers be charged and laden again with the riches and reuenues of a good lordship, they are not adorned and decked to their mind. But I purpose more fully to speake hereof in my treatise of gems and pretious stones. Others again will haue in their rings and stones sundry figures and portraictures as they list themselves engrauen, that as there be some rings costly for the matter, so others again should be as pretious for the workmanship. Yee shall haue many of these wantons and delicate persons make conscience (forsooth) to cut and engrauie some of their pretious stones, for hurting them; and (to shew that their rings serue for somewhat else than to seale and signe withall) doe set the said stones whole and entire as they be. And diuers there are who will not enclose the stone with gold on the inside of the coler which is hidden with the finger, to the end (forsooth) that it may touch the naked skin and be seene through. And such an opinion they haue of these stones, that gold is worth nothing in comparison of many thousands of them now in vse and request. Contrariwise, many there are who will haue no stone at all in their rings, but make them all of massiue gold, and therewith do seale: a deuise that came vp in the time of *Claudianus Caesar* the Emperour. Furthermore, in these our daies some slaues set iron within a collar of gold, in stead of a stone; and others again hauing their rings of iron, yet they adorn and set them out with the most pure and fine gold that may be had. This licence (no doubt) and libertie of wearing rings in this order, began first in Samothrace, as may appeare by the name of such rings: The manner was in old time to weare rings but vpon one finger onely, and namely that which is the fourth or next to the little finger, as we may see in the statues of *Numa* and *Seruius Tullius*, Kings of Rome: but afterward they began to honour the fore-finger which is next vnto the thumbe, with a ring, according to the manner which we see in the images of the gods: and in proceesse of time they took pleasure to weare them vpon the least finger of all: and it is said, that in France and Brittain they vsed them vpon the middle finger. But this finger now adayes is excepted onely and spared, whereas all the rest be sped and charged with them; yea and euery joint by themselves must haue some lesser rings and gemmalls to fit them. Some will haue the little finger laden with 3 rings; others content themselves with one and no more vpon it, wherewith they vse to seale vp the signet that is to signe ordinarily, for this signe manuel (I may tell you) the manner was to lay vp a safe among other rare and pretious things: this might not come abroad euery day, as beeing a jewell that deserved not to be misused by handling commonly, but to be taken forth out of the cabinet or secret closet neuer but when need required: so that whosoever weareth one ring and no more vpon the least finger, hee giueth the world to vnderstand, that he hath a secret cabinet at home stored with some speciall things more costly and pretious than ordinarie. Now, as some there be that take a pride and pleasure to haue heavy rings vpon their fingers, and to make a shew how massiue and weighy they are; so others againe are so fine and delicat, as they thinke it a paine to weare more than one. Some hold it good, for sauing of the stone or collet (if the Ring should chance to fall) to haue the round hoope or compasse thereof wrought hollow or enchaused within, yea and the same filled vp with some lighter matter than is gold, that it may fall the softer. You shall haue many that vse to carry poysen hidden within the collet vnder the stone, like as *Demosthenes* did, that renowned Prince of Greeke Orators; so as their rings serue for no other vse or purpose but to carry their owne death about them. Finally, the greatest mischiefs that are practised by our mighty men in these daies, are for the most part performed by the meanes of rings and signets. O the innocence of the old world! what a heauenly life led men in those daies, when as there was no vse at all of seale and signet? But now we are faine to seale vp our ambries and hogtheads with our signets, for feare we be robbed and beguiled of our meat and drinke. This is the good that cometh of our legions and troupes of slaues, which we must haue waiting and following at our heeles: this commoditie we haue by our traine and retinue of strangers that wee keepe in our houses: inso much as wee are driven to haue our ^{Nomenclatores} Controllers and * Remembrancers to tell vs the names of our Seruants and people

A people about vs, they are so many. It was otherwise ywis by our ancestors and fore-fathers daies, who had no more but one yeoman or groome apiece, and those of the lineage and name of their Lords and Masters: as may appeare by the ordinary names of * *Marci-pores*, and *Luci-pores*: and these had all their viduals and diet ordinarily at their masters board. And therefore there was no great need to keep safely any thing vnder lock and key from such household seruitors: whereas now adayes the cater goeth to the market to provide cates and viands for to be stolen and carried away as soon as they come home, and no remedy there is against it: (for no seale will serue to make sure either such lurchers themselves for filching, or keep the very locks and keies safe and whole that lead to the prouision. And why? an easie matter it is to plucke the rings from their lord and masters fingers that are oppressed with dead sleep, or when they lie adying. And verily we hold in these daies a seale to be the best assurance in contracts that may be: but I wot not how long it is since that custom first came vp. And yet if we consider the fashions and manners of strange Nations, we may peradventure find how these signets came into such credit and authoritie: and namely by the History of *Polycrates* the Tyrant or King of the Isle Samos: who hauing cast into the sea a ring which he loued and esteemed aboue all other jewells, met with the same againe by meanes of a fish which was taken, in the belly whereof the said ring was found. Now this king was put to death, about the two hundred and thirtieth yeare after the foundation of our citie. Howbeit, the ordinarie vse of these signets (as I suppose by all reason and likelihood) began together with vsurie: for prooffe whereof, marke how still at this day, vpon any stipulation and bargain paroll made, off goes the ring presently to confirme and seale the same.

C The which custome no doubt came from old time, when there was no earnest nor gods-pennie more ready at hand than a signet. So as we may conclude assuredly and affirme, That amongst vs here at Rome, when the vse of money and coyne was taken vp, soone after came the wearing of rings in place. But as touching the deuise and inuention of mony, I will write anone more at large.

And now to return againe to my discourse of rings: after they began once to bee in any request, there were none at Rome vnder the degree of a knight or gentleman that carried rings on their fingers; inso much, as a man might know a gentleman from a commoner by his ring, like as a Senator was distinguished from the Gentlemen, wearing rings, by his coat embroidered with broad gards and studs of purple. Howbeit, long it was before this distinction was obserued: for I find that the publicke criers were ordinarily such coats likewise embroidered, as Senators do: as appeareth by the father of *L. Atilius Stilo*, surnamed vpon that occasion *Praconimus*, because his father had bin a publicke Crier. Certes, these rings certified the middle degree, inserted between the Commons and the Nobles: and that name which in times past horses of seruice gaue to men of armes and * gentlemen of Rome; the same now adays sheweth men of worth, and those who are of such and such reuenues. But long it is not since this disorder and confusion begun. For when as *Augustus Caesar* late Emperour of happy memory, ordained decuries of Iudges in criminal matters, the greater part of them consisted of those who wore no other rings but of yron: and those were simply called Iudges, and not Knights or Men of armes: for this name continued still appropriat to the troupes of those gentlemen, who serued vpon horses allowed by the Senat. Moreover, at the first there were no more but foure decuries of Iudges, and hardly might there be found in each of those decuries, a bare thousand: for as yet those of our prouinces might not be admitted to this estate to sit and iudge vpon criminal causes: and euen at this day precisely obserued it hath bin, That none but antient citizens might be Iudges: for neuer any that came newly to their free burgeoisie, were taken into this order and degree.

CHAP. II.

¶ Of the Decuries or Chamber of Iudges vpon record at Rome. How often the name and title of the Romane Cavallerie changed. The gifts and rewards represented vnto valiant souldiers for their braue seruice. And at what time Coronets of gold were seene.

THE chamber of the foresaid iudges consisted of diuers estates and degrees, distinguished all by severall names: for first and foremost, there were of them called *Tribuni æris*, as it were

R r 2

Generall

* the pages or
groomes of
Marcuso. Lucius.

* who thurp.
on we called
Equires.

Generall receiuers or Treasurers: secondly, *Selecæi*, chosen from among the Senators: and last of all, those who simply were named Iudices or Iudges, taken from among the knights or men of armes.ouer and besides these, they had others called *Nongenti*, choice men selected from out of all the estates, who had the keeping of those chests or caskets wherein were put the voices of the people in their solemn elections. And by reason of a proud humor in men, chusing themselves names to their owne liking, great diuisions and factions arose in this house and chamber of the foresaid Iudges; whiles one would needs be called *Nongentus*; another *Selecus*, and a third gloried in the title of Tribune or Receiuer. But at length, in the ninth yere of the reigne of the Emperor *Tiberius Caesar*, the whole estate of the gentrie or cauallerie of Rome, was reduced to an vniformitie; and an order was set downe whereby it was knowne who might weare rings, and who might not? which fell out to be in that yere when *C. Asinius Pollio*, and *C. Annius Vetus* were Consuls together, and in the 775 yere after the foundation of Rome city. And verily this vniforme regularity was occasioned by a trifling cause to speak of, and whereat wee may well maruell: and thus stood the case: *C. Sulpitius Galba* desirous in his youth to win some credit with the foresaid Emperour *Tiberius*; and namely, by deuising meanes how to bring *Tavern*, Cooks shops, and victualing houses in danger of the law, and to forfeit penalties; pleaded against them, and complained before the Senat, That those who were the vndertakers and Tenants: were of the foresaid *Taverns*, &c. and made their gaine thereby, had no other meanes to beare themselves out, nor plea to defend their faults and disorders, but their rings. The Senat taking knowledge hereof, ordained an act, That none from that time forward might bee allowed to weare the said rings, vnlesse he were free borne, and that both himselfe, his father, and grandfire by the fathers side were afflicked in the Censors booke 400000 sesterces; and by vertue of the law *Iulia* as touching the publike Theatre, had right to sit and behold the plaies in the first and foremost 14 ranks or seats for knights appointed. Howbeit afterwards, euery man labored and made means one with another, to be allowed to weare this ornament of a ring. Now in regard of these disorders and variances aboue rehearsed, prince *Caius Caligula* the Emperour, adjoynd to the former foure, a fifth Decurie. And shortly after, mengrew to that height and pride in this behalfe of wearing rings, and the company so furcresed, that whereas in *Augustus Caesars* dayes there could not be found knights and Gentlemen sufficient throughout all Rome to furnish those Decuries, by this time they could not be contained all within the Chamber of Iudges or Decuries abouesaid: insomuch as now adaies, no sooner are there any slaues manumised and affranchised, but presently (by their good will) they must be at their rings. A thing that neuer before was knowne in Rome: for aforesetime when a man spake of the iron ring, he was vnderstood presently to point at the Gentlemen and Iudges before named: but the said ornament or badge became so commonly to be taken vp, by one as well as another, that a gentleman of Rome (*Flavius Proculus* by name) indited 400 at once before *Claudius Caesar* Censor for the time being, and declared against them for this abuse and offence. See what inconuenience infused vpon the act of rings! for whiles thereby a distinction was made between that degree & other free-born citizens, straight waies base slaues leapt in, and were so bold as to take that ornament vpon them. And hereby the way, it is to be noted, that the two *Gracchi*, *Tiberius*, and *Caius*, brethren, vpon a certain desire and inbred affection that they had to maintaine and nuzzle the people in sedition, and to beare a side alwaies against the Senat, for to currie fauour with the Commons and to do them a pleasure, deuised first to haue all them called Iudges, who by vertue of the foresaid statute or edict, might weare rings: and this he did to crosse and beare the Senat. But after the state of this sedition was quenched, and the popular authors thereof who stirred & blew the coles were murdered, the denomination of these criminal Iudges (after diuers troubles and seditions with variable and alteratiue fortune) fell in the end to the Publicans and Farmers of the reuenues of the State; and being thus deuolued vpon them, there continued: insomuch as for a good while the said Publicans made vp the third degree betweene the Senators and the Commons. Howbeit, *M. Cicero* when he was Consull re-established the Knighthood & Cauallerie of Rome in their former estate and place, and so far preuailed, that hee reconciled them againe vnto the Senat: giuing out openly, that he himselfe was come of that degree, and by that means by a certain popularity, sought to draw them all to side with him. From this time forward, the men of armes were installed as it were in the third estate of Rome, insomuch as al edicts and publick acts passed in the name of the Senat, People, and Cauallerie of the citie. And for that

* Who onely indeed were to judge causes.

that these knights or gentlemen were last incorporated into the body of the Common-weale, this is the only reason that euen now also they are written in all publicke Instruments, after the People.

As touching the name or title, attributed to this third estate or degree of Horsemen or men of Arms, it hath bin changed and altered oftentimes: for in the daies of *Romulus* and other KK. of Rome, they were called *Celeres*, afterwards *Flexumines*, and in proceesse of time *Trossuli*, by occasion that these horsmen without any aid at all of the Infanterie, had woon a towne in *Tuscane* nine miles on this side *Volfinij*, called *Trossuli*: which name continued in the Cauallerie of Rome, vntill the time of *C. Gracchus* and afterward. And verily *Iunius* (who vpon the great amitie betweene *Gracchus* and him, was surnamed *Gracchanus*) hath left these words in writing as touching this matter: concerning the degree of knights (quoth hee) those who now are called Equites, [i. Horsemen] beforetime had to name *Trossuli*: the change of which name arose vpon this; that many of these Gentlemen, ignorant in the originall and first occasion of the foresaid name *Trossuli*, and what the meaning thereof was, were ashamed so to be called. He alledgeth moreover the cause of the said name: and yet notwithstanding (quoth hee) they cannot away with the name at this day, but are so called against their wils.

To come again vnto our former discourse of gold. There be yet some other points besides to be considered therein, which cause distinction in diuers conditions of men: for our ancestors, willing at all times to honour those souldiers who had borne themselves valiantly in wars, were wont to bestow chains of gold vpon strangers and auxiliaries, such I meane as came to ayd and succour the Romans: but vnto their owne naturall citizens they gaue none other but of siluer: and true it is, that Roman citizens had bracelets giuen them ouer and aboue, which foreiners had not. They were wont also (a thing to be maruelled at) to giue vnto citizens, coronets of gold: but who he was whom they honored first with this reward, I could neuer find in any Chronicle; and yet *L. Piso* hath set downe in his Annals, the first giuer thereof: for *A. Posthumus L. Dictator* (quoth he) vpon the winning of the fortified campe of the Latines neare the Lake *Regillus*, was the first that bestowed vpon that souldier, by whose valorous seruice principally the said bold was forced, a coronet of gold; which he caused to be made of the pillage taken from the enemy. *L. Lentulus* in like manner, being Consull, gaue a crowne of gold vnto *Sergius Cornelius Merenda*, at the winning of a certaine towne within the Samnites countrey. Semblably *Piso* surnamed *Frugi*, bestowed vpon his owne sonne a Coronet of gold weighing five pound, which hee caused to bee made of his owne priuate money: and yet amongst other Legacies in his last Will and Testament, the said Coronet hee bequeathed to the State and Common-wealth of Rome.

CHAP. III.

Other vses besides of gold, as well in men as women. Of Gold in money. When Brasse, Siluer, and Gold, were first stamped and coined. Before Brasse was conuerted into stamped money, how they used it in old time. At what rate and proportion of money were assessed the best houses of Rome, at the first leuying of Subsidies. And at what time gold came into credit and request.

All the gold imploied in sacrifices to the honor of gods, was in gilding the horns of such beasts as were to be killed, and those onely of the greater sort. But in warfare among souldiers, the vse of gold grew so excessiue, that the field and campe shone againe withall, insomuch as at the voiage of *Macedony*, where the Marshalls of the field and colonels bare Armour set out with rich buckles and clasps of gold, *M. Brutus* was offended and stormed mightily at it, as appeareth by his letters found in the plaines about *Philippi*. Well done of thee, *O M. Brutus*, to find fault with such wastfull superfluitie: but why saidst thou nothing of the gold that the Roman dames in thy time wore in their shoes? And verily this enormity and abuse, I must needs impute vnto him (whosoever he was) that first deuised rings, and by that means caused gold to be esteemed a mettall of much worth: which euill precedent brought in another mischiefe as bad as it, which hath continued a long time; namely, that men also should weare about their arms, bracelets of gold next to their bare skin: which deuise and ornament of the arm

is called Dardanium, because the inuention came from the Dardanians: like as the fine golden carkanets Viriæ, we tearme Celticæ; and the necke-laces of gold Virioliæ. Celtibericæ. Oh the monstrous disorders that are crept into the world! But say that women may be allowed to weare as much gold as they will, in bracelets, in rings on euery finger and joynt, in carkanets about their necks, in earrings pendant at their ears, in staies, wreaths, & chinbands; let them haue their chains of gold as large as they list vnder their arms or crosse ouer their sides, scarce-wife, be gentlewomen and mistresses at their collars of gold, beset thicke and garnished with masse pearls pendant from their necke, beneath their waist; that in their beds also when they should sleepe they may remember what a weight of gold they carried about them: must they therefore weare gold vpon their feet, as it were to establish a third estate of women answerable to the order of knights, betwene the matrons or dames of honour in their side robes, and the wiuies of meane commoners? Yet me thinkes, we men haue more reason and regard of decencie, thus to adorne with brooches and tablets of gold, our youths and yong boies, and a fairer sight it is to see great men attended vpon to the baines by beautifull pages thus richly decked and set out, that all mens eyes may turne to behold them. But what meane I thus bitterly to inueigh against poore women; are not men also growne to such outrageous excessse in this kind, that they begin to weare vpon their fingers either Harpocrates, or other images of the Egyptian gods engrauen vpon some fine stone? But in the daies of the Emperor Claudius there was another difference and respect had, That none might carrie the pourtraiture of that prince engrauen in his signet of gold, without expresse licence giuen them by those gracious enfranchised slaues who were in place to admit vnto their lord the Emperor, whom it pleased them: which was the occasion I mities were happily cut off as soon as the Emperour Vespasian (to the comfort and joy of vs all) came once to the crowne: for by an expresse edict, he ordained, That it might be lawfull for any person whatsoever to haue the image of the Emperour in ring, brooch, or otherwise without respect. Thus much may suffice concerning rings of gold, and their vlage.

To come now to the next mischief that is crept into the world; I hold that it proceedeth from him who first caused a denier of gold to be stamped: although, to say a truth, I know not certainly who he was that deuised this coine. As for the people of Rome, sure I am that before king Pyrrhus of Epirus was by them vanquished, they had not so much as siluer money stamped and currant. Well I wot also, that in old time the manner was to weigh our brasse by the Asse, which was a pound weight, and thereupon called As Libralis; and yet at this day, Libella: like as the weight in brasse of two pound, they named Dipondius [As.] And hereupon came the custome of adjudging any fine or penaltie vnder the tearme of [Æris grauis] that is to say, of brasse Bullion or in Masse. From hence it is also, that still in reckonings and accounts whatsoever hath bin laid out or deliuered, goeth vnder the name of Expensa [id est, Expences] as a man would say, weighed forth, because in times past all payments passed by weight. The Latines likewise vse the nowne Impendia, for cost bestowed, or the charges of interest in vsurie about the principall; euen as the verbe Dependere, betokeneth (to pay) because payments ordinarily were performed by poise. Moreover, the vnder treasurers of war, or paymasters in the camp, were in ancient time named Libripendes, for weighing out vnto the souldiers their wages; and their very pay thereupon was called Stipendium, from whence commeth Stipend, a word commonly receiued. According to which manner and custome, all buyings and sellings at this day which passe with warrantise, are vsually performed by interposition of the ballance, which serueth to testifie the realitie of the contract and bargain on both parts.

Touching brasse money, Servius Tullius a king of Rome, caused it first to be coined with a stampe, for before his daies, they vsed it at Rome rude in the masse or lumpe, as Remus mine author doth testifie. And what was the marke imprinted thereupon? euen a sheepe, which in Latine they call Pecus: and from thence proceedeth the word Pecunia, that signifieth money. And note here by the way, that during the reigne of that king, the best man in all Rome was vallew to be worth in goods not about 120000 Asses in brasse: and at this rate were assailed the principall houses of the city in the kings booke: and this was counted the first Classis.

Afterwards, in the 485 yere from the foundation of the city, when Q. Ogulnius and C. Fabius were Consuls, five yeares before the first Punicke warre, they began to stampe siluer money at Rome, and three severall pieces were coined. At what time ordained it was, That the Denarius

* Called also Sigalion.

* He speaketh as I take it for Denarius was a siluer piece: but he meaneth any piece of coine.

A or Denier should goe for tenne Asses or pounds of brasse money; the halfe Denier, Quinarius, should be currant for five; and the Sesterce reckoned worth two and a halfe. Now, for as much as during the first Punicke war against the Carthaginians, the city was growne much behind hand and farre indebted, so as they were not able to goe through the charges which they were to defray, agreed it was and ordained to raise the worth of the brassen money by diminishing the poise: whereas therfore the Asse weighed a pound of twelue ounces, they made the Asse of two ounces: By which deuise, the Commonwealth gained five parts in six; and the Fiscus or city chamber by that means was soone acquit of all debts. But if you would know what was the marke of this new brassen Asse: of the one side it was stamped with a two faced Ianus, on the other side with the beake-head of a ship, armed with brassen pikes. Other smaller pieces there were, according B to that proportion, to wit, Trientes, the third part of an Asse; and Quadrantes the fourth; which had the print of punts or small boats vpon them. As for the piece Quadrans, it was before time called Triuncis, because it weighed three ounces. Howbeit in processe of time, when Annibal pressed hard vpon the city, and put them to an exigent for money to maintaine the wars against him, driuen they were to their shifts and forced (when Q. Fabius was Dictator) to bring downe the foresaid Asse of two ounces vnto one. Yea, and enacted it was, That the siluer denier, which went before time for ten Asses, should be worth * sixteene; the halfe Denier or Quinare, eight; and the Sesterce foure: and by this means the State gained the one halfe full. And yet I must except the money paid to souldiers for their wages: for a Denier vnto them was neuer reckoned about ten Asses. As for the siluer Deniers, stamped they were with the pourtraiture of cohes C drawne with two horses or foure horses, whereupon they were called Bigari and Quadrigati. Within a while after there passed an act promulged by Papyrius, by vertue whereof the Asses weighed not aboute halfe an ounce. Then came Livius Drusus in place, who being one of the Prouosts or Tribunes of the commons, brought in base money, and delaid the siluer with one eight part of brasse. Touching that piece of coine, which now is called Victoriatus, stamped it was by an Act propoed by Claudius, for before his time, those pieces of money were brought out of Sclauonia, and reckoned as merchandise: and stamped it is with the image of Victorie, of which it tooke that name.

Concerning gold coined into money, it came vp threescore and two yeres after the stamping of siluer pieces: and a scripture of gold was taxed and valued at twenty sesterces, which ariseth D in euery pound according to the worth of sesterces as they were rated in those daies, to nine hundred sesterces. But afterwards it was thought good to cast and stampe pieces of gold, after the proportion of fiftie to a pound: And those, the Emperors by little and little diminished still in poise, till at length Nero brought them downe to the lowest, and caused them to be coined after the rate of five and fiftie pieces to the pound. In summe, the very source and originall of all auarice proceedeth from this money and coine, deuised first by lone and vsurie, and continued still by such idle persons that put forth their money to worke for them, whiles they sit still, and find the sweetnes of the gaine comming in so easily. But this greedy desire of hauing more still, is growne after an outrageous manner to be excessiue, and no more to be named couetousnesse, but rather insatiable hunger after gold: in so much as Septimulcius, an inward and familiar friend E of C. Gracchus, forgat all bonds of amitie, and hauing cut off his friends head, vpon promise to haue the weight of it in gold, brought the same vnto Opimius: howbeit, he poured molten lead into the mouth thereof to make it more heauie, and so together with this parricide and vnnatural murder, couened also & beguiled the Commonweale. But to speak no more of any particular citizen of Rome, the whole name of the Romanes hath bene infamous among forraigne nations for auarice and corruption in this kind: as may appeare by the conceit that king Mithridates had of them, who caused Aquilins (a Generall of theirs, whose hap was to fall into his hands) for to drinke molten gold. See what couetousnesse brings home with it in the end.

Now when I behold and consider no more but these strange names of our vessell in plate, which are newly deuised in Greeke from time to time, according as the siluer is either double or F parcell gilt, or the gold enclosed and bound within worke, I am ashamed of it; and the rather, for that in regard of these deuised names and daintie toies, such plate as well of beaten gold, as gilded only, should be so vendible and sell so deare: especially knowing as we do full well, the good order that Spartacus held in his campe, expressely commanding that no man should haue any plate of gold or siluer. A great reproch to vs Romans, that our fugitiues & banished persons should

* And therefore they were called Ratiis of Rates.

* Ordinarily the Romane siluer Denier had the letter X stamped vpon it, but these Deniers had XPI. V. S.

should shew a more nobler spirit than we our felues. *Messala* the great Oratour hath left in writing, That *M. Antonius* vsed to discharge all the ordure and filthy excrements of the body into vessels of gold; yea, and allowed *Cleopatra* likewise to do the same by her monthly superfluities, most shamefully. Noted it was among forreine Nations for excessive licentiousnesse, and that in the highest degree, that *K. Philip* of Macedony was neuer wont to go to bed and sleepe without a standing cup of gold vnder his pillow also, That *Agnon Teius* (a great captain vnder *Alexander the Great*) was giuen to such wastfull prodigality, as to fasten his shooes and pantophles with buckles of gold. But *Antony* aboue named, to the contumelie and contempt of * Nature, abused gold, and imploied it to the basest seruice that is: an act (as much as any other) deseruing pro- scription and outlawing indeed.

* Which had giuen vs gold for vessels of honour.

* For in al they were to pay 10000 talents: reck on a talent at 60 pounds, which is the lesse Article, * *Folia*, I think rather *folies*, i. bathing vessels.

* Some say 75.

But among diuers things besides, I wonder much at this, That the people of Rome, vpon the conquest of so many Nations, imposed vpon them a tribute to be paid alwaies in siluer, & neuer made mention of gold: as for example, when Carthage was subdued, & *Annibal* vanquished, the Carthaginians were inioined for 50 yeres together to make payement yerely of * [12000] pound of siluer only, and no gold at all. Neither can it be thought that there was little gold at that time to be had abroad in the world; for *Midus* and *Crasus* both, were posselt of infinit sums of gold, besides the golden plate and vessell, and other gold which he found ready wrought: and of gold, besides the golden plate and vessell, and other gold which he found ready wrought: and among the rest, certain * leaues, a Plane and a vine-tree, both of beaten gold. In the pillage also of this victory, he gaue away 500000 talents of siluer, and one standing cup that he tooke from *Semiramis*, that weighed 15 talents. And *Varro* mine Author saith, That the poise of the Egyptian talent ariseth to * 80 pound. Besides, there had reigned before time ouer the Colchians, *Silauces*, and one *Eubopes*: who hauing newly broken vp a piece of ground in the Samnians country, is reported to haue gotten out thereof great store of siluer and gold: notwithstanding that the whole kingdome is renowned for the golden fleeces there. And verily this prince had the arched and embowed rouses of his pallace made of siluer and gold: the beames and the pillars also sustaining the said building, yea, the jambes, posts, principals, and standards, all of the same metall; namely, after he had vanquished *Sesofres* K. of Egypt, so proud a prince, that (as *Chronicles* make mention) he was wont euery yere to haue one or other (as the lot fell out) of those kings who were his tributaries and did homage to him, for to draw in his charriot like horses, when he was disposed to ride in triumph. These and such like things haue bin thought K fabulous tales: but haue not our Romans done semblable acts, which the age and posterity hereafter wil think incredible? *Casir* afterwards Dictatour, was the first that in his Edileship, when hee exhibited a solemne memoriall in the honour of his father departed, did furnish the whole Cirque and shew-place, with all things meet for such a solemnity, of cleane siluer; in so much as the chasing stauces and bore-speares were of siluer, wherewith the wild beasts were assaulted: a spectacle neuer scene before. And not long after, *C. Antonius* set forth his plaies (when he was Edile) vpon a stage or scaffold of siluer: after whose example, diuers free cities and townes of the empire haue don the like. Semblably, *L. Murana* and *C. Caligula* the Emperor, erected a frame or pageant to go and rife vp of it selfe with vices, supporting images and jewels in the place of publick pastimes, which was thought to haue in it 124000 pound of siluer. *Claudius Casir* who succeeded Emperor after him, when he rode in triumph for the conquest of Brittain, among other crownes of beaten gold, shewed two that were principall, the one of 7 pound weight, which high Spaine had giuen to him; the other weighing 9 pounds, sent vnto him as a Present from that part of Gaule which is called *Comata*: as appeared by the inscriptions and titles which they bare. *Nero* his successeur, to shew vnto *Tyridates* king of Armenia what abundance of treasure he had, kept the great Theatre of *Pompeius* for one whole day covered all ouer with gold. But what was that furniture in comparison of his golden house, which tooke vp a great part of the city, and seemed (as it were) to be compassed about. In that yere when *Sex. Iulius*, and *Lucius Aurelius* were Consuls (which fell out to be 7 yeres before the third Punicke warre) there was found in the treasury or chamber of Rome, * 700026 pound weight of gold, in Masse or Ingots; M of siluer likewise in Bullion, 92000 pound weight; besides the coine and ready money, which amounted to 375000 Sesterces. The yere wherein *Sex. Iulius* and *L. Marcus* were Consuls, the wit, in the beginning of the sociall warre against the Marcians and other Romane allies, the treasure of Rome arose to 846 pounds of gold in Bullion. *C. Casir* at his first entrance into the

* According to *Budens*.

A the city of Rome, when the ciuill war between him and *Pompey* was begun, took out of the citie chamber 15000 wedges or ingots of gold, 35000 lumps or masses of siluer, and in ready money 40000 Sesterces. And to say a truth, neuer was the city of Rome wealthier than at this time. Moreover, *Amplius Paulus*, after he had defeated and vanquished *Perseus* the Macedonian King, brought into the Treasurie of the Citie a bootie of 3000 pound of gold in weight. After which time the common people of Rome had neuer any tributes or taxes leuiued of them by the State.

* According to *Budens*.

Moreover, this is to be obserued, That after the ouerthrow and destruction of Carthage, the beames began first to be guiled within the temple of the Capitoll, whiles *Lu. Mummius* was Cenfor. And now adaies you shall not see any good house of a priuat man, but it is laid thicke and covered ouer with gold. Nay, the brauery of men hath not staied so, but they haue proceeded to the arched and embowed routs, to the walls likewise of their houses, which we may see euery where as wel and thoroughly guiled as the siluer plate vpon their cupbours. And yet *Catulus* was diuersly thought of in the age wherein he liued, because he was the first that gilded the brazen tiles of the Capitoll.

Touching the first inuentors, as well of gold, as also of all other mettals to speake of, I haue already written in my seuenth booke. As for the estimation of this metall, that it should be chiefe as it is, I suppose it proceedeth not from the colour, for siluer hath a brighter lustre, more like to the day, and in this respect more agreeable to the ensignes of war than that of gold, because it glittereth and shineth farther off: and hereby is their error manifestly conuincied, who commend the colour of gold, in this regard, that it resembleth the starres: for well it is knowne that their colour is not reputed richest, either in precious stones or in many things besides. Neither is gold preferred before other mettals, because the matter is more weighty or pliable than the rest; for lead surmounteth it, both in the one and the other. But I hold, that the reputation which it hath, commeth from hence, That it alone of all things in the world, loseth nothing in the fire: for say that a house be burnt wherein gold is, yet it wasteth not: and looke what gold is committed to the funerall flames, it consurneth not with the dead body, but is found all againe among the ashes. Nay, the oftener it hath bin in the fire, the better it is, and the more refined: in such sort, that the best gold which they call *Oryzum*, is knowne by this, if it be of the same deep red colour that the fire is wherein it is tried. And a principal argument this is of fine gold, if it hardly be kindled & set on fire red hot. Moreover, this is wonderful in the nature of * gold: that in a fire made of light straw or chaff, it wil most quickly become red hot and melt; put the same among the hottest burning coles that can be of wood, vnneath or hardly wil it yeeld to the heat thereof and resolute: as also for the purifying thereof, it ought to be melted with lead. A greater reason there is besides that maketh gold so precious: for that with vse or handling there is little of it lost and wasted; whereas siluer, brass, and lead, if you draw any lines therewith, colour as they go and leaue somewhat behind: they soile their hands also who occupie the same with the substance and matter that sheddeth from them.ouer and besides, there is not a metall will be driuen out broader with the hammer, or diuide easily into more parcels than gold, in so much as euery ounce of it may be reduced into 750 leaues, or more, and each one of them foure fingers large euery way. The thickest gold soile beareth the name at this day of *Prænestium*, for that the Image of Fortune at *Prænest* is aboue all other most richly guiled. The next thereto in goodnesse is the soile or leafe of gold named *Quæstoria*. In Spaine they vse to call by the name of *Strigiles*, the small pieces of that fine gold which is found naturally alone aboue all the rest either compact in some masse, or in manner of sand or grauell; whereas all other parcels of gold taken out of the Mines, need to be fined and brought to their perfection by the meanes of fire. But this gold that I speake of, is gold presently at the first, and no sooner is found, but the matter thereof by and by is consummat and accomplished. Lo how gold is found in the owne nature pure and perfect! As for the other manner of finding and fining gold, whereof I meane to speake anon, it is forced (as it were) and vpon constraint. But aboue all other properties to commend the goodnesse of gold, this especially is to be obserued, That there is no rust nor canker, no nor any filth besides breeding of it selfe therein, which is able either to corrupt the goodnesse, or diminish the weight and substance thereof. What should I say how firme it continueth and dureable against salt and vineger, scorning all their iniuries: and yet otherwise their moisture is able to eat into any other mettals, yea, and to consume and tame all things else

* This haply may be true in ore, for otherwise in fined gold it is not so: & the finer that it is, the stronger fire it asketh to be melted by.

*or rather cor-
rupt

* Manifesta-
buntur ad
omen
* or rather
Araum, Graec.
αἰνῶν.

A Conduits, and those are to be paved by degrees one vnder another. Besides, there is a kinde of shrub or bush, named Vlex, like to Rosemarie, but that it is more rough and prickly, and the same is there planted because it is apt to catch and hold whatsoever pieces of gold do passe beside. The sides moreover of these canals or trenches, are kept in with planks and boards, and the same borne vpon arches pendant through steep places, that by this means the canale may haue passage and void away at length out of the land into the sea.

Lowhat a worke it is to search out and meet with gold I and verily by this means Spaine is grown mightily in wealth, and full of treasure. In the former work also of sinking pits for gold, an infinit deale of labour there is to lade out the water that riseth vpon the workemen, for feare it choke vp the pits, for to preuent which inconuenience, they deriue it by other drains. As touching the gold gotten by cleauing and opening mountains (which kind of work I called Artu-
B gia) it needeth no trying by the bloome-smithie, for fine it is naturally & pure of it selfe: and found there be whole lumps and masses of this kind, and in this manner. In pits likewise we shal haue such pieces, weying otherwhiles ten pounds and more. These grosse and massie pieces of gold, the Spaniards call Palacra or Palacranca: but if they be but small, they haue a pretie name for them, and that is Baluces. But to come again to the shrub or plant Vlex, whereof I spake before, after it is once dried, they burn it, and the ashes that come thereof, they wash ouer turfs of greene grasse, that the substance of gold may rest and settle therupon. Some writers haue reported, that the countries of Asturia, Gallæcia, and Lusitania, were wont to yeeld euery yere 20000 pound weight of good gold gotten after this sort: yet so, as they all doe attribute the greatest proportion thereof to Asturia: and there is not any part of the world comparable to it either for
C so great fertility of mines, or so long continuance, holding out as they do so many ages. As for Italy, our antient Senat in old time thought good to haue it spared, and they made an Act, forbidding expressly to break any ground for mines: otherwise there is not, I dare be bold to say, a land more plentifull in gold and other mettals. And here there commeth to my remembrance an Act of the Censors extant vpon record, as touching the gold mine of Ictimulus, a towne in the territory or countrey of Vercelles; which Act contained an inhibition, that the publicanes who ferm'd that mine of the city, should not keepe aboute fise thousand pioners together at worke there.

Moreouer, there is one deuise to make artificiall gold, to wit, of Orpiment, a minerall digged out of the ground in Syria, where it lyeth very ebbe, and the painters vse it much: in colour it resembleth gold, but brittle it is in substance like as glasse stones. And verily *Caligula* the Emperour (a couetous prince and greedy of gold) was in great hope to extract gold out of this minerall, and thereupon caused a huge masse thereof to bee boiled, melted, and calcined: and in truth he made therof most excellent gold, but in so small a quantity, that it would not quit for the cost & pains about it; in somuch, as he lost by the bargain: yet his auarice was such, as he would needs make the experiment, notwithstanding that orpiment it selfe was worth foureene deniers the pound: but he sped so bad, that no man afterwards would go about to try the like conclusion.

Gold vntried is of a diuers touch; & generally there is not any but it hath siluer in it more or lesse: for in some places, the gold ore hath a tenth part in weight of siluer, in others a ninth, and there is again that hath a mixture of the eight part. In one gold mine within France, called Albicrarente, there is found in gold the 36 part of siluer, and no more: such mettall is not elſwhere found to my knowledge, and therefore it passeth all other whatſoeuer.

There is a base kind of pale and whitish gold, which hath in it a fifth part of siluer: and whosoever this is found, they call it Electrum. Such mettall lieth commonly in trenches and pits minerrall, and namely with that gold which I called before Canaliense. Moreover, there is an artificiall Electrum made, namely, by intermingling gold with siluer according to the naturall mixture, but if it exceed that proportion of one part to fve, it wil not abide the hammer and the anuill. This white gold also hath bin of great account, time out of mind, as may appeare by the testimony of the Poet *Homer*, who writeth, that the pallace of prince *Menelaus* glittered with gold, electrum, siluer, and yvorie. At *Lindos* (a city within the Island of the *Rhodians*) there is the temple of *Minerua*, wherein Lady *Helena* did dedicate vnto that goddesse a cup made of Electrum: and as the story saith moreover, it was framed and wrought just to the proportion & bignesse of one of her own paps. This property hath Electrum naturally, To shine by candle-light more cleare and bright than siluer. This singulartie and proper vertue it hath besides (if it

be naturall) to discover and shew any poison: for be there poison in a cup of this mettall, a man shall see therein certain semicircles resembling rainbows, & perceiue besides the liquor to keep a hissing and sparkling noise as the fire doth; which 2 signs do certainly giue warning of poison.

As touching statues of gold: it is said, that the first image that euer was knowne to be solid and massie, was that of the goddesse Diana surnamed *Anaitis*, which stood within a temple dedicated to her, which in my Cosmography I haue signified vnder that name, and this was before any brassen statue of that making. This temple in those parts was accounted in regard of the diuine power of this goddesse, most holy and sacred; and such a kind of Image they call *Holophraton*. Howbeit, as religious as the church was, *Antonie* in his voiage into Parthia, spoiled it, and carried away the said Image. And here I cannot forget to put downe a pretty speech, which (by report) an old gentleman and souldier of Bononie deliuered to *Augustus Caesar*, at what time as he was entertained as a guest and supped with the said Emperour at his owne table: for beeing asked by *Augustus*, whether it was true, that the man who first violated this goddesse, died blind, lame, and bereaued of all his limps: he answered, Yea sir, that it is; and that me thinks you should know best, for euen now a leg of his you haue at supper, and *all your wealth besides is come to you by that faccage.

* For *Augustus Caesar* desired *Antonie*, & was mightily enticed by the spoils of him. * And yet other writers say, that *Al Grece* erected that image to honor him withall.

The first man that * caused his owne statue to be made of gold, and the same solid & massie, was *Gorgias Leontinus* the great Orator and Rhetorician, which (to immortalize his owne name) he set vp in the temple at Delphos; and this was about the 70 Olympias: whereby we may see what wealth and gain was gotten in those daies by teaching Oratory and the Art of Rhetorick.

But to come at length vnto the medicinable vertues of gold: certes, diuers waies effectually it is in the cure of many diseases: for first of all, foueraign it is for green wounds, if it be outwardly applied: and if yong children weare it about them, lesse harme shal they haue by any sorcery, witchcraft, or enchantments, that be brought into the house, or practised where they are: howbeit, gold it selfe if it be carried ouer one, is thought to be mischieuous and hurtfull: for in that sort it doth harme also to hens that coue and sit, or ewes that are great with lambe and ready to yeane. But what is the remedy to preuent this mischiefe? marry take the same gold that is thus brought in place to do a shrewd turn, wash it well, and with that water besprinkle them that you would cure. Moreover, gold may be torrifed once with cornes of salt taken to the triple weight thereof; and a second time with two parts of salt, and one of the stone which they call *Schistis*: by this manner of preparing, all the venomous and hurtfull quality that is therein, it doth transfuse into the other things that be calcined or burnt therewith (which must be done vpon an earthen vessell) and it selfe continueth pure and incorrupt still. Now the rest of the ashes separated from the gold, saued in an earthen pot, and incorporat with water into the forme of a liniment, healeth the foule tetter that appeareth in the face: it cureth the same disease also, if the face be rubbed with the said ashes and beane floure together, but then it must be afterwards washed off. These ashes thus prepared, cure the hollow vlcers called fistuloes, and also the hæmorrhoids: but in case you put thereto the * floure of salnitre, it healeth corrupt and putrified vlcers, & such as stink again: the same being boiled in hony with *Nigella Romana*, doth gently loofe the belly, if the naual be anointed therewith. To conclude, *M. Varro* saith, that gold wil cause werts to fall off.

CHAP. V.

¶ Of *Borras*, and the six medicinable properties that it hath: the wonderfull Nature thereof in sodring one mettall with another, and in bringing all mettals to their perfection.

Chryfocolla, called otherwife *Borax*, or green earth, is found in those pits and mines that are digged for gold: and a humor it is at the first, running along the veine of gold, which as it thickneth and groweth muddy, congealeth at length by the extreame cold of winter to the hardnesse of a pumish stone. Howbeit, the best kind of *Borax* we haue known by experience to be ingendered in mines of brasse; and the next to it for goodnes, in those of siluer: otherwhiles also men meet withal in leaden mines, but the same is not so good as that which the gold mines doe yeeld. Moreover, there may be an artificiall *Borras* made in all the said mettall mines, but far inferior to that which is naturall; namely, by letting water gently to run among their veines all winter long vntill the month of Iune: the which water, in Iune & Iuly wil grow to be dry and prooue

A prooue *Borras*; whereby a man may perceiue plainly, that *Borras* is nothing els but a putrified vein of mettall. But this Minerall, if it be of the own kind, differeth from this other which is made by art of man, especially in hardnesse, for much harder it is, and called the yellow *Borax*, or in Latine *Lutea*; and yet it may be brought to that colour by artificiall means, namely by dying with an herb called likewise * *Lutea*: for of this nature it is, that it will take color & drink it in, as well as linnen or woollen. But for to dresse and prepare it for the purpose; first, they pin it in a mortar, then they let it passe through a fine seer, afterwards it is ground or beaten againe, & so it is seerced a second time through a finer seer; whatsoeuer passeth not through, but remaineth behind, must be punned once more in a mortar, & so ground into a small powder: and euer as they haue reduced any into powder, they put it into sundry pots or cruets: then they let the same to lie enufed and soked in vinegre, till the hardnes therein be wholly resolued, which done, to the mortar it goeth againe, where it must be thoroughly stamped for altogether, and so when it is well washed out of one trey or boll into another, they let it dry: after it is thus prepared they giue it a colour with the herb *Lutea* (before said) and alum de plume: and thus you see it must be painted and died first, before it selfe serue to paint or die withall. And herein it skilleth much how pliable & apt it is to receiue the said color; for vnlesse it haue willingly taken a deep tincture, they vse to put thereto *Schyttanum* and *Turbystum*, for so they call two drugs which serue to make it take a color the better. This *Borax* thus died, our painters vse to call *Orobiris*: and two kinds they make thereof, to wit, *Lutea*, the yellow, which they keep for the powder or colour * *Lomuntum*; the other liquid, namely when the said grains or pellets be resolued into a kind of moisture, like drops of sweat. This *Borax* of both sorts, is made in the Isle *Cypros*. The principall and best of all other comes from *Armenia*: in a second degree, from *Macedonia*; but the greatest quantity therof is in *Spain*. The excellent *Borax* is known by this mark especially, If it resemble perfectly in colour the deep and full green that is in the blade of corn wel liking. In our time, & namely in the daies of the Emperour *Nero*, the floore of the grand-cirque or shew-place at *Rome*, was seene paved all ouer with greene *Borax*, at what time as he exhibited goodly fights and pastimes to the people; and namely, when he meant himselfe to run a race with chariots, and took pleasure to driue his horses vpon a ground sutable to the colour of the cloth or liuerie that he * wore himself at that time: and in truth, a world of workemen he brought thither to lay the said paving. All the sorts of *Borax* may be reduced into three distinct kinds: to wit, the rough, valued at seuen denarij a pound; the meane, which is worth fise; and the poudred *Borax*, called also the grasse-green *Borax*, which costeth not about three deniers the pound. As for the sandie or poudred *Borax*, the painters before they vse it, lay the first ground vnderneath it, of vitrioll and * *Parætanium*, and then the *Borax* aloft: for these things take it passing well, & besides giue a pleasant lustre to the color. This *Parætanium* (for that it is most fattie & vnctious by nature, & for the smoothnes besides most apt to sticke too and take hold) ought to be laid first, vpon which must follow a course of the vitrioll ouer it, for feare least the whitenes of the foresaid *Parætanium* do pall the greenesse of the *Borax*, which is to make the third coat. As for the *Borax* called *Lutea*, some thinke it tooke that name of the herbe *Lutea*; which also, if it be mixed and tempered with azure or blew, maketh a greene, which many do lay and paint withall in stead of *Borax*; which as it is the cheapest greene of all other, so is it a most deceitfull colour.

* Sometime it is to be weld or yellows.

* *Lomuntum*, See the beginning of the next booke.

* For some were called *L'assina* that ran for the pitte, i. Green-kins.

* A kind of chalkie earth, or clay, growing neare the sea shore.

E *Borax* doth not onely serue painters, but is much vsed also by Physicians; and namely, to mundifie wounds and vlcers, if it be made into a salve with wax and oile: and dry as it is of it selfe in powder, it hath a desiccative qualitie, and doth conglutinat and sodder very well: being mixed with hony into an electuarie, they giue it inwardly vnto those that haue the squinancie, and cannot draw their wind but sitting vpright, and so it prouoketh vomit. Moreover, it entreteth into many collyries or cie-salues, especially to consume and discusse the cicatrices and filmes growing within the cis: it goeth also to the making of green plasters, such as be applied either to mitigat paine, or to heale the skin. And verily this *Borax* not artificially died, thus employed in Physick, the Physicians call *Acefin*; and is not that which men name *Orobiris*, and which F receiueeth a tincture from mans hand.

Furthermore, there is a *Borax* or *Chryfocolla*, that goldsmiths occupie especially about sodring their gold: & of this kind al the rest take the name also of *Chryfocolla*. This is altogether artificiall, and is made of Cyprian *Verdegri* or rust of brasse, the vrin of a yong lad, and salnitre, tempered all together & incorporat in a brassen mortar, stamped with a pestill of the same met-

* Whereupon it took the name *Chryfocolla*, i. Gold-glasse, or Gold-glaze.

tall. Our countrymen in Latin call this Borax Santerna: with it they vse to fodder that gold especially which standeth much vpon siluer, and is therefore called Argentofum. This kind of gold may be known thus: namely, if it will look bright and cleare vpon the putting of Santerna to it: whereas contrariwise if it hold much vpon brasse (and such gold is named Aërosum) it will haue no lustre at all, but looke dim and dusky vpon the laying of Borax vpon it, and besides will hardly be sodred. But to fodder such gold, there is a proper glue or fodder made, with an addition of gold and the seuenth part of siluer to the rest abouenamed, and all the same stamped and vnited together. And since I am entred into the feat of sodring, it were very meet and conuenient to annex vnto this present discourse, all things els concerning it, that we may vnder one view behold the admirable works of Nature in this kind. The fodder of gold then is Borax, which I haue shewed already. Iron is sodred with the stiffe potters cley Argilla. Brasse ore or Chalmine called Cadmia, serues to vnite and knit pieces of brasse together in masse. Alume is good to hold plates of brasse one to another. Rosin doth fodder lead, and besides is the proper cement of marble: but black lead will join well, by the means of the white: and one piece of tin with another, with the helpe of oile. In like manner, tin will hold vser with a fodder of brasse file-dust, and siluer, with tin. Both brasse or copper, & also yron ore, melt best with an yron made of Pinewood, as also with the Papyr reed in Egypt: but contrariwise gold soone it melts with a fire of chaffe and huls. Quicklime will catch an heat and burne, if water be cast vpon it, and so doth the * Thracian stone: but the same oile doth quench. Fire is most of all extinguished and put out with vinegre, with birdlime, and the white of an egg. No kind of right earth will burn light or flame. Finally, charcole which hath bene once one fire, then quenched and afterwards set a burning againe, is of more force and giueth a greater heat, than that which commeth new from the earth.

CHAP. VI.

¶ Of Siluer, Quick-siluer naturall, Stibium, or Alabastrum. The drosse or refuse of siluer, and litharge of siluer.

IT followeth by good order to write in the next place, of siluer mines, from whence proceedeth the second rage that hath set men a madding: where first and formost this is to be noted, that there is but one means to find siluer, and that is in pits sunke of purpose for it: neither is there any shew at all of siluer to giue light thereof, and to put vs in hope of finding: no sparkes shining, like as there be in gold mines which direct vs to it. The earth that engendreth the veine of siluer, is in one place reddish, in another of a dead ash color. But this is a generall rule, that it is not possible to melt and trie our siluer ore, but either with lead, or the veine and ore of lead. This minerall or metall they call * Galena, found for the most part neer to the veins and mines of siluer. Now by the means of fire, when these are melted together, part of the siluer ore setteth downeward and turneth to be lead, the pure siluer floteth aloft, like as oile vpon water. In all our prouinces, yea and parts of the world to speake of, there be mines of siluer to be found: howbeit the fairest be in Spaine, and yeeld the finest and most beautifull siluer: and the same also like as gold, is engendred in a barraine soile otherwise and fruitlesse, and euen within mountains: look also where one vein is discouered, there is another alwaies found not farre off: which is a rule obserued not in mines of siluer only, but also in all others of what metalls soeuer, and hereupon it seemeth that the Greekes doe call them * Metalla. And verily, strange it is and wonderfull, that the mines of siluer in Spaine which were so long agoe begun by Anniball, should continue still as they do, and retaine the names of those Carthaginians who first found, discouered and brought them to light: of which, one named then Bebelo, & so called at this day, yeelded vnto Anniball daily 300 pound weight; which mine euen at that time had gone vnder the ground and hollowed the mountain a good mile and a halfe: and all that way the Aquitans at this day standing in water, lade the same vp, labouring night and day by the candle or lampe-light, euery man in his turne, and during the burning of a certaine measure of oile, in such wise as they diuert the water from thence, and make a good big riuer thereof, to passe and run another way. A veine of siluer which lieth but ebb within the ground, and is there discouered, the miners call Crudaria, as it were a raw vein. In old time those that digged for siluer, if they met once with allum, were wont to giue ouer their worke and seeke no farther: but of late daies it happened, that vnder alume there was found a veine of white brasse or laton, which fed mens hopes still,

* Some take this for Tin-glasse.

* Which some take for pit-cole, or sea-cole rather, such as commeth from Newcastle by sea: or rather a kind of yeast.

* or, Molybdaena.

* quasi vñ z'ma, one after another.

A and cause them now to sink lower, and neuer rest so far as they can dig. And yet there is a damp or vapor breathing out of siluer mines, hurtfull to all liuing creatures, and to dogs especially. Moreover, this point is well to be marked, that gold and siluer both, the softer that they be and tender, the better they are esteemed: and siluer being white as it is, most men maruell how it commeth to passe, that if one rule paper or any thing therewith, it will draw black lines & fully as it doth.

Furthermore, within these veins and mines abouesaid, there is a certaine stone found which yeelds from it an humor continually, & the same continues alwaies liquid: men call it * Quick-siluer (howbeit being the bane and poison of all things whatsoeuer, it might be called Death-siluer well enough) so penetrant is this liquor, that there is no vessel in the world but it will ear and breake through it, piercing and passing on stil, consuming and waisting as it goes: it supports any thing that is cast into it, and wil not suffer it to settle downward, but swim aloft, vnlesse it be gold only, that is the only thing which it loveth to draw vnto it and embrace: very proper it is therefore to refine gold; for if gold and it be put together into earthen pots, and after often shaking be poured out of one into another, it mightily purifies the gold & casts forth all the filthy excrements thereof; and when it hath rid away all the impurities and grosse refuse, it selfe ought then to be separated from the gold: for which purpose poured forth the one & the other ought to be, vpon certaine skinned leather well tewed and dressed vntill they be soft, through which the quick-siluer may passe: and then shall you see it stand in drops vpon the other side like sweat sent out by the pores of our skin, leauing the gold pure and fine behind it: and verily the affinitie betwixt gold & quick-siluer is so great, that if any vessels or pieces of brasse are to be gilded, rub the same ouer first with quick-siluer before the gold soile be laid on, it will hold the same most surely: many this one difcommodity there is in it, that if the leaues of gold be either single or very thin, the whitenesse of the quick-siluer will appeare through, and make the gilding more pale and wan: wherefore our cunning goldsmiths who would make their Chapmen to pay for their plate as double gilt, when it is indeed but thin laid and single, and so picke their purses, set a rich and deep colour vpon their work for the time, by laying vnder the gold in stead of quick-siluer naturall, the white of an egg, and then vpon it artificial quick-siluer named Hydragryum, whereof I purpose to write in place conuenient. And to say a truth, the right quick-siluer which is of the own kind, is not commonly found in great plenty.

D Ouer and besides, within the same mines and among the veins of siluer, there is found a minerall, which to speake properly is a stone concrete of a certain scum or some, white and shining, howbeit not transparent, which is called by some Stimmi, by others * Stibium, Alabastrum, or Larbason: and hereof there be two kinds, the male and the female; but the female Antimony or Stibium is the better esteemed: for the male is more rude, rough, and rugged, & yet for all that not foweighty, bright and radiant; besides that, it is more charged with sand: whereas the female contrariwise shineth and glittereth plentifully, being also brittle & tender, apt to cleaue easily into plates or flakes, and not to breake into lumps and gobbets.

Touching the vertues of Stibium pertinent vnto physick, astringent it is and refrigerant, but a principal and peculiar medicine to be employed about the eyes; for therupon it was that most men called it Platyophthalmion, for that being put into those ointments that are to * beautifie the eyes of women, (named thereupon Calliblephara) it seemes to extend the compasse of the eyes, and make them appeare open, faire, and * large withall. Antimonie puluerised and incorporat with the powder of frankincense, by the means of gum withall, staith the flux of humors into the eyes, and healeth the fretting and exulcerations incident thereto: being otherwise a proper medicine to staunch the blood that gusheth or issueth from the braine. But for to stop the bleeding of any fresh wound, the powder of Antimony alone is thought to be more effectual: all if the place be strewed withal: which also is a singular thing to heal the old bitings of dogs. It cureth moreover any burn occasioned by fire, in case it be tempered in some conuenient suet and wax, with Litharge of siluer, and Ceruse or White lead, and so reduced into a salue. But for to prepare Antimonie aright, it ought to be well lured all ouer with a certain kinde of paste made of Cow-dung, and then dunged and calcined in an ouen; which beeing done, to bee quenched with Womans milke, and then stamped and brayed very well in a mortar, putting thereto raine water also among, and euer and anon the troubled water ought to be transfused into a vessel of brasse, and clarified therein together with Sal-nitre. As for that which settled in

* or Life siluer.

* We call it, Antimonium.

* And therefore Jon called it, *Antimonium* *quintessentia*, when he reckons vp the deuices that *Quintessentia* had to paint and trim her selfe.

* Which was caused a grace in old time, as may appeare by Homer, who giueth vnto *Quintessentia* the Epithet of *beaute*, (*id est*) broad eyed, as is a Cow or Heifer.

the bottome of the mortar, is held to be the droffe and dregs thereof, standing most vpon lead, and is throwne away as good for nothing: but the pot or vessell whereinto the troubled water afore said was poured, after it is well couered and stopp'd with a linnen cloth, must be suffred to stand all night to take a setling; and the next morrow that which floteth aloft is to be poured out by little and little, and the rest of the liquor to be soked forth with sponges, and separated from the Antimonie. Now, that which resteth in the bottome is taken to be the floure of Antimonie, and so called; which they lay forth in the Sun a drying, couered with a fine linnen cloth, that it should not be ouermuch dried: which done, they beat this fine floure againe in a mortar, and so reduce it into trochiskes. But in this operation of preparing antimonie, about all things regard would be had in the burning thereof, that it be not ouermuch calcined, and so turne into lead. Some in the burning of antimonie vse not dung, as is before said, but rather lap the same about with some grease or tallow: others, after it is well beat and punned, streine it with water through a threefold linnen cloth, & cast away the dregs remaining behind: but the liquor that passed through, they poure out of one vessell into another, and the residue alwaies they gather and saue, which they mix in the composition of plaisters and eie-salues, or collyries.

As touching the droffe or refuse in siluer, the Greeks call it Helcysma: the nature thereof is restrigent & refrigeratiue: it entreteth into plaistres like as lead ore doth (which is named Molybdæna, and whereof I intend to write in my treatise of lead) especially those that are made to heale cicatrice, and skin. Also being injected by way of clistere with oile of myrtles, it cureth teneffms and dysenteries. It is vsed much also in those lenitiue and vntuous plaistres named Linpate, and serueth likewise for the excrecence of proud flesh in vlcers, & for those exulcerations which come of rubbing and fretting, or the running sores and scalls in the head.

Within the mettall mines afore said there is ingendred another mineral, known by the name of Spuma argenti, [i.e. the some of siluer] commonly called litharge, & three sorts there be found of it. The best litharge, of gold, which they call Chrystitis: the second, of siluer, named Argyritis; and a third of lead, which is Molybditis: and many times all these kinds to distinct in color, are found in one and the same lump or puffed loaf of litharge. The best litharge is brought out of the region Attica: the next in goodnesse comes from Spain. Litharge of gold, named Chrystitis, is made of the very mine and vein of siluer, Argyritis, of siluer it selfe; and Molybditis, of the lead which is melted with the siluer: as wee may see at Puteoli, where great store of it is made, and of that place took the name Puteolana. All the sorts of them are made, after that the mettall or matter appropriat vnto them, is thoroughly melted and tried; for it runneth downe from the vpper pan into that vnderneath, out of which it is taken vp with iron broches; and to the end that it might be of a small weight, some wind it about the broch in the very flame of the furnace; and as it may appeare by the very name, it is no other thing but the scum of the ore, or mettall boiling and melting ouer the furnace: from droffe it differeth as much as scum or froth aboue, may from dregges or lees beneath: and as the one is an excrement cast vp from a matter while it is purging it selfe, so the other is the refuse or grounds thereof after it is purged and settled. Howbeit many there bee who make but two kindes of this some or litharge; the one

* or rather,
Peumene

* Spuma argen-
* or rather,
Stercoris.

* Rumpuntur.

* Sterefitis, as it were solid and massiue; the other * Peumene, as one would say, puffed vp and full of wind. As for the third named Molybdæna, they reckon as a thing by it selfe, to be treated of in the discourse or chapter of lead. Now the litharge abovesaid ought for the vse that it is employed about, for to be prepared in this manner: first the lumps afore said are to be broken into small pieces as big as Hæfel nuts, and set ouer the fire againe: thus when it is once red hot by the blast of bellows, to the end that the coles and cinders might be separated one from another, there is wine or vinegar cast vpon it, both to wash, & also withall to quench the same. Now if it be Argyritis, to the end it may look the whiter, they vse to break it to the bignes of beans, and giue order to seeth it in water within an earthen pot, putting thereto wheat and barley lap-ped within pieces of new linnen cloth, and suffer them to boil therewith till they burst: which done, for six daies together they put it in mortars, washing it thrice euery day in cold water, and in the end with hot, and so at length put to euery pound of the said Litharge, the weight of one Obolus of Sal-gem. The last day of all they put it vp into a pot or vessell of lead. Some there be who seeth it with blanched beans and husked barley, and after that dry it in the sun: others think it better to seeth it with beans and white wool, vntill such time as it colour the wool no more black: then they put thereto Sal-gem, changing estoones the water, and dry it for the space of forty

A forty daies together in the hottest season of the Summer. There be againe who think it best to seeth it in water within a swines belly, and when they haue taken it forth, rub it wel with sal-nitre, and pun it in mortars, as before, with salt. Ye shall haue them that neuer bestow seething of it, but only beat it with salt, and then put water thereto and wash it. Well thus prepared as is before said, it serueth for collyries and eie-salues; in a liniment also, to take away the foule cicatrices or scars, the pimples and specks likewise that mar the beauty of women, yea & our dames wash the haire of their head withall, to make it clean and pure. And in very truth, Litharge is of power to dry, mollifie, coole, and attemper; to clenfe also, to incarnate vlcers, and to assuage or mitigate any tumors. Being reduced into the vnguent or plaisters afore said, and namely with an addition of rue, myrtles, and vineger, it is singular for S. Antonies fire. Semblably, being incorporated with oile of myrtles and wax into a ceror, it healeth kided heeles.

CHAP. VII.

Of Vermilion; and of what estimation it was among the old Romans: the first inuention thereof. Of Cinnabaris, the vse thereof in Pictures and in Physicke. The sundry sorts of Minium or Vermilion: and how it is to be ordered to serue painters.

C There is found also in siluer mines a mineral called Minium, i. Vermilion, which is a colour at this day of great price and estimation, like as it was in old time: for the ancient Romans made exceeding great account of it, not only for pictures, but also for diuers sacred & holy vses. And verily *Perrius* alledgeth and rehearseth many authors, whose credit ought not to be disproued, who affirm, That the maner was in times past to paint the very face of *Iupiters* image on high and festiual daies with Vermilion: as also, that the valiant captains who rode in triumphant maner into Rome, had in former times their bodies coloured all ouer therewith: after which manner (they say) noble *Camillus* entred the city in triumph. And euen to this day, according to that ancient and religious custom, ordinary it is, to colour all the vnguent that are vsed in a festiual supper at a solemne triumph, with Vermilion. And no one thing doe the Censors giue charge and order for to be done, at their entrance into office, before the painting of *Iupiters* visage with Minium. The cause and motiue that should induce our ancestors to this ceremony I maruel much at, and canot imagin what it should be: True it is and well known, that in these daies the *Aethiopians* in generall set much store by this colour, and haue it in great request, in so much as not onely the Princes and great Lords of those countries haue their bodies stained throughout therewith, but also the images of their gods are painted with no other colour: in which regard I am moued to discourse more curiously and at large of all particulars that may concerne it.

* To shew the bloody battle is they had fought, and what carnage of their Enemies they had made: for with out much effusion and drawing of their blood they might not triumph.

Theophrastus saith, that 90 years before *Praxibulus* was established chiefe ruler of the Athenians (which falls out iust vpon the 249 yere after the foundation of our city of Rome) *Callias* the Athenian was the first that deuised the vse of Vermilion, and brought the liely colour thereof into name: for, finding a kinde of red earth or sandy grit in the mines of siluer, and hoping that by circulation there might be gold extracted out of it, he tried what he could do by fire, and so by that means brought it vnto that fresh and pleasant hue that it hath: which was the first original of Vermilion. Hee saith moreover, That euen in those daies there was found Minium in Spain, but the same was hard and full of gritty sand. Likewise among the Colchis, in a certaine rock inaccessible, by reason whereof the people of the country were much afraid by shooting at it, to shake and driue it down: howbeit the same was but a bastard Minium. But the best simply (saith he) was gotten in the territorie of the Cilbians, somewhat higher in the country than *Elphesus* in sum, That the said Minium or Vermilion is a certaine sandy earth of a deepe scarlet colour, which was prepared in this order: first they pun and beat it into powder, and then washed it being thus puluerified. Afterwards, that which settled in the bottome they washed a second time. In which artificiall handling of Minium this difference there is, that some make perfect Vermilion of it with the first washing: others thinke the Vermilion of that making to be too pale and weake in colour, and therefore hold that of the second washing to be best. And verily

I won.

* Such are called by Homer, *μυνηρ*.

I wonder not that this colour was so highly esteemed: for euen before time during the state of Q Troy, the red earth called Rubrica was in great request, as appeareth by the testimony of Homer, who being otherwise spary enough in speaking of pictures & colours, yet commends the ships * painted therewith. The Greeks call our Minium by the name of Miltos, and yet some terme it Cinnabari: and hereof arose the error occasioned by the Indian name Cinnabari. For so the Indians call the bloody substance of a dragon, crushed and squeezed with the weight of the Elephants lying vpon them ready to die, to wit, when the said dragons are full with sucking out the Elephants blood before: and now their owne and it are mingled together, according as I haue shewed before in the story of those beasts. And verily there is not a color besides, which expressed the lively colour of blood in pictures so properly as Minium. As for that other Cinnabaris of India, it is most wholsom to be put into antidots, preseruatiues, and countrepoysons, yea H and other souerain medicines to be taken inwardly. But our physicians (belecue me) for that by an error Minium or vermilion is called Cinnabaris, vse in stead of Sanguis draconis, the said Minium, which in very truth is no better than a meere poison, as I will shew anon. Wel, in old time they vsed to draw those pictures and pourtrails which consist of one single colour, and be called Monochromata, with this colour Cinnabaris. They painted also with the Minium of Ephesus, but they gaue it ouer in proesse of time, because such colors were so costly, & required such pains ere they were prepared and made perfect. Besides, both the one and the other were thought to be ouer-quick and stinging in hand; and therefore they betook themselves to the red earth Rubrica and Sinapis, of which colours I will speake more in their proper places. But to returne again to Cinnabaris or Sangdragon, it is sophisticated and corrupted either with Goats I blood, or else with the fruit of Scruoites punned. But the true Cinnabaris or Sangdragon is worth fifty Sesterces by the pound. As for Minium or Vermilion aforesaid, K *K. Iuba* saith, that it groweth plentifully also in Carmania. And *Hermogenes* affirmeth, that *Aethiopia* likewise is not without good store of it. But from neither of those two countries is it brought vnto vs, nor (to say a truth) out of any other place but Spain. The best and most excellent is that which comes out of the territory of Sisapone in the Realm of Granada or Boetia a part of Spain, euen from a Mine of Vermilion there, which payeth a great custome, and yeelds much reuenue to the people of Rome: and there is nothing looked to more streightly for feare of fraud and imposture; for lawfull it is not there to dresse and refine it, but vncocted and crude is it brought to Rome in the masse as it lay within the vein, sealed by the sworn masters of the mine, which yeelds one K a yeare with another 10000 pound weight or much thereabout. At Rome it is washed, and a price there is set vpon it by an expresse Act, namely, That it should not be sold aboue seuentie deniers the pound. But many wayes is it sophisticated, whereby the societie and fellowship of the Publicanes, who had the ordering of it at Rome, robbed the Commonweale, and gained themselves. For a second kind there is of Minium, found almost in euerie mine of siluer & lead, the which is made of a certain stone intermingled in the veins of those mettals after the same is burnt; and not of that red stone which yeeldeth forth the humor that I named before Quicke-siluer: for this stone may it selfe by boiling be brought to siluer, but of other red pieces of earth found together with the said true Vermilion, which are knowne to be barraine and void of the right Vermilion, onely by the leaden hue which they haue: for vnlesse it be in the furnace they L neuer wax red, and then being fully burnt and calcined, they are beaten to powder. This is that Minium of a second sort, and much inferiour vnto those naturall powders and sands of the true Minium, notwithstanding very few there bee that know it. Well, this is that Minium where- with the true Vermilion is sophisticated in the Worke-houses and shops of those Publicanes, whose Companie and Fellowship had the ordering of it; like as it is corrupted also with Scy-ricum. Buphow this colour Scyricum is made I will in due place write hereafter: Certes our painters, to giue the better lustre vnto Minium, yea and to saue charges, haue deuised to lay the first ground vnder it of this Scyricum. Besides this, they haue another cast to gain (or scale rather) by Minium; for by reason that it sticketh to their pensils euer and anon, they wash it off M when they be full: this fetleth down to the bottom of the water, where it remaines, and the painters take it for their auails; but they were as good pick their masters purse who setteth them aworke. But if a man would know the true and sincere Vermilion indeed, it ought to haue the rich and fresh colour of skarlet. As for the brightnesse that is in the second sort, if a wall bee painted therewith, the naturall moisture and dankenesse that commeth from thence will abate the

A the lustre soon. And yet this Minium is taken to be but a kind of rust in mettals, either siluer or lead, as they lie in the mines. Moreouer, the minerall Vermilion found naturally in the foresaid Minium mines of Sisapona, haue no siluer mixed therewith, boyle and trie it in the fire as much as you will. Also the way to find true Minium from false, is by the means of gold: for touch the sophisticated Minium with a piece of gold red hot, it will wax blacke, whereas the true Minium keepeth colour still. [Whereby the way note, That I read it may be falsified with Quicklime:] And after the same maner, if there be no gold at hand to trie it by, you shal soon see the prooffe and find the falsehood by a plate of yron red hot, and vsed accordingly. Furthermore this hath bene obserued, That the shining beams either of Sun or Moone, do much hurt to the lustre of Vermillion, or any thing painted therewith. But what meanes to preuent this inconuenience? B Euen to vernish the wall after the colour is dried vpon it in this manner: Take white Punicke wax, melt it with oyle, and while it is hot, wash the said painting all ouer with pensils or fine brushes of bristles, wet in the said vernish. But when this vermish is laid on, it must be well chafed & heat again with red hot coales made of Gall-nuts held close to it, that the wall may sweat and frie again: which done, it ought afterwards to be rubbed ouer well with cerecloths, and last of all, with cleane linnen cloths, that it may shine again and be likke as statues of marble be. Moreouer, the workemen that are employed in their shops about the making of Vermillion, doe bind vnto their faces in manner of Maskes, large bladders, that they may take and deliuer their wind at libertie, and yet not be in danger of drawing in with their breath that pernicious and deadly powder, which is no better than poyson: yet so, as they may see out of the said C masks neuer thelesse.

To conclude, Vermillion is vsed much in limming the titles and inscriptions of roles and books, it setteth forth the letters also, and maketh them more faire and beautifull which are written in tables ouer sepulchres, be they enriched otherwise either with gold or marble stone.

CHAP. VIII.

¶ Of quicksiluer artificiall, called Hydragryum. Of gilding siluer. Of Touch-stones for to trie the diuerse kinds of siluer.

S O inuentiue is the wit of man, that there hath bene deuised in the world a means to make an artificiall Quick siluer in stead of the true and naturall, and that out of the second kind of Minium which before I called Secundarium. I should erewhile haue spoken therof in the chapter of the right Quicksiluer, but deferred it I haue no further than to this present place. First therefore this is to be vnderstood, that made it is two maner of waies, somtimes of the Minium aforesaid punned with vinegre in morters, and with pestles all of brasse; otherwhiles it is drawn by fire: for they put secundarie Vermilion in an earthen pot well luted all ouer with cley, vpon which is there set a pan of yron, & the same couered ouer the head with another pot, well cemented, vnder which earthen pot abouenamed, there ought to be a good fire made, & the same kept continually with blowing: and thus by circulation there wil appeare a dew or sweat in the vppermost vessel proceeding from the vapors resolved, which being wiped off, will in substance E shew liquid as water and in color resemble siluer: The same liquor is easie to diuide into drops, and as apt again by the lubricitie thereof, to run into an humor. This quicksiluer being by the iudgement of all men a rank poyson, I suppose, that al things reported of Minium as medicinale, be dangerous remedies, vnlesse haply that by inunction of the head or belly, it staies all flux of blood; with this caution and charge notwithstanding, that it neither perce and enter into the inward noble parts, nor touch the wound: for otherwise my conceit is, that it ought not to be used. I see that now adaies siluer only, and in maner nothing els, is gilded by the means of this artificiall Quicksiluer: whereas gold soile should be laid also after the same maner vpon vessels, or any workmanship of brasse: but (as I haue before said) the deceit & fraud that is euery where in the world, which makes men so wittie as they be, hath deuised other means of gilding, and F those of lesse dispence & charge than with any Quicksiluer, according as I haue before declared I canot thus write as I do so much of gold and siluer, but me thinks I must of necessity speak of the stone which they call in Latin * *Coricula*, which in times past was not vsually found in any place but in the riuer Tmolus, as saith *Theophrastus*: but in these daies we find it euery where: some call it Heraclius, others Lydius. Now these stones all the sort of them are but small, not

* i. The touch-stone.

exce-

exceeding foure inches in length, and two in bredth. That part or side which lies about toward G the Sunne when it is found, is thought better for touch, than the other which lieth to the earth. By means of these touchstones, our cunning and expert mine-masters, if they touch any ore of these mettals, which with a pickax or foile they haue gotten forth of the veine in the mine, will tell you by and by how much gold there is in it, how much siluer or brasse, and they will not misse a scruple: a wonderful experiment and the same infallible.

As touching siluer, two degrees there be of it, different in goodnesse, which may be knowne and discerned in this maner: For lay a piece of siluer ore vpon a scilife, plate, or fire pan of yron red hot, if it continue white still, it is very good, if the same become reddish, go it may for good too in a lower degree; but in case it looke blacke, there is no goodnes at all in it. Howbeit, there is some deceit also in this triall and experiment: which may crosse a man in his iudgement: for H let the said scilife or plate lie a time in a mans vrine, be the ore neuer so base that is laid thereupon when it is burning red hot, it will seeme to take a white colour for the time, and deceiue him that shall see it. To conclude, there is another pretty prooffe of siluer fine, if it be brought and burnished, and that is by breathing vpon it: for if the breath be seene thereupon presently as a sweat, and the same passe away incontinently as a cloud, it is a signe of perfect siluer.

CHAP. IX.

¶ Of mirroirs or looking glasses. And of the Egyptian siluer.

AN opinion it was sometime generally receiued and beleued, That no plates might be dri- I uen by the hammer, nor mirroirs made, but of the best and purest siluer: And euen this experiment is falsified and corrupted by deceit. But surely a wonderful thing in Nature this is of these mirroirs of siluer, that they should represent so perfectly the image of any thing that is before them, as they do: which must needs be (as all men confesse) by the reuerberation of the aire from the solid body of the mirroir, which being beaten backe againe from it, bringeth therewith the said image expressed therein. The same reuerberation is the cause that such looking glasses as by much vliage are polished and made subtile, doe in that sort gently driue backe the image represented within them, that it seemes infinitely big in proportion of the body it selfe: such difference there is in them, & so materiall it is, whether they reuerberate and reflect the aire, or receiue and entertaine it. Moreouer, there be drinking cups so framed and fashioned with a K number of mirroirs within, that if there do but one look within them, he shall imagine that he saw a multitude of people, euen as many images as there be mirroirs. There are deuised looking glasses also, which will represent monstrous shapes; and such be those mirroirs that are dedicated in the temple at Smyrna: but this comes by reason that the matter wherof they be made, is in that sort fashioned. For it skilleth much whether mirroirs be hollow, either in manner of a drinking pot, or of a Threidian buckler: whether the middle part lie low and inward, or rise and beare out with a bellie: whether they be set crosse and ouerthwart, or stand bias, whether they hang with their heads bending backward, or bolt vpright: For according as the matter which receiueth the image, is disposed to this or that fashion, or set one way or other, so it turneth the shadowes backe againe: for verily the said image represented in a mirroir, is nothing els L but the brightnesse and clearenesse of the matter which receiueth the same, returned and beaten backe againe. But to go through in this place with all things concerning such looking glasses, and the best known in old time vnto our ancestors, came from Brindis, and those consisted of tin and brasse tempered together. But when siluer mirroirs came in place, those went downe, and these were preferred before them. The first that made them of siluer, was Praxiteles in the daies of Pompey the great. Of late, men had this opinion of siluer mirroirs, That they would represent an image more liuely and truly, in case their backe part were laid ouer with gold.

But to return againe to siluer, the Egyptians vse a deuise to paint it, to the end that they would drinke more deuoutly, seeing their god Anubis painted within their pots. And in truth they rest contented with painting their plate, and neuer graue or chase any pieces. This deuise is growne M into such credit by the precedent receiued from thence, that the statues of siluer caried in a shew at triumphs, be nought set by, vnlesse they be also enamelled & painted black: & wonderfull it is how much more precious they are thought to be when the native brightnes thereof, is thus hid and the light quite put out or blindfolded. The manner of making this black siluer, is thus: They

A They take of siluer and sulphur vif as much of the one as the other, of Cyprian brasse or latton plates (which brasse they call Coronarium) as thin as may be, a third part: these they mix together and melt them in an earthen pot well luted all ouer with cley: and boile they must so long, vntill the lid of the pot doth rise vp and flie open of it selfe. Moreouer, siluer will look black with the yolke of an egge roasted hard and well beaten with vineger and Tripoli.

To come now vnto those that counterfeit money. Antonius whiles hee was one of the three vsurping Triumvirs, mixed yron with the Roman siluer denier. He tempered it also with the brassen coine, and so sent abroad false and counterfeit money. Others there be that make money too light (namely, vnder the lawful proportion) which is, to coin and stamp for euery pound weight of siluer 84 deniers. This enormity grew to this passe, that M. Gracidianus published a law, by B vertue whereof there was an act instituted and ordained for the prooffe and allowance of siluer deniers, what touch and what poise they should haue: by which act of his hee so pleased the Commons of Rome, that there was not a street throughout all the city, but they erected a siluer statue, pourtraied all whole in a gowne in the fauor and honour of M. Gracidianus. But strange it is, and a man would not think it, that this art and cunning deuised for the detecting of falshood and forgerie, is the only means to teach deceit and wickednesse, for many a man will giue too too much for false money: yea, and many siluer deniers for one counterfeit, well and cleanly made: to take forsooth a pattern thereby, and learne to deceiue others.

CHAP. V.

C ¶ Of excessive summes of money in mens hands. Who they were in old time that were thought richest. And when here began largesses at Rome, and money to be scattered and cast abroad to the people.

IN old time men knew no number about 100000: and therefore at this day also in stead of a million we multiply the said number by ten, and say thus in Latine, *Decies centina millia*. A hundred thousand ten times told, and so forward, * repeating alwaies a hundred thousand to the numerall aduerbe, as the sums doth amount. Vsuries, interests, and coined money haue been the cause of these multiplications: and by that occasion also came debts to be called euen vnto

D this age, by the name of *As alienum*. And thereof arose the proud name of *Diuites*, i. Rich, for great monied men were so called. Yet take this withall, That the first man that euer was knowne by that surname * *Diues*, brought a shilling to nine pence in the end, proued Baquerout, & de- feated his creditours. As for M. Crassus, one of that same house, and who gaue the same armes, would commonly say, That no man was to be counted rich, and worthie of that title *Diues*, vnlesse he were able to dispend by the yeare as much in reuenues as would maintaine a legion of fouldiers. And verily his owne lands were esteemed worth *Bis milles sesterium*, that is to say, Two hundred millions of sesterces, Roman: & setting aside *Sylla*, he was the richest Roman that euer was knowne. And yet such was his auarice, that hee could not content himselfe with that

E wealthy estate, but vpon a hungry desire to haue all the gold of the Parthians, would needes undertake a * voyage against them. And albeit by his inestimable wealth he vsurped the title & ad- dition of *Optimus* i. The best, in his time, yet (for me thinks it doth me good to prosecute stil, and inueigh against this insatiable desire of hauing more) we haue known many after him, & those otherwise of base condition, and no better than slaves newly enfranchised, to haue growne vnto greater wealth; and namely three at one time, to wit, during the Empire of *Claudius Caesar*; and those were *Pallas*, *Callistas*, and *Narcissus*, late bondslaves all to the said Emperor. But to let these men passe, as if they were lords still of worldly wealth: in that yeare wherein C. *Asinius Gallus* & C. *Marcus Censorinus* were Consuls of Rome, died C. *Cacilius Claudius*, who signified by his last will and testament, bearing date the 6 day before the Calends of February, the yere about writ- ten, That albeit he had sustained exceeding great losses during the troubles of the ciuil war, yet F he should leaue behind him at the houre of his death, of slaves belonging to his retinue foure thousand one hundred and sixteen; in oxen, three thousand and six hundred yoke; of other cattell 257000 head, and in ready coine, H. S. D C. i. three score millions of sesterces Roman. And besides, he set out for defraying of his funerall charges, * eleuen thousand sesterces, and gaue or- der expressly, to be entered so sumptuously. But what of all this? Set case these and such like

* To wittwen- tie times, or a hundred times, a hundred thousand, &c.

* i. Crassus.

* In which ex- pedition he was taken prisoner by *Servius*, lieutenant general for the king of Par- thia: who strake off his head, and poured gold melted into his mouth to stifle his hu- ger after it.

* H. S. X. i. which if you read by the numerall aduerbe (un- decies) a mean- eth to the said sum a hundred times told.

men gathered together innumerable fums of mony, and an infinit masse of goods, yet they shall come nothing neare to the wealth of *K. Ptolomeus*, who according to the testimony of *M. Varro*, (at what time as *Pompey* the great warred about Iury) maintained 8000 horsemen in pay continually with his own priuat purse: kept an ordinary table within his court of a thousand persons, and those had every man his own cup of gold to drink out of, and at each course and change of meats that came in, new plate was serued vp still to the boord. These guests of his sared so highly, that a man would haue said they had bin franke-fed. But how far short was this mighty and sumptuous prince think ye (for I wil say no more now of kings) in comparison of one *Pythius* a Bithynian, who sent to *Darius* the king a Present of a Plane-tree, all entire of beaten gold, and withall, that famous gold Vine, so much renowned by all writers: feasted the whole army of that mighty monarch, and those were * 788000 men: promising ouer and aboue five moneths H pay for them all, and corne for so long to serue the whole campe, if of five sons that he had of his owne, the king would spare him but one to beare him company in his old age, and not prest him forth to serue in the wars. Certes, a man that heareth thus much of this *Pythius*, might compare him with that rich *Crasus* king of Lydia. But what folly and madnesse in the diuels name is this, to hunger and thirst so much in this life after that, which either is common to base slaues, and may fall vnto them, or els wherof kings themselves can find no end? And thus much of gathering good and heaping riches together.

To come now to the scattering thereof, I finde in the Chronicles, That in the yeare wherein *Sp. Posthumius*, and *Qu. Martius* were Consuls, they began at Rome to make largesses, and to sling money abroad to the common people. And at that time such plenty of coine therewas stirring at Rome, that the City bestowed by a generall contribution vpon *Lu. Scipio*, as much as bare out his charges in exhibiting the solemne games and plaies vnto the people. As for that purse which was made for the funerals of *Agrippa Menenius*, wherein euery man put his sextant, i. the sixt part of an As, I take it to haue been no Largeffe, but a beneuolence to testifie how the people honoured *Agrippa*, and a supply of meere necessitie, considering how poore the man died.

CHAP. XI.

¶ Of the superfluitie and frugality both, of men in times past, touching plate and siluer vessels. Of beds and tables of siluer. Also when there were deuised chargers and platters of Siluer to be made of huge capacity beyond all measure.

THE world is giuen to so much inconstancy as touching siluer plate, that a wonder it is to see the nature of men how variable they be in the fashion and making of such vessel: for no workmanship wil please them long. One while we must haue our plate out of *Furnius* his shop; another while we will be furnished from *Clodius*: and againe in a new fit, none wil content vs but of *Gratius* his making (for our cupboords of plate & tables, forsooth, must beare the name of such and such Goldsmiths shops.) Moreouer, when the toy takes vs in the head, al our delight is in chased and embossed plate, or els so carued, engrauen, and deep cut in, as it is rough againe in the hand, wrought in imagery or floure-work, as if the painter had drawne them. And now a daies we are growne to this passe, that our dishes are set vpon the table borne vp with feet and supporters to sustaine the viands and meat therein, but in any wise their sides must be pared very neere; for herein I may tell you lieth a great matter, and the more that the sides and edges hath lost by the file, the richer is the plate esteemed to be.

As touching the vessell seruing in the kitchen: did *Calvus* the noble Oratour complaine in his time that it was of siluer? Why, wee in these dayes doe more than so, for wee haue deuised that our coaches should bee all siluer, and these curiously wrought and engrauen. And within the remembrance of man, euen in this age, *Poppaea* the Emperesse, wife to *Nero* the Emperour, was knowne to cause her Ferrers ordinarily to shooc her coach-horses and other palfreys for her saddle (such especially as shee set store by, and counted more daintie than the rest) with cleane gold. To what excesse and prodigalitie is the world now grown to? *Scipio Africanus* the second of that name when hee dyed, left no more vnto his Heire in Siluer Plate and Coine than two and thirte pound weight: and yet this worthie Knight, when hee rode in triumph for the conquest

A quest of the Carthaginians shewed in that solemne pompe, and brought into the chamber of Rome as much treasure as amounted to * foure thousand foure hundred and seuentie pounds weight of siluer, a thousand times old. This was all the treasure in siluer that the whole state of Carthage was able to make in those daies; Carthage (I say) that great and proud city which pretended a title to the Empire of the world, and maintained the same against Rome: and yet see! in this age there is as much laid out in our cupboords of plate, and furniture of our tables. The same *Africanus* afterwards, vpon the winning and final ruine of Numantia, gaue among his souldiers in a triumph, 17000 pound weight of siluer: O braue souldiers, and worthy so noble a captain, who stood contented with such a reward. A brother of this *Scipio*, surnamed *Allobrogus*, was the first knowne to haue in plate, one thousand pound weight: but *Lucius Drusus*, while he was but Tribune or Prouost of the commonalty, had in siluer vessell as much as weighed eleuen thousand pounds. Now if I should tell you that the Romane Censors vpon a time disgraced, yea and degraded an antient captain and one who in his time had rode in triumph, only for that he had in plate five pound weight, it would be taken in these daies for a meere tale and vaine fable: as also that *Catus Calpurnius* in his Consulship, was found sitting at dinner serued with earthen vessell of potters worke, when the Embassadors of the *Aetolians* came vnto him: that he refused also siluer plate presented to him for the furniture of his boord, and to his dying day had neuer in siluer more than two drinking cups, which *Lucius Paulus* his wiues father bestowed vpon him after the defeiture of *K. Perseus*, in regard of his valiant seruice, we hold it now for no lesse than an vntruth and incredible. And here I call to minde a merry conceited speech that I haue read in the chronicles, of certain Carthaginian Embassadors, who said, that no men in the world had more good fellowship in their houses, and liued more friendly together, than the Romanes, for why? when they feasted one another (say they) the same * siluer plate went round about amongst them all from one to another without change. But howfoeuer this frugality whereof I speak may seeme strange and fabulous to the world wherein we liue, certes wee all know this to be true and no fable, that *Pompeius Paulinus* (the son of a Roman knight or man of armes borne at Arles) was not only banished out of the country and nation where his father was borne, but confined also to the marches of most sauage and barbarous people, and exposed to their cruelty, only for this, That he had in his campe (to the euil example of the army) as much siluer plate as weighed 12 pounds. But long ago it is since the fashion came vp at Rome, that our dames had their beds couered all ouer with siluer, yea, and some dining rooms with tables laid with the same: which inuention came first (as it is reported) from *Cornelius Pollio*, a gentleman or knight of Rome, who deuised to garnish his boords with siluer, not couering them full and whole throughout with plates thereof, nor after the manner of Deliacke workmanship, but onely by parcels, and according to the Punicke or Carthaginian fashion. The same *Pollio* made beds and tables of gold: but not long after, those siluer beds and boords came to the order of those in the Isle Delos. But all this sumptuositie was punished sufficiently and expiat by the ciuill warre of *Sylla*: for a little before those troubles, this excesse and these superfluities came vp: as also about the same time, men fel to make great chargers & platters of siluer, weighing one hundred pound a piece; of which there were at Rome (as it is well knowne) when the said warre beganne, to the number of five hundred and aboue: which was the cause that many a man fell into the danger of proscription and confiscation, for that their rich plate set their enemies teeth on water; who for the loue and desire thereof, practised by all cunning meanes their vtter vndoing. Certes our Historians heretofore, who attributed this cursed and unhappie ciuill warre betwene *Sylla* and *Marius*, vnto such superfluities and vices of those times which reigned so rife, might be ashamed and blush to say so; for our age hath been more hardy, and hath proceeded farther without any such feare of punishment from aboue. No longer since than in the daies of *Claudius* the Emperour, *Drusillanus* a slave of his surnamed *Rotundus* (the Seneschol or Treasurer vnder him in high Spaine) had a siluer charger of five hundred pound weight (for the working whereof, there was a forge framed beforehand of set purpose:) and the same was accompanied and attended with eight more of a smaller size, weighing 50 pound a piece. Now would I gladly know (if it might please you) how many of his fellowes (such slaues as him selfe) there must be to carry the said vessell and serue it vp to the table: or what guests they mought bee who were to be serued with such huge plate? *Cornelius Nepos* writeth, that before the victorie of the sayd *Sylla* hee defeated *Marius*, two dining tables and no more there were throughout Rome, all of siluer.

T t

Fence/ella

* This was spoken by way of jest, & signified: for that al their vessell being plate of potters clay & no better, seemed alwaies the same: whereas in siluer plate, men were delighted with diuersitie of workmanship, and vaine of fashion.

* Quater million, quadrigena septuagena milia pondo: which is foure millions four hundred & 70 thousand pound weight. An incredible sum, considering that which presently followeth: and therefore I suppose: this place in Pliny is corrupted.

Fenestella saith, that in his time (and he died the last yere of the reigne of *Tiberius Caesar* the Emperor) men began at Rome to bestow siluer vpon their cupboords and side livery tables: & even then also (by his saying) Tortoise worke came in request and was much vsed. Howbeit, somewhat before his daies, he writeth, that those cupboords were of wood, round and solid of one entire piece, and not much bigger than the tables whereupon men eat their meat: but when hee was a young boy, they were foure square, and of many peeces joyned together; and then they began to be covered ouer with thin boords or painels, either of maple or citron wood. Soone after, they were set to lay siluer plates vpon them at the corners only, and along the joints where the planks were set together: but by the time that he was come to be a well grown yong man, they were at their drinking mazors or round-bottomed dishes like balances, whereupon they were called *Statera*: also at those platters, which in old time were named *Magides*. Howbeit, men rested not contented to haue furnished themselves with plenty of siluer in their plaine plate and about their houses, vnlesse the curious workmanship also thereof were more costly than the metall and matter it selfe. But lest this superfluity should be imputed vnto vs in these daies, be it knowne, that such curiosity was crept into the world long ago: for *C. Gracchus* had in the gold-smiths hand 5000 sesterces certain vessels of siluer called *Dolphins*, which cost him at the gold-smiths hand 5000 sesterces a pound: an exceeding price for the fashion and workmanship, considering *L. Crassus* the Orator had two pots artificially engrauen by the hand of *Mentor* that cunning workman, the fashion and making whereof cost * 100 sesterces a pound: and yet he confessed and protested, that hee was abashed to see them, and durst not for shame bring them abroad. Moreouer, knowne it is, that he had in his cabinet pieces of plate, which to be bought and sold were worth euery pound 6000 sesterces. Briefly, the conquest and reducing of Asia vnder our Empire, was the first occasion that brought into Italy such wastfull excess: for *L. Scipio* shewed in triumph of siluer plate, intailed and ingrauen, 400 thousand and 50 pounds weight, besides vessels of gold amounting to the weight of 100 thousand pound: and this was in the yere from the foundation of Rome, 565. But the free * donation and bestowing of the said Asia vpon the city of Rome (which fell vnto the Romans by the death of *K. Attalus*, who in his last will and testament ordained them his full heires) did most hurt vnto our state: and this succession which our Antients injoyed by vertue of that gift, did greater damage to the integrity of manners, and brought more corruption into our city, than the former victory atchieued by force of armes: for from that time forward men grew to be shamelesse, and without regard of modesty euery mans fingers itched to be tempering with the treasure of *K. Attalus*, and to buy the same at any price, sold in open port-sale to them that would giue most: which hapned in the 626 yere after the foundation of the city: for in 56 yerres (which was the meane space between the foresaid subduing of Asia and this feoffment of *K. Attalus*) our city was well nuzzled and trained not onely in the admiration of such puissant forrein kings and princes, but also in some affectionate loue to their wealth and riches. About which middle time between, & namely in the 608 yere, reckoning from the first founding of Rome, when Achaia was likewise brought vnder our obedience and subjection, this victory also was a mighty means to bring vs also out of al good order, and to set vs forward to imbrace superfluities and to ouerthrow al honesty and vertue: for now were brought in the stately statues and proud painted tables, that we should want no inticing delights, but that all the pride and pleasure of the world might be found at Rome. Finally, the ruin of Carthage, was the rising of superfluities with vs, as if the Destinies had so appointed, that at one & the same time we should haue both wil to imbrace vice, & also power & liberty withal to perform sin: so that in regard of our times and the enormities thereof, we may iustifie, yea and honor any of our ancestors who seemed before to offend in this behalfe: for, as it is said, *C. Marius* after he had defeated the *Cimbrians*, contented himselfe to drink in a wooden godet and tankard, after the example of father *Bacchus*: *C. Marius* I say, who of a good husbandman in the country about Arpinum, & of a common and ordinary souldier, came to be a braue captaine and commander in the field.

CHAP. XII.

¶ Of Statues and Images of Siluer: of the workmanship in grauing Siluer, and of other things pertinent thereto.

Men commonly haue thought, that the first statues of siluer seene in Rome, were made in the honour of the Emperour *Augustus*, by way of courting and flatterie to winne his grace and

A and fauour, as those times did require: but it is altogether vntrue; for before his daies, we finde that *Pompey* the Great when he rode in triumph, caused the siluer statue of *K. Pharnaces* (the first) [of that name] that euer reigned in the realme of Pontus to be carried in a solemne shew: like as the image also of *Mithridates* his father, besides chariots as well of gold as of siluer.

Moreover, it falleth out sometimes, that siluer is vsed in stead of gold also vpon some vrgent cause and iust occasion: as we may see by our proud & sumptuous dames, that are but commoners and artizans wiues, who are forced to make themselves carquans and such ornaments for their shooes, of siluer, because the rigour of the statute provided in that case, will not permit them to weare the same of gold. And I my selfe, as I remember, haue seen *Aurelius Fuscus* (a gentleman of Rome, who being put beside his place, and hauing lost the dignity of a man of arms, by reason of a notable calumnniation framed against him, when as young gentlemen sons vsed to accompany him because he had the name of a braue souldier) weare his rings of siluer. But to what purpose do I collect these examples, seeing our soldiers make no reckoning of yvorie, but the hilts of these swords and the hafts of their daggers, bee garnished with siluer, damasked and ingrauen; their scabbards and sheaths bee set out with siluer chapes, and their sword-girdles, bangers, and bawdricks, gingle again with thin plates of siluer. And do we not see how our yong boies are * kept in and restrained with siluer, during the time that they be vnder mans age? how our fine dames vse to wash and bath in siluer, disdaining and setting light before any other bathing vessels in the baines, in so much as the same metall and matter which we are serued with at the table, is employed also in shamefull and vnclenly vses. Oh that *Fabritius* were alive now again to behold these things! if hee saw our women bathing together with men in one and the same baine, and those pained (as it were) vnder foot with siluer for smooth and slipperie that they cannot hold their feet: *Fabritius* I say, who forbade expressly, that any warriours and Generall captains should haue in plate more than one drinking boll or goblet, and a saltellar: if hee saw siluer (which was wont to be giuen in presents and rewards to braue men and valiant captains) thus to be melted and broken to serue for these purposes, what would he say? but What a world is this! we passe not for *Fabritius*, nay, we are ashamed of him and his frugality.

But to leaue these abuses and complaints: one thing I wonder much at, that among so many excellent artizans as haue been, there is not one who took any pleasure to graue in gold, nor became renowned thereby; whereas many are famous for their workmanship in siluer: howbeit, *Mentor* (of whom I spake erewhile) excelled them all in this kinde: and yet I doe not find, that euer he made in all, about eight peeces that were curiously and exquisitely wrought, and those (as it is said) be all lost. And no maruell, for why? the temple of *Diana* at Ephesus lieth along: the Capitoll of Rome likewise, and all within it, hath perished by fire. Howbeit, *Varro* hath left in writing, that among his antiquities, one brazen image he had of *Mentors* hand-worke. Next to him, the world had *Acragas*, *Boethus*, and *Mys*, in great admiration for their excellent skill: and at this day there be extant, peeces of all their workmanship, to be seen in the Isle of the Rhodians: for in the temple of *Minerva* which is at Lindus a city in that Island, there is one statue of the said goddesse, of *Boethus* his making: within the temple of god *Bacchus* in the very city it selfe of Rhodes, there are certain cups wrought by *Acragas*, wherein bee ingrauen the religious Priestresses called *Bacchæ*, and the Centaurs. Within the same Church, are the pourtraicts of *Silennus*, and the pretty *Cupids*, expressed liuely in imagerie, by *Mys*. Moreover, *Acragas* pourtraied the resemblance of chaces or hunting, in certain pots, most artificially; for which he became very famous. After these, there are to be ranged in another degree, *Calamis* and *Antipater*, together with *Stratonicius*, who wrought within a broad-mouthed cup, one of the Satyres found asleep; but with such dexterity and so liuely, that he is judged and said to haue couched and fitted him to the cup, rather than barely ingrauen him. Then followes *Tauriscus* of Cyzicum: semblably *Arifmus* and *Eunicius*, both Mityleneans, are highly commended: as also *Hecateus* and *Praxiteles*, who flourished about the time of *Pompey* the Great. *Pofidonius* also of Ephesus, and *Ledus* the Stratiat, who was in great name for ingrauing of bartells and armed men at the point to joyne skirmish. Likewise *Zopirus*, who made two singular cups; in the one, hee represented the honourable Court of the *Areopagites*; in the other, the trial and judgement of *Orestes*: which were esteemed worth twelue talents. In another age liued *Pytheas*, a singular Artificer, whose workmanship was so rare and exquisite, that euery two ounces of his siluer plate, was sold commonly for twentie thousand sesterces: and verily a broad goblet or stand-

* I could see this done more plainly: but in some respect of care mind & care, I am willing enough to leaue it as it is in English, as I found it in Latine.

ding piece there was of his making, with a deuise appendant to it, for to be set too and taken off by a vice, and the same resembled *Ulixes* and *Diomedes*, stealing the Palladium out of the temple of *Minerva* in Troy. The same workman deuised to set into little cups, prettie images or mannikins resembling cookes, which he termed *Magiriscia*, but so finely & delicatly wrought they were, that the patterns of them could not be taken out in any mould, without hurting and spoiling; so subiect were they to any outward injuries in the handling. Furthermore, *Tecus* was famous in his time, for his dexterity and light hand in shallow imboosing. Well, in as great request as these artificers were in times past, yet this cunning decayed all on a sudden, and grew so far out of vse, that nothing now commendeth such pieces of work, but only antiquity: in which regard, how neare soeuer they be worne with continuall handling, insomuch as the shapes and proportions of the imagerie ingrauen cannot be discerned, yet great store is set by any such antique plate wherefoeuer it is to be had.

Ouer and besides, it is to be noted, that siluer will rust in medicinable waters, such as stand vpon some especiall mine; yea, the salt aire breathing from them, is able to infect it: as wee may see in the Mediterranean parts of Spaine far remote from the sea.

Also, in mines of gold & siluer, there are ingendred certain mineral colours seruing for painters, to wit, * Sil and Azur. As for Sil, to speake properly, it is a kind of muddy slime: the best of this kind is called *Atticum*: and every pound of it is worth 32 deniers. The next in goodnesse is hard as stone or marble, and carieth hardly halfe the price of the other named *Atticum*: there is a third sort, of a fast & compact substance, which because it is brought out of the Island *Scyros*, some call *Scyricum*: and yet of late verily, we haue it out of *Achaia* also, and this is the Sil that painters vse for their shadows: this is sold after two festerces the pound. As for the Sil which commeth out of France, called the Bright Sil, it is sold in euery pound two asses lesse than that of *Achaia*. This Sil, and the first called *Atticum*, painters vse to giue a lustre and light withall: but the second kinde, which standeth vpon marble, is not imploied but in tablements and chapters of pillars, for that the marble grit within it, doth withstand the bitternesse of the lime. This Sil is digged likewise out of certain hils not past 20 miles from the city of Rome: afterwards, they burne it, and by that means do sophisticate and sell it for the fast or flat kinde named *Pressum*: but that it is not true and natural, but caleined, appeareth evidently by the bitternesse that it hath, and for that it is resolu'd into powder.

CHAP. XIII.

¶ Of * Sil, * Caruleum, Nestorianum, and Calum. Also that all these kindes keep not the same price euery yeare.

Polygnotus and *Mycon* were the first Painters who wrought with Sil or Ochre, but they vsed onely that of Athens in their pictures. The age insuing, imploied it much in giuing light vnto their colours, but that of *Scyros* and *Lydia* for shadows. As for the Lydian ochre, it was commonly bought at *Sardis*, the capitall city of *Lydia*, but now it is growne out of all remembrance.

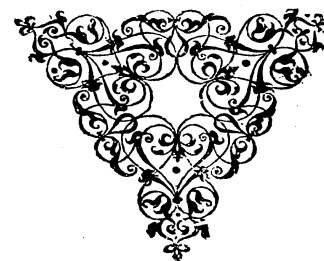
As touching *Caruleum* or Azur, it is a certaine sandy grit or powder: of which, in old time there were knowne 3 kinds: to wit, the Egyptian, most commended aboue the rest: the Scythian which is easie to be dissolued and tempered, and in the grinding turneth into foure colours: namely, the Azur, which is of a pallet colour, called therefore the whiter; the blacker Azur of a deeper blew, there is the Azur also of a grosser substance, and the fourth of a finer. The Cyprian Azur is preferred before that of *Scythia*. Ouer and aboue those Azures before-named, wee haue some from *Puteoli* and *Spaine*, where they be artificiall, and they haue taken to making it, of a kind of sand. All the sorts of these Azurs, receiue first a dye, and are boiled with a certain hearbe appropriat to it, called *Oad*, the colour and juice whereof Azur is apt to drinke in and receiue. As for all the preparation and making of it otherwise, it is the same that belongeth to *Chrysocolia* or *Borax*. Of Azur there is made that powder which wee call in Latine *Lomentum*, for which purpose it must be first punned, puluerized, and washed; and this is whiter indeed than the Azur it selfe: sold it is after three and twentie deniers the pound, whereas Azur may be bought for eightene. Herewith they vse to paint walls that be ouercast with plasters, for lime it will nor abide. Of late daies there is a kinde of Azur growne into request, called *Nestorianum*,

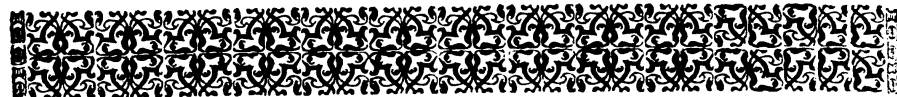
num, taking that name of him who first deuised it: made it is of the lightest part of the Egyptian Azur, and it costeth 40 deniers the pound. Of the same vse also is the Azur of *Puteoli*, saue only in windows; and this some call *Cælon*. It is not long, since another kind of Azur or blew named *Indico*, began to be brought ouer vnto vs out of India, which is prized at 17 deniers the pound. It serueth painters wel for the lines called *Incisura*, that is to say, for to diuide shadows from lights in their workes. To conclude, there is another kinde of *Lomentum* or blew powder of the basest account of all other; some call it *Tritum*, and it is not esteemed worth aboue six asses the pound.

But to try the right and perfect Azur indeed, the best experiment is to see whether it will flame vpon a burning cole. As for the false and sophisticat Azur, it is thus made: they take the floures of violets dried, and boile them in water: the juice they presse forth through a linnen cloth, and mix the same with the chaulky earth called *Eretria*, vntill such time as it be well incorporat with it.

To proceed vnto the medicinable vertues of Azur: It is holden to be a great clenfer, & therefore it mundifieth vlcers: in which regard, it entreth into plasters: as also into potentiall cauterics. As touching Ochre or Sil, it is exceeding hard to be reduced into powder: and this also serueth in Physicke, for it hath a mild kind of mordacity: astringent it is besides & incarnatiue, in which respect, soueraigne to heale vlcers: but before that it will doe any good, it ought to be burnt and calcined vpon an earthen pan.

To conclude with the prices of all those things named heretofore: how soeuer hitherto I haue set them downe, yet I am not ignorant, how they vary according to the place; yea, and alter in manner euery yeare: and well I wot, that as shipping and nauigation speeds well or ill, as the Merchant buyeth cheap or deare, the price may rise and fall. Againe, it falleth out, that sometime one rich munger or other, buying vp a commodity, and bringing it wholly into his owne hands for to haue the Monopoly of it, raiseth the market, and inhaunceth the price: for I remember well, how in the daies of *Nero* late Emperour, all the spicers, druggers, and Apothecaries, preferred a Bill of complaint vnto the Consuls, against one *Demetrius* a regrater. Yet notwithstanding, I thought it necessarie to put downe the prices of things as they are ordinarie valued at Rome one yeare with another, to shew in some sort (by a generall æstimat) the worth of such wares and commodities whereof I haue written.





THE XXXIV. BOOKE OF
THE HISTORIE OF NATURE,
WRITTEN BY C. PLINIUS
SECVNDVS.

The Proem.

CHAP. I.

¶ *The Mines of Brasse.*

IT is now time to go in hand with Mines of Brasse, a mettall esteemed most of all other next to Gold and Siluer, in regard of the vses about which it is employed: nay, if I should say truly, preferred it is (especially that which is called the laton of Corinth) in diuers respects before siluer, yea, and gold it selfe: for brasse (I may tell you) is of great authority in the campe, and carrieth no small stroke among souldiers in regard of their pay, which (as I haue said before) was weighed them out in brasse: and hereupon their wages-money is vsually called by the name of *Ara militum*. From this mettall likewise, the generall Receiuers and Treasurers take their title of credit and place: for at Rome they be called *Tribuni ærarij*, as a man would say, The Tribunes or Officers to the chamber of brasse coine, that is indeed, of the Treasury: hereof also is the Chamber of the city K or Treasury it selfe, called *Ærarium*: finally, those that be deeply indebted to any man, are in Latine named *Obærati*, as it were charged and pressed with the heavy burden of brasse, i. debt. Moreouer, I haue shewed already (for the greater credit and authority of this mettall) for how many yeres together the people of Rome vied no other mony but brasen coine. And otherwise, as may appeare by antient records and histories, the credit of brasse took root at the beginning, and hath bin in authority euer since Rome was Rome: an euident prooffe whereof we haue from K. *Numa*, who founded and erected a third society or confraternity of brasse-founders. As touching the ore or veine of brasse, digged it is out of the mine in manner aforesaid, but it is tryed, & brought to perfection by fire. Made also it is of the Chalamine stone, named otherwise Cadmia. The best mines of brasse that yeeld the excellent mettall, are now in Asia; howsoeuer in old time Campaine in Italy carried the name. And euen at this day, the brasse digged out of the mines within the territory of the Bergomats in the farthest part of Italy, is in great request: and as it is said, there are good mines thereof discovered lately in Germany, a Prouince vnder the Roman Empire.

CHAP. II.

¶ *Diuers kinds of Brasse: and namely, the Brasse of Corinth, of the Isles of Delos and Egeina.*

IN the Island of Cyprus, where first were found mines of brasse, the same is made of another M stone also besides Cadmia, which they name Chalcitis: but this * Cyprian brasse sel soon to beare a low price, by reason of a better kind which other countries did yeeld; and principally the laton called Orichalcum, which for a long time was counted the best and held in greatest admiration. Howbeit, this kind of brasse hath not bin gotten for these many yeres, as if the earth were

A were not in heart, and had giuen ouer bearing of it. Next to this Aurichalcum, the most reckoning was made of the brasse Sallustianum, within the tract or quarter of the Centrones among the Alps: neither held these mines out any long time; but after it, succeeded the Livian brasse, discovered in France. These two kinds last mentioned, take name both of the lords and masters of the mines wherein they were digged: the former of one *Sallustius*, a great friend and fauorite of *Augustus Caesar* the Emperor: the other of the Empreffe *Livia* his wife: and this mine also quickly failed. And verily of this Liuiian brasse very little or none there is to be had. But now adiaies all the name goes of the Marian brasse, which also is called Cordubense: and to say a truth setting aside the aboue-named Liuiian brasse, there is not any will take the yellow tincture of the Cadmia or Chalamine stone better, or commeth so neer in goodnesse to the latton Orichalcum; **B** as if a man would say that a piece of coin stamped of it, were a sesterces, or at leastwise a double As, to the Cyprian piece, which is but a single As. And thus much concerning the degrees in goodnesse and credit, of those kinds of brasse which be naturall.

There be other sorts of brasse mettall, which stand vpon an artificiall mixture and temperature, whereof I purpose to write in more ample manner in place conuenient, after I haue shewed aboue all other things the excellencie of this mettall in generalitie, thus tempered. In old time there was a mixt mettall made of brasse, gold and siluer, melt and confused all together, whereof were made singular pieces of worke: and albeit the mettall was rich and precious, yet euermore the workmanship was the dearer and went beyond it. But now, it is hard to say, whether is worfe of the two, the matter or the art that is seen in it? But certes, I cannot but maruell much how it commeth to passe, That these brasen workes, hauing alwaies bin from time to time so dear, and growing so infinitely as they do stil in price to be bought & sold, yet the magnificence and credit of this art is so much decayed & vtterly gone? But I take this verily to be the cause, that in times past artificers wrought for to win glory and fame; & now, as all things els, for gain and lucre only. Certes, in old time the feat of casting mettall was counted so magnificent, that the Poets ascribed it to some of the principal gods, as a mystery befitting their diuine workmanship; in so much, as the great lords and noble princes of the world sought to win an immortal name by this means: and yet I say for all that, the manner of tempering and casting this precious Mascellin, this compound mettall I mean of gold, siluer, and brasse, is so far grown out of practise and knowledge, that for these many yeres past Fortune her selfe hath had no power either to retain or to restore the antient art belonging thereto. But setting aside the glorious Mascellin of old time, the Corinthian brasse mettall was most highly commended: and the same mixture happened euen by meere chance and fortune, when the city Corinth was woon, sacked and burnt to the ground: and wonderful it is how the minds of many great men was affected to this compound mettall, and how they stood vpon the hauing thereof, in so much as (by report) there was no other cause in the world why *Perres*, whom *Cicero* had caused to bee condemned, was together with him proscribed, outlawed, and banished by *Antonie*, but only this, For that he vaunted that he had as goodly vessels and pieces of Corinth mettall as himselfe, and would not part with any of them to *Antonie*: howbeit, in my conceit, most part of those men who delight thus in this Corinth Mascellin, in a certain singularity by themselves, because they would seem to know more than their fellows, make semblance rather of a special insight and skill that they haue therein, than know indeed any thing by it of such exquisite stuffe. And this will I shew and declare to you in few words: the city of Corinth was won and destroyed in the 156 Olympias, and the third yere thereof, which fell out to be in the 608 yeare by our computation at Rome: now long before this time, those great masters and imageurs, so famous for mettall-founding and casting of Images were dead and gon; and yet all the pieces of their making, these men forsooth at this day will needs haue to be of Corinthian medley, and so they call them. And therefore to disprove this erroneous opinion of theirs, I purpose as I proceed in this my discourse, to range all the notable artificers that antiquity hath knowne in this kind, according to the several ages wherein they liued & flourished in the world. For easie it will be to calculate and collect the yeres from the foundation of our city, by the former comparison of them with the Olympiades. All the vessels then which our delicats haue, those I mean that would seem to be more fine in their houses than their neighbors, are only of the Corinth mettall and no better, which they cast, partly into pots and pans and such like kitchin vessell for to seeth meat in, partly into candlesticks, chafers, chamber pots, and such like homely and base vessels, without any regard of cleanness and

* As if he would say, this mettall is so much better than the Cyprian brasse & copper, as the Sesterce and Dupondius, is of more value than As: i. i. duple, or duple and halfe.

and neat seruice. But this Corinthian mettall may be reduced well into three principall kinds, G
to wit, the white, which commeth nearest in brightnesse to siluer, as standing most indeed vpon
the mixture of siluer: the second yellowish, according to the nature and colour of gold, which
beareth the chiefe stroke in it: and a third of an equall medley and temperature, wherein a man
shall not perceiue any one mettall predominant. Ouer and besides, these 3 sorts of Corinthian
brasse, there is another kind of Mascellin, as touching the mixture whereof precisely, we are not
able to yeeld any reason: for although there be found Images and statues thereof made, wherein
we may see the handy worke of man, yet it should seem that Fortune in some sort hath giuen
the temperature thereto: and that dainty and precious colour that it hath, is a deep red, much
resembling that of the liuer, and therefore they call it commonly Hepatizon. Short it commeth
far of the Corinthian mettall, but out-goeth a great way the brasse either of Ægina or Delos, H
which two mettalls for a long time were thought to be the chiefe. And in very truth, for antient
glory and name the Deliake brasse may challenge the first place: for thither, as to a mart or fair,
there was great resort of chapmen from all parts of the world; & specially of those artificers who
were curious in making of table feet, trestles, and bed-steads: and indeed the finest workmanship
at first was seen herein, and thereby artificers came to be innobled. But in proceffe of time they
went farther, euen to cast the images of gods, the personages also of men for statues, yea, & the
solid forms and pourtraits of beasts and other such liuing creatures. After this brasse of Delos,
the most account was made of that which came from Ægina: an Island this is without any mine
at al of brasse in it, howbeit, much renowned for the excellent mettall-founders therein, in regard
of the singular temperature that they gaue vnto their brasse. The brasen Oxe which standeth in
the beast market at Rome was brought from thence. And this may serue for a paterne of the Æ-
ginetick brasse: but the image of *Iupiter*, erected within the chappel of *Iupiter*, surnamed Thun-
dring, in the Capitoll, is the true paterne, testifying what kind of brasse that of Delos was. And,
as *Myron* was wont to cast the mettall of Ægina in all his works, so *Polyeetus* vied ordinarily that
of Delos for this purpose; and these two were rare Imageurs, liuing at one time, and prentises at
the Art together: but they indeauoured to surpass one the other in diuers mettalls which they
occupied.

CHAP. III.

¶ Of Candle-sticks and Ornaments belonging to Temples, made of Brasse.

IN old time the Island Ægina was in especial name for the workmanship only of the branches,
sockers, & heads of candle-sticks; like as Tarentum, for the shanke, shaft, & body supporting
the same: and therefore that candle-sticke was counted rich indeed, when both these places
seemed to concur to the making and workmanship therof: for such a candle-stick some haue not
bin ashamed to giue as much money as the salarie and yearly pension of a Tribune militarie or
Colonell, commeth to: and yet you see, an implement or moueable it is, that hath but a vile
& base name, for called it is in Latine Candelabrum, of sticking a candle in it. But wil you know
who was so foolish as to bestow so much vpon a candle-stick, and what a tale belongeth therun-
to, for to mend the hard bargain: thus stood the case; it was a jolly dame in Rome, named *Gegania* L
who made this wife match. And when she had so done, she must needs forsooth make a feast to
shew this candle-stick to her guests, which cost her 50000 sesterces. Now *Cleippus*, the founder
or Brasier that sold it her, was mishapen and bunch-backed. And order was taken by the comman-
dement of **Theon* a publick crier of Rome, that he should in the midst of supper be brought
into the place stark naked as euer he was borne (and as foule and ill-fauoured a fellow he was o-
therwise as a man should lightly see) vnder a colour to make sport and to set the company in a
laughing, but indeed to mocke *Gegania* the Mistresse of the house. But what followed therupon
The woman cast a faspie to him by and by, and in that heat of loue, or lust rather, admitted him
anon to her bed, and after let him into her will, and made him her heire. This crooke-backed
squire seeing himselfe exceedingly enrich by this double bargain, adored the said candlestick M
no lesse than a god, as the only cause of his rising, and all the wealth he had: and thus by his oc-
casion, one tale more goeth currant abroad in the world, of Corinthian vessels. And yet after-
wards (as it were to punish his Mistresse for that light behaviour of hers) he caused a stately and
magnificent sepulchre to be made for her, whereby the infamy and shame of *Gegania*, might be
eter-

Which was a
talent, or 50000
sesterces.

**Cleippus* sutor
gibber, &c. not
Fullo.
Who as it
should seeme,
was one other
guest, & knew
how to play
his part well
enough.

A eternized and continue fresh in remembrance with all posterity. But to return again to Corin-
thian Brasse and the vessels made thereof, although it be well knowne, that there are no Candle-
sticks indeed made of that Mascellin, yet there goeth a great name of them, as if they aboue all
other things were certainly cast of that mettall: and the reason is, because that *Mummius*, as in
the heat of his victorie he sacked and destroyed Corinth, so withall hee dispersed the brasse by
parcels and piece-meale, and sent it away into many other townes and cities of Greece.

Moreover, this is to be noted, That in old time it was an ordinary thing to make of brasse, the
sides, lintels, sills, and leaues of great dores belonging to temples. I read also in Chronicles, that
Cn. Octavius, who defeated *K. Persus* in fight at sea, and rode in triumph for that naual victorie,
caused the double gallerie, which standeth neere vnto the Cirque of *Flaminius*, to be erected;
B which was called the Corinthian gallerie, for that the chapters of the pillars were of brasse.
Furthermore, the Annals do testifie, that it was thought good, That the rouse of the chappel of
Vesta, should be alwaies covered ouer with Brasse, after the manner of Saracossian work. Likewise
M. Agrippa made all the chapters of the pillars, standing in the temple *Pantheon*, of Syracusan
brasse, which remaine at this day to be scene. And not onely publick places and buildings were
thus beautified and adorned, but great mens priuat houses also were enriched by this mettall:
for it appeareth vpon record, That *Sp. Carvilius*, one of the Treasurers of Rome, amongst other
criminal imputations that he objected to *Camillus*, challenged him for this, That the dores of
his dwelling house were plated and garnished with brasse & copper. Moreover, as *L. Piso* report-
eth in his Chronicle, *Cneus Manlius* after his conquest of Asia, was the first that in the triumph
C wherein he rode in the yeare after the foundation of Rome 568, he made a shew of three-sided
tables, cup-bourds, and bours, supported by one foot all of brasse. And *Valerius Antias* verily
doth write, That *L. Crassus*, heire to that great Orator *L. Crassus*, made sale of many such brasen
tables, which fell vnto him by right of inheritance. Semblably, I find in the histories, That in
old time they were wont to make many large basons, supported with a frame of 3 feet, known by
the name of Delphick basons, for that they were commonly dedicated to *Apollo*, the patron or
god of Delphos, for to receiue the gifts and oblations offered to him. In those daies also the
lamp-branches hanging aloft in churches, spreading out their arms abroad and carrying lights
like trees bearing fruit were vsually made of brasse: and such a one is to be seen in the temple of
Apollo within the Palatine hill at Rome: which being found by *Alexander* the great in the sac-
D cage of Thebes, the said prince dedicated to the god *Apollo* at Cyme, a towne in Æolia. To con-
clude, this art of founding and casting brasse proceeded farther and passed on, vntil it was com-
monly practised in making the idols and images of the gods.

CHAP. IIII.

¶ At what time the first brasen Image was cast at Rome. The first originall and begin-
ning of statues, and the honour that belonged to statues. Also the diuers
kinds and fashions of them.

E The first Image of brasse that euer was made at Rome, I finde to be consecrated to *Ceres*, &c.
raised it was out of the goods of *Sp. Cassius*, who aspiring to be a king, was therefore slaine
by his owne father. But this honor continued not long proper to the gods, but passed from
them vnto the statues of men also and their portraictures, and that after sundry sorts. In ancient
time the manner was to vernish their images and statues of brasse, with * Bitumen: more mar-
uel it is therefore, that afterwards men should take such pleasure to guild them as they did: this
invention, whether it came from Rome or no, I know not: but if it did, surely it was no antique
deuise, nor of any long continuance there. Certes, the manner was not in old time to expresse
the liuely similitude of men in brasse, vnlesse they were such worthy persons as by some notable
and famous acts deferred to be immortalized, as namely, for winning the prizes at any of the
F foure sacred and solemn games holden in Greece, and principally at those of Olympia, where it
was an ordinary thing to see the statues of those erected and dedicated, who had atchieued any
victory there. But in case any one were so happy as to obtain victory at those solemnities, 3 se-
ueral times, his statue in brasse was so liuely & perfectly cast, that it resembled his person full &
whole, according to the proportion of euery member, joint and muskle of the body, yea, euen to
the

* or as some
say, with a kind
of Amber.

the haire of the head and beard. And such kind of complete images, the Greeks vse to call Icones, i. personages. The manner of the Athenians was to honour men of singular vertue and valour, by representing their personages in brasse: but I am not sure whether those Athenians were the first that brought vp that manner or no: true it is, that long ago they caused statues of *Harmodius* and *Aristogiton*, to be made of brasse at the charges of the state, and to be erected in publick place, for that they had the courage and heart to kill *Pisistratus*, who tyrannized ouer them: and this fell out just in that very year wherein the kings were also deposed at Rome, and expelled the city for euer. And in proesse of time this manner was taken vp in all parts of the world: so plausible to the nature of man, is the ambitious desire to perpetuate their memorie by such monuments, inso much as there is not a good towne within our prouinces, but they haue begun already to beautifie their market places with many such ornaments of brassen statues & images; together with titles, honours, and dignities ingrauen at the bases or pied-stal therof, for the better continuance of mens memoriall, that the posterity might be informed by such inscriptions, as well as by their tombs and sepulchers. And at length the ambition of men proceeded so far, that as well their priuat houses within, as the base courts and porches without, were so beset with images, that a man would take them for some publicke places within a city: and all this arose from the deuote courtesie of vassalls, in token of homage and honour done to those their patrons and lords, whom they acknowledged to be the protectors and maintainers of their life and liberty.

CHAP. V.

¶ Of brassen statues in long robes, and diuers other sorts of Images. Whose statues were first erected vpon pillars. When they were set vp first in publicke, and at the common charges. Finally, which were the first in Rome.

IN ancient time all the images and statues erected to the honour of any men, were in their gowns and robes. Men delighted also to haue them otherwhiles all naked, resting vpon their spears which they held in their hands: this pattern came from the Greeks, resembling the manner of their yong men, which in that sort dia exercise naked in their publick wrestling places, thereupon called *Gymasia*: and such images are named *Achilles*. And verily, the Greekish fashion it is, to hide no part of the body, but to shew all: whereas the Romanes contrariwise (like souldiers and military men) vsed to make their statues armed with a cuirace or brest plate only, leauing the rest of the body discouered and bare. And *Iulius Caesar* verily the Dictator, was well content that his image should be set vp in the Forum or common place at Rome, armed with an habergeon or coat of male. As for such statues which represented in habit the priests of *Pan*, called *Luperci* (i. all discouered but their priuities) it is an inuention new come vp, and as lately deuised as those which be pourtraied in clokes or mantles. *Mancius* appointed that his image should be erected in that habit and manner, that is to say, bound and vnarmed, as he was deliuered prisoner to the Numantines his enemies. As touching the statue of *L. Afcus*, a famous Poet, I will report vnto you what writers haue recorded, namely, That being himselfe a very little man and low of stature, he caused his image to be made exceeding big and tall, and so to be set vp within the temple of the Muses at Rome. As for the statues represented on horse-backe; in great name and request they were among the Romans: but no doubt they had their precedent from the Greeks. At first they honoured such horsemen only in this sort, who had won the price in the race at those solemn & sacred games which were held in Greece, and those horse-runners they called *Celeres*: howbeit, afterwards the like honor obtained they, who had born themselves best at the running of chariots, whether they were drawn with 2 horses or four. And from hence came the manner with vs of our valiant captains and victorious generalls, to haue their statues made riding triumphant in their chariots. Howbeit, long it was first ere this fashion came to be taken vp: and before the daies of *Augustus Caesar*, late Emperour of famous memory, there had not been knowne any such images at Rome riding in chariots either drawne with six steeds, or Elephants, as now there be. The manner also of riding in coches with 2 horses about the cirque or shew place (which vually they did who had bin lords Pretors of Rome) represented in their pourtraitures, is not ancient.

Con-

A Concerning statues erected vpon columns or pillars, they be of greater antiquity, as may appeare by that of *C. Metius*, who vanquished the ancient Latines that invaded the territory of Rome: vnto which nation, the people of Rome was wont by vertue of the league, to allow the third part of the bootie and pillage gotten in the wars: during the Consulship of which *C. Metius*, vpon the victory atchieued of the Antiat, the city of Rome ordained, that the beak-heads with their brassen tines, which were taken from them in a conflict at sea, should be fastened vnto the pulpit of publicke pleas and Orations, which thereupon was euer after called *Rostra*: and this fortuneth in the 416 year after the foundation of Rome. The like statue vpon a column was set vp for the honour of *C. Duillius*, who first defeated the Carthaginians by sea, and for that natural victorie entered Rome in triumph: the same remaineth at this day to be seen in the Forum or grand place of the city. Semblably, *P. Minutius* obtained the same honour, who being Puruei- or generall of corne for the city in time of a dearth, behaued himselfe so well in that office, that his statue of brasse was erected vpon a pillar without the gate of Rome called *Trigemina*: and that by an vniuersall contribution of the people, who gaue voluntarily toward the charges thereof, euery man to the value of an ounce of brasse coine. And I wot not whether I may boldly say that he was the first man who receiued that honour at the peoples hands: for before time I am well assured that the Senat only granted such rewards for mens good seruice. Certes, these were braue and honourable memorialls, had they not begun vpon occasion of some trifling matters to speake of. For such a statue was that of *Afcus Nauus* the Augur or Soothsayer, which stood before the entrie of the Curia or Councell-chamber of Rome: the base or foot of which pillar was burnt, at what time as the said Curia or Senat-house caught a light fire, at the funerals of *P. Clodius*. The like image was set vp (by authoritie from the State) in the publicke place of elections at Rome, called *Comitium*, to the honor of *Hermodorus* the Ephesian, who translated out of Greeke into Latine the lawes of the 12 tables, which the ten Decemvirs had gathered and set down for the publicke benefit of the city. As for the statue of *Horatius Cocles*, which remaineth to this day, there was another reason of it, and the same of greater credit and importance: for that he alone sustaining the charge and brunt of *K. Porcinaes* army, made good the wooden bridge ouer Tybre at Rome, and caused the enemies perforce to abandon the place. As touching the Statues of the Prophetesses *Sibylla*, three of them there be neare vnto the *Rostra*, before said, but of a lesse making, whereat I nothing maruell: the one was repaired by *Sex. Pacuvius Taurus*, one of the *Aediles* of the Commons; the other two by *M. Messala*. And I assure you I would haue taken these Images and that of *Afcus Nauus* to haue beene the most antique of all others, as being set vp in the daies of *K. Tarquinius Priscus*, but that I see the statues of the former kings within the Capitoll.

CHAP. VI.

¶ Statues without gowne or robe at all. Of other Statues, Which was the first statue on horse-backe. When and whereupon all the Images, as well publicke as priuat were demolished and put downe. What women they were at Rome who were honoured with brassen statues: and which were the first statues erected publickely at Rome by strangers.

AMONG the said Statues of Roman kings, that of *Romulus* is without any coat or cassocke at all; like as that also of *Camillus*, which standeth at the pulpit *Rostra*. As for the Image of *Q. Martius Tremellius*, which was erected before the temple of *Castor* and *Pollux*, the same was in a gowne, and sitting vpon horse-backe: this noble knight had vanquished the Samnites twice: and by the winning of *Anagnia*, a city not far from Rome, procured thereby an easment vnto the people, from paying tribute vnto the state for the maintenance of the wars. In the ranke of the most antique monuments of Rome, I may range the statues of *Tullius Clatius*, *L. Roscius*, *Sp. Nautius*, and *C. Fulcinius*, which stand about the Pulpit *Rostra*: and these were the foure Roman Embassadors, who against all law of Nations, were during their embassage murdered by the Fidenatians. For this was an ordinary custome with the Romanes, to honour those in this manner, who in the seruice of the Commonwealth were vniustly killed: as may appear likewise by *P. Iunius*, and *T. Cornucanius*, who by *Tenuca* the queene of the Illyrians were put to death, notwithstanding

*i. Therewelfsh part of their As.

withstanding they came in embassage to her. And here I cannot ouerpasse one point noted in the Annals, that the measure of the statues erected in the common place at Rome, was set down precisely to be three foot in height: whereby it may appeare, that this proportion and scantling in those daies was thought to be honorable. Neither wil I conceale from you & omit the memorable example of C. * *Ostius*, who for one word speaking lost his life: this man being sent as Embassadour vnto king *Antiochus*, and hauing deliuered his message vnto him according to his charge and Commission, when hee saw that the king made no haite to giue him his dispatch presently, but said hee would make him an answer another day; made no more adoe, but with a wand or rod that he had in his hand, drew a circle about the king, and compelled him by force to giue him his answer before he stirred his foot without that compasse. But this cost him his life: and for that he was killed thus in his Embassage, the Senat of Rome ordained, That his statue should be erected in the most conspicuous place of the city, and that was in the publick pulpit for Pleas and Orations, the Rostra before named. I read in the Chronicles, that the Senat made a decree, that *Taracia Calia*, or, as some say, *Suffetia*, a Votary or Vestall Nun, should haue her image made of brasse, and this speciall prerogative besides, that she might set it vp in what place she would her self: which addition or branch of the decree implieth no lesse honor than the grant it selfe of a Statue to a woman. What her desert might be, in consideration whereof she was thus honoured, I will set downe word for word, as I finde it written in the Chronicles, namely, *For that she had conferred fr ankely vpon the people of Rome, a piece of meadow ground lying vnder the Riuer Tybre, which was her owne Free-land.* I finde moreouer vpon record, That the Statues of *Pythagoras* and *Alcibiades* were set vp in the cornered nouke of the Comitium at Rome, & that by direction from the Oracle of *Apollo Pythius*, vnto which the Senate sent of purpose to know the issue of the Samnites warre, which was then in hand: from whence they had this answer, that if they looked to speed well in their affaires, they should take order to erect two statues of brasse in the most frequented place of the city of Rome, the one in the honour of the most valiant man, and the other in the honour of the wisest person of all the Greekish Nation: which Images remained there vntill such time as *Sylla* the Dictatour built his stately hall or pallace in the same place: But I maruell very much, that those sage fathers (the Senatours of Rome at that time being), preferred either for wisdom *Pythagoras* before *Socrates* (considering that the said *Socrates* by the very same Oracle of *Apollo*, was judged the wisest man, not of Greeks onely but of all others in the world;) or in regard of valour, *Alcibiades*, before so many hardie Captaines in Greece: but most of all I muse, that in both respects, as well of wisdom as vertue, they set any one before *Themistocles*. Now if a man be desirous to know the reason of these Columns and Pillars, which supported those Statues aforesaid, it was to signifie, That such persons were now aduanced and lifted vp above all other mortall men: which also is meant by the triumphant Arches, a new inuention, and deuised but of late daies: yet both it, and all other such honourable testimonies, began first with the Greekes. But amongst many and sundry statues which they granted and allowed vnto such as they affected and liked of, I suppose, there was neuer man had more than *Phalerius Demetrius* at Athens: for the Athenians honoured him with three hundred and threescore: and yet soone after they brake them all to peeces, euen before one full yeare went ouer their heads, that is to say, a few daies more than there were Images. Moreover, all the tribes or wards of Rome set vp a statue in euery street of the city (as I haue said before) in the honor of *Marius Gratidianus*, and those they ouerthrew euery one, against the comming in of *Scylla*.

As touching statues and Images on foot, I doubt not but they haue bene for a long time greatly esteemed at Rome. Howbeit those on horse-backe were very antient: and that which more is, this honour they did communicate also vnto women as well as men; as may appeare yet at this day by the statue of *Clatia* sitting on horse-backe, as if shee could not haue bene honored sufficiently by making her statue in the habit of a Damosell or Ladie of Rome in a side gowne. And yet neither the Chaste dame *Lucretia*, nor the valiant *Brutus* (who chafed the kings and all their race out of Rome, and for whose sake and in whose quarrell the said *Clatia* was deliuered as a Hostage among others) neuer attained vnto that honour. And I doe verily beleeue, that this Statue of hers, and that of *Horatius Coclus*, were the first that publique authoritie ordayned: for before time King *Tarquinius Priscus* caused both his owne Statue and also *Sibylla* to be made, like as the other kings before him and after, as may be presumed by all likelihood

* Others say
Popilius.

* Strabo saith
that they desired
to be melted
them, yea, and
flung them in
to draughts
and priues.

likelihood and probabilitie. And yet *Piso* saith, that the other damosells and young gentlewomen her fellow hostages, after they were set free and sent home safe againe by king *Porfena* (for the honour that he meant vnto *Clatia* in consideration onely of her rare and singular vertue) caused the said statue or image of hers to be cast in brasse, and erected. But *Annus Facialis* (another antiquarie or herald at armes of Rome) reporteth this storie otherwise; for he writeth, That the statue of a woman sitting on horse-backe (which standeth ouer-against the temple of *Iupiter Stator*, and hard at the gate or entry of king *Tarquinius* the Proud his Pallace) was of ladie *Valeria*, daughter vnto *Valerius* the Consul, surnamed *Publicola*: who saith moreouer, that shee it was alone who escaped from her fellowes, and swam ouer the riuer *Tiberis*; whereas the rest of the virgins which had been sent as pledges vnto king *Porfena*, were mured all, by the secret traines and indirect meanes of *Tarquinius* the Proud.

L. Piso moreouer hath left in writing, that in the yeare when *M. Emilius* and *C. Popilius* the second time were Consuls, the Censors for the time being (*P. Cornelius Scipio* and *M. Popilius*) caused all the images and statues of those who had been head magistrates, that stood about the Forum of Rome, to be taken downe; permitting those onely to stand which had bene erected and set vp either by grant from the people, or warrant and decree of the Senat. As for that statue which *Sp. Cassius* (him I meane who ambitiously sought to be a king) caused to be erected for his owne selfe before the church of the goddesse *Tellus*, the Censors not onely pulled it downe, but also took order that it should be melted. And this (no doubt) did those wise and prouident fathers, to cut off all means euen in such things as these, that might feed the ambitious spirit of men. There be yet extant certaine declamations of *Cato*, who being Censor, cried out against the vain-glorie and pride of certaine Romane Ladies who suffered their own images to be set vp in the prouinces abroad: yet with all his exclamations, he could not repress their ambition, but that their statues must be erected euen in Rome also: as for example, *Corndia*, the daughter of the former *Scipio Africanus*, and mother to the two *Gracchi*, whose statue was made sitting: and this singularitie it had besides from all others, That her shooes were pourtraied open and loose without any strings or latches at all. This image of hers was set vp in the great gallery or publick walking-place of *Metellus*, but now it is to be seen among the stately workes and buildings of *Octavia*.

Moreover, (by allowance and permission of the state) there haue been statues set vp in Rome in publicke place, by strangers: as namely, for *C. Aelius* a Tribune or Prouost of the commons, for that he published and enacted a law, That *Stennius Statilius* a Lucan, who twice had invaded and ouer-run in hostile manner, the Territory of Thurium, should be reputed as an enemy vnto the Romanes: In regard of which demerit, the Thurines honoured the said *Aelius* with a statue of brasse, and represented to him a coronet of gold. The same Thurines also caused another statue to be made in the honour of *Fabricius*, for raising the siege that inuested and beleaguered their citie. By occasion of which succour and reliefe giuen vnto strangers and aliens, it came to passe in proceesse of time, that forrein states and cities shrouded themselves ordinarily vnder the protection of some great men at Rome; and in deuotion to them, honoured such as their lords and masters, by statues and all other means, euen as their bounden vassals. At length, there grew such disorder and confusion of these statues, that we had them pell mell at Rome without any choise or regard at all: insomuch as it this day, they are no fewer than three statues of *Annibal* to be seene at Rome, in three seuerall places of that citie, within the walls whereof he was the onely enemy euer knowne to haue launced his iavelin.

CHAP. VII.

¶ Of the Brasse-founders in old time. The inestimable prices of molten Images. Of the most renowned Colosses and gyant-like Images in Rome.

That the art of Founderie or casting mettals for Images hath been very antique, practised also and professen in Italie as well as in other countries time out of mind, may be evidently proued by the statue of *Hercules*, which *K. Evander* consecrated to the honour of him, in that very place (by folks saying) which now is the beast market in Rome. This image is called at this day, *Hercules triumphalis*, and at euery triumph is richly clad in triumphant habit. The image likewise of *Ianus* with two faces, dedicated by *K. Numa*, testified no lesse, and honoured

he is no lesse than a god, as by whom the times of war and peace be distinctly knowne. Moreover, the fingers of his hand are in that sort fashioned and formed, as they represent the number of 365, which are the daies of the whole yere; by which notification of the yere, he sheweth sufficiently, that he is the god and patron of time and ages. The images also which are knowne commonly by the name of Thulcanica, which are so dispersed abroad in all parts of the world, who will ever doubt but that they were commonly made in Tuscan? I would haue thought verily, that these Thulcanica had bene the images of the gods, and no other, but that *Meiodorus Scepheus* who for the immortall hatred that he bare against the Romans had his * surname giuen him, reproches the Romanes among other imputations, That they had forced and sacked the towne Volfinij, for the loue of two thousand pretty images in brasse which were therein. Considering then, that the inuention of making such molten images hath been so antique in Italie, I cannot chuse but much maruaile, that the idols and images of the gods in times past dedicated in churches and chappels, were either of wood or potters earth, rather than of brasse, vntill the conquest of Asia; from whence to say a truth, first arose and proceeded all our excesse and superfluitie. As touching the first deuise and originall of casting by moulds and forming the liuely similitudes of any thing expressly to the patterne, I shall haue fitter and better occasion to write thereof in my treatise of the art of Pottery, which the Greeks call *Plastice*; for of more antiquity I take it to be than this feat of Foundrie: & yet this craft and cunning so flourished in times past, and brought forth such excellent pieces of worke, and for number so infinit, that if I should put down the greater part of them, it would require many volumes; for, to comprehend them all, what man is able? During the time that *M. Scavrus* was *Aedile*, there were three thousand molten images shewed vpon the stage when he exhibited his plaies, notwithstanding this theatre of his was made not to continue any time, but to serue for the present. *Mummus*, after the conquest of Achaia, brought in with him so many of these images, that hee filled the citie therewith, and no corner was free; and yet when he departed this life & died, he left not behind him a competent portion for to bestow his daughter in marriage. And this I write not to accuse and condemne so braue a man, but rather to excuse and commend him: for how can I otherwise doe? The two *Luculli* stored Rome with a number of these images. *Mutianus* (a man who of late daies had been twice Consul) reporteth, That there be yet within Rhodes three thousand such images: and verily it is thought, that in Athens, Olympia, and Delphi, there remaine no fewer to be seen. What man liuing is able to particularize them all? and say a man should come to the perfect knowledge of them, what good can he reape thereby, or what vse may he make thereof? Howbeit, one would take some delight and pleasure lightly to touch the principall pieces of workmanship in this kind, and namely those that be of marke and note for some special singularitie about the rest; as also to name therewith the renowned artificers in times past, who wrought euery one of them a number of pieces, the exquisite and curious workmanship wherof, no man is able to vnfold and vtter as they deserue, since that *Lysippus* (by report) made in his time six hundred and ten, so full of art, so excellent and perfect all, as there is not one of them but sufficient it were to immortalize his name. And how was it knowne that hee made such a number just? It appeared plaine after his decease by a coffer that he had, wherein he treasured vp his gold, and which was then broken open by his heire: for the manner of *Lysippus* was, whensoever he tooke money for the workmanship of any piece that went out of his hands, to lay by in the said coffer one * denier of gold; and so by the number of those deniers it was knowne, how many pieces of worke he made. Incredible it is to what height of perfection this art grew vnto, first by the successe of the art, which was so vendible and high prized; afterwards, by the audaciousnesse of the artificer, who ventured to make so huge and monstrous works.

What good speed this art had, may appear by an example which I will set downe, of an image, deuised to expresse the likenesse neither of god nor man: and a dogg it was in brasse, which many a man hath seene in our time in a chappell of *Iuno* within the Capitoll temple, before it was burnt now last by the * *Vitellians*: This dogg was made licking his owne wound; but how artificially it was wrought, and how liuely it expresse the proportion & feature of a dog indeed, to the wonder of all those that beholding it could not discern the same from a liuing creature, is apparant not only by this, That it was thought worthy to stand in that place and to be dedicated to that goddesse, but also by the strange manner of charge laid vpon them that had the keeping and custodie thereof: for no reall caution of money was thought sufficient to

* It doth not appear what it was, but by all likelihood *quintus metellus*.

* It should seeme that the Greeks had a piece in gold answerable in weight vnto the Romane *Denarius* in silver, which was a dram Attick: and this cometh next vnto our French crowne.

* i. Those that sided with *Vitellius*.

A be pledged and pawned for the warrantise, or to counteruaile the worth thereof: Order therefore was giuen by the state, and the same obserued from time to time, that the sextons or wardens of the said chappell should performe the safety and forth-comming of it vnder paine of death.

As touching the bold and venturous pieces of worke that haue been performed and finished by this art, we haue an infinite number of such examples: for we see what huge and gyant-like images they haue deuised to make in brasse, resembling high towers more like that personages, and such they called *Colossi*. Of this kind is the image of *Apollo* within the Capitoll, transported by *M. Lucullus* out of Apollonia, a city within the kingdome of Pontus, which in height was thirtie cubits, and cost a hundred and fifty talents the making. Such another is that of *Iupiter* within *Mars* field, dedicated by *Claudius Caesar* the Emperour, which because it standeth so neere vnto *Pompeys* theatre, men commonly call *Iupiter Pompeianus*, and full as big he is as *Apollo* abouenamed. Like vnto these, is the colosse or stately image [of *Hercules*] at Tarentum, the handiwork of the said *Lysippus*, but he is forty cubits high: and miraculous is the deuise of this colosse, if it be true which is commonly reported thereof, namely, that a man may moue and stirre it easily with his hand, so truly ballanced it stands and equally counterpoised by Geometry; and yet no wind, no storme or tempest, is able to shake it. Certes, it is said, that the workman himselfe *Lysippus*, provided well for this danger, in that a pretty way off he reared a colunne or pillar of stone full opposit to the winds mouth, for to breake the force and rage thereof, from that side where it was like to blow and beat most vpon the colosse: and verily so huge it was to weld, and so hard to bee removed, that *Fabius* surnamed *Verrucosus*, durst not meddle with it, but was forced to let it alone & leaue it behind him; notwithstanding be brought with him from thence another *Hercules*, which now standeth within the Capitoll. But the Colosse of the Sun which stood at Rhodes, and was wrought by *Chares* of Lyndus, apprentice to the abouenamed *Lysippus*, was aboue all others most admirable; for it carried seuentie cubits in height: well, as mighty an image as it was, it stood not on end aboue threescore yeares and six; for in an earthquake that then happened, it was ouerthrowne: but lying as it doth along, a wonderfull and prodigious thing it is to view and behold: for first and foremost, the thumbs of the hand and great toes of the foot are so big, as few men are able to fadome one of them about: the fingers and toes are bigger than the most part of other whole statues and images: and looke where any of the members or lims were broken with the fall, a man that saw them would say they were broad holes and huge caues in the ground: for within these fractures and breaches, you shall see monstrous big stones, which the workemen at the first rearing and setting of it had couched artificially within, for to strengthen the colosse, that standing firme and vpright so ballasted, it might checke the violence of wind and weather. Twelve yeares (they say) *Chares* was in making of it before he could fully finish it, & the bare workmanship cost three hundred talents: This money was raised out of *K. Demetrius* his prouision which he had set by for that purpose, & paid from time to time by his officers, for that he would not himselfe endure to stay so long for the workmanship thereof. Other images there are besides of the nature of colosses in the same citie of Rhodes to the number of one hundred, lesser indeed than the foresaid colosse of the Sun, yet there is not one of them, but for the bignesse were sufficient to giue a name to the place and ennoble it, wherefoeuer it should stand.ouer and aboue, there be in the said citie fise other gyant-like images or colosses representing some gods, and those of an huge bignesse, which were of *Bryaxes* his making. Thus much of workemen strangers.

And to come somewhat nearer home: we Italians also haue practised to make such colosses, for surely we may see (and go no further than to the librarie belonging to the temple of *Augustus Caesar* here in Rome) a Tuscan colosse made for *Apollo*, and the same is fiftie foot high from the great toe vprward: but the bignesse thereof is not so much as the matter and workmanship: for hard it is to say, whether is more admirable, the beautifull feature of the body, or the exquisite temperature of the mettall. Moreover, *Sp. Carvilius* long agoe made the great image of *Iupiter* which standeth in the Capitoll hill, after the Samnites were vanquished in that dangerous war, wherein they bound themselves by a sacred lay and oth to fight it out to the last man, vnder paine of death to as many as seemed to turne backe or once recule; to the making whereof, he tooke the brassen cuiraces, grieues, and morions of the enemies that lay dead and slaine vpon the ground: which is so exceeding bigg and large, that hee may very plainly and euidently bee discovered and seene from the other *Iupiter* in Latium, called therefore *Latarius*.

* *Fellus* saith 105 foot: whereby it appeareth that a cubit was one foot & a halfe. *Chares* the workman engraved vnder it this Hypogram in Latin: *hic est colossus Iovis aedificatus a Rege Xipre miles armatus a Antiocho*.

The powder & dust which the filme made in the workmanship & polishing of this colosse, *Caracallus* himselfe cast again, and thereof made his own image and pourtraiture, and the same standeth (as you may see) at the foot of the other. Within the said Capitoll, there be two brasen heads worthy of admiration, which *P. Lentulus* when he was Consul thought good to dedicate to that place. The one was made by *Chares* the foresaid founder, the other wrought by *Decius*. But this of *Decius* his making compared with the other, commeth so farre short, that one would not take it to be the doing of an artificer that was his crafts-master, but rather of some bungler, prentice, or learner. But to speake indeed of a great image, and that which surpasseth in bignes all the rest of that kinde, looke but vpon the huge and prodigious colosse of *Mercurie*, which was about it, and within our remembrance, made in France at Auvergne: ten yeares hee *Zenodorus* in our age and the workmanship came to foure hundred thousand sesterces. Now when hee had made sufficient prooffe of his Art there, *Nero* the Emperour sent for him to come to Rome, where he cast indeed and finished a colosse a hundred and ten foot long, to the similitude and likenesse of the said Emperour, according as it was first appointed, and as he began it: but the said prince being dead and his head laid, dedicated is was to the honour and worship of the Sun, in detestation of that most wicked monster, whose vngodly acts the city condemned and abhorred. Certes, I my selfe haue been in that workhouse of *Zenodorus*, where I beheld and considered not onely that great master-patterne in cley of the said colosse, but also another consisting of very small pieces, as branches, which serued as it were for moulds, and the first indution to the worke, as the assay and prooffe thereof. Surely the workmanship of this one statue or colosse, shewed plainly, that the true science & skil of founderie or casting brasie into forms, was cleane decayed and gone; considering that *Nero* was ready and willing to giue siluer and gold enough for the doing thereof artificially and with expedition. *Zenodorus* also himselfe was not thought inferiour to any workman in old time, either for counterfeiting a similitude, or grauing the same: for during the time that he made the statue before said in Auvergne, he counterfeited two drinking cups grauen and chased by the hand of *Calamis*, but belonging to *Vibius Arvatus* (the president and gouernor at the same time, of that prouince) which he had receiued of *Cassius Syllanus* his vnkle by the mothers side, tutor and schoolemaster somtime to *Casus Germanicus*: which prince notwithstanding that he loued them wel, yet hee bestowed them freely vpon his said instructor *Cassius*, whom he loued better: and *Zenodorus* did it so well, that hardly there could be discerned any difference in the workmanship. But to conclude, the more consummat and accomplished that *Zenodorus* was for his skill and cunning, the more euidently it appeareth, that the true Art of founderie was in his time cleane lost, and out of knowledge and practise.

CHAP. VIII.

¶ Of 366 excellent pieces of worke in Brasie, and as many cunning artificers in that kind.

The images and wrought pieces of Brasie, commonly called Corinthian works, many men take such pleasure & delight in, that they loue to carry the same with them whither soeuer they goe. As *Hortensius* the famous orator, who would neuer be without the counterfeite of *Sphinx*, which hee had from *Verres* his client, at what time as he was in trouble and called into question, for his extortions and oppressions in Sicilie: in which triall of *Verres*, wherein *Cicero* was his aduersarie and accuser, vpon occasion that *Hortensius* who pleaded at the barre against him in the behalfe of *Verres*, among other crosse words that passed betwene, happened to say, That he understood no parables and riddles, and therefore willed him to speake more plainly; *Cicero* made answer readily againe, that by good reason he should be well acquainted with riddles, seeing he had a *Sphinx* at home in his house. Likewise, *Nero* the Emperour had a great fancie to a piece or counterfeite of an Amazon, (wherof I meane to write more hereafter) which by his good will he would neuer be without. And *C. Cestius*, somewhat before *Nero*, a man that in his time had bin Consul, was so addicted to a little image that he had, that it went with him in the campe, yea and he would haue it about him in the very conflict and battell with his enemies. Moreover, *K. Alexander* the Great had four statues or images (by report) which ordinarily were wont and none but they, to support his tent when he lay abroad and kept the field: wherof twain stand now before the temple of *Mars* called the Reuenger, & other 2 before the *Palatium*.

As

As touching images, statues, and counterfeits of a lesser size, there are an infinite number of artificers who are ennobled & renowned by them: yet to begin with the image of *Iupiter* made at Olympia, *Phidias* the Athenian (about all other) was of great name therefore, and wrought it was of yvorie & gold together: howbeit many other pieces of brasie there were of his making, which greatly commended the workman; he flourished in the 83 Olympias, and about the yere (after our computation at Rome) 300. And at the same time there liued those concurrents of his who endeauoured to match him, to wit, *Alcamenes*, *Critias*, *Nesicles*, and *Hegias*. After these, and namely in the 87 Olympias, there succeeded and had their time, *Agelades*, *Callon*, *Polycleus*, *Phrynon*, *Gorgias*, *Lason*, *Myron*, *Pythagoras*, *Scopas*, and *Pericles*: of which, *Polycleus* brought vp diuers braue and worthy apprentices, and by name, *Argisus*, *Asipodorus*, *Alexis*, *Aristides*, *Phrynon*, *Pyron*, *Athenodorus*, *Dameas* of Clitorea, & *Myron* the Lycian. In the 95 Olympias there flourished *Nauces*, *Dinomides*, *Canochus*, and *Patrocles*. In the 102 Olympias there came in place, *Polycles*, *Cephalodorus*, *Ececharis*, and *Hypatodorus*. In the 104 liued *Lysippus*, at what time also *K. Alexander* the Great flourished: likewise *Lysistratus* and his brother *Sthenis*, *Euphronides*, *Softratus*, *Ion*, and *Silanius*: of which *Silanius* this is wonderful, that hauing no master at all to teach and instruct him in the art, yet he became himselfe so excellent, that he brought vp vnder him, *Zeuxis* and *Ladys*. In the 120 Olympias, *Eutychides*, *Euthykrates*, *Labippus*, *Sephestodorus*, *Tymarchus*, and *Pyromachus* were famous artificers for the time. Then lay the art asleepe and as it were dead for a while, vntill such time as about the 155 Olympias it seemed to reuiue and awaken again; & then there arose *Antheus*, *Callistratus*, *Polycles*, *Athenaus*, *Callixenus*, *Pythocles*, *Pythias*, and *Timocles*, indifferent good workemen, but nothing comparable to the other before named. Thus hauing ranged the most famous Artificers distinctly according to their seuerall Ages, I will runne ouer them againe, as many I meane as excell the rest: and yet how soeuer I make haste, I will not ouerpasse the multitude of others, but interlard (as it were) and disperse them among, as occasion shall be offered.

In the first place this is to be vnderstood, that the principal and singular of all these founders came in question (notwithstanding they liued in sundry ages) which of them should be esteemed chiefly, by reason of diuers Amasons wrought by their hands: for when these images should be dedicated in the temple of *Diana* in Ephesus, it was thought good to make choise of one that should be deemed & approued best, by the iudgment of those workmen who then liued & were present: for plaine it was, that the image whom they all iudged to be next and second to their own, the same was simply best, and so to be reputed. This principal Amason hapned to be of *Polycleus* his making: in a second degree was the Amason made by *Phidias*: that of *Ctesilas* was counted the third, of *Cydon* the fourth, & in a fifth place was reckned the workmanship of *Phragmon*. As for *Phidias*, besides the *Iupiter Olympius* of his making, (wherin no man seeketh to come neere vnto him) he made likewise *Minerva* of iuorie at Athens, which standeth there in the temple *Parthenon*. But ouer and aboue the foresaid Amason, there was of his workmanship *Minerva* in brasie, so faire and beautifull, that of her beauty she tooke the surname [*Kallimorphos*]. Of his doing was the image called ** Cliduchos*, and another of *Minerva*, which *Amilius Paulus* dedicated at Rome in the temple of *Fortuna huiusce diei*. Of the daies of Fortune. Also two other statues or images portraied in clokes or mantles, were his handiwork, which *Catulus* set vp in the same temple: likewise another after the maner of a colossus or gyant all naked. In sum, he was deemed and that iustly, to haue bin the first that deuised and taught the skil of chasing & embossing. As for *Polycleus* the Sicyonian, who learned his cunning vnder *Agelades*, hee it was that made in brasie *Diadumenus* an effeminate yong man looking wantonly, with a diadem or wreath about his head, a piece of work of great account, & much spoke of, for that it cost 100 talents: and of his making was *Doryphorus*, a yong boy with a manly countenance, hauing a speare in his hand. Moreover, he made that which workmen call Canon, that is to say, one absolute piece of worke, from whence artificers do fetch their draughts, simetries, and proportions, as from a perfect patterne or rule which guideth and directeth them in their worke: so as wee may well and truly iudge, that *Polycleus* alone reduced the skill of Founderie and imagerie into an Art and method, as may appeare both by that Canon, and by other workes which passed through his hands. Of his workmanship was the brasen image, representing one scraping and rubbing himselfe in the bath or hot-house: as also another all naked, and ** challenging to the dice*. Item, two boyes both naked playing at dice, which thereupon be called *Astragalizontes*. And these re-

* *Kallimorphos*, i. *Claviger*, i. *key-bearer*.

* *Tale incensum*, i. *incensum*, i. *incensum*.

main to be seen in the court or portall belonging to the house of *Titus* the Emperour, which is so exquisite a piece of worke, that many doe iudge there cannot be set another to it more absolute and perfect: also he it was which wrought the image of *Mercury* which is at *Lysimachia*. of *Hercules* at Rome, and namely how hee heaved and held vp *Anteus* from the ground between heauen and earth: and the counterfeits of *Artemon*, that effeminate and wanton person, who because hee was ordinarily carried in a Litter, men called *Poryphoritos*. This *Polyclitus* was iudged to haue brought this art of Imagery to a consummat perfection; the feat also of ingrauing & imbossing he was thought to practise and promote, like as *Phidias* before him opened the way to it & gaue instructions. This proper and special gift he had besides about all other, to deuise how Images might stand vpon one leg: and yet *Varro* saith, that all the images of his making be four square, and all in manner after one pattern.

To come vnto *Myro*, born he was at *Eleuthera*, and an apprentice likewise to *Agelades*: the piece of worke that brought him into name and made him famous, was an heifer of brasse; by reason for that diuers Poets haue in their verses highly praised it, and spread the singularity of it abroad: for so it falls out otherwhiles, that many men are commended by the wit of others, more than by their own. Other pieces of work there were of his besides, to wit, a dog, a coit, a caffer (or one hurling a stone or weight of lead) *Perseus* [killing *Medusa*] sawyers called *Pristæ*, a Satyre wondrous at a pipe or flute, and the goddesse *Minerva*: moreover, the Delphick *Pentathli*, & the *Pancratiastra*: furthermore, that image of *Hercules* which standeth in the temple that *Pompey* erected neere the greatest cirque or shew-place, is the handiwork of *Myro*. Besides (as it appeares rected neere the greatest cirque or shew-place, is the handiwork of *Myro*. Besides (as it appeares by the poesie of *Erinna* the Poetresse) hee it was that made the tombe or monument in brasse of a poore graff,opper and a locust; the image likewise of *Apollo*, which (after that *Antonius* the Triumvir had wrongfully taken from the *Ephesians*) *Augustus Caesar* restored againe vnto them, being warned so to do by a vision appearing vnto him in his sleep, was of *Myro* his making. This workman seems to haue bin the first that wrought not his images after one sort, but altered his work after many fashions, as being fuller of inuention, and giuen more to deuise in his art, more curious also and precise in his symetries and proportions, than *Polyclitus*: and yet as exquisite as he was, he went no farther than to the outward linements of the body and members thereof; as for the inward affections of the mind he did not expresse in any of his work: the haire also as well of head, beard, as share, he left after a grosse manner, & wrought them no finer than the rude and vnexpert workmen in old time had either done or taught. No maruel therefore if *Pythagoras* K of the Imageur of Rhegium in Italy went beyond him in this feat, and namely in that piece of worke of his which resembled a wrestler or *Pancratiastra*, which was dedicated in the temple of *Apollo* at Delphos. He came short also of *Leontius*, who expressed liuely in brasse, *Astylus* the famous runner in a race; which image is shewed for a rare piece of work in *Olympia*: also the boy *Libys*, which is to be seen in the same place, holding in his hand a little table, and withall carrying apples, stark naked. He made also the pourtraiture of one that seemed lame and to halt, vpon an vicer, but the same is so liuely and naturally done, that as many as behold the same seeme to haue a compassion and fellow-feeling with him of some pain and grienance of his fore; and this piece of work a man may see at *Syracusa*. Furthermore, the said *Leontius* cast in brasse one *Apollo* playing vpon his harpe: as also another *Apollo*, and the serpent killed with his arrowes; which I image he surnamed *Dicaeus*, i. lust: for that when the city of *Thebes* was won by *Alexander* the Great, the gold which he hid in the bosome thereof when hee fled, was found there safe and not diminished, when the enemy was gon and he returned. Hee was the first that in his images expressed the sinues and veines lying vnder the skinne: hee it was also that couched and layd the haire of the forehead more handiomerly, yea and wrought the same farre more finely than any before him.

* or rather *Parrasius*, of *Paros*.
* *Hierofte* dict.
Now besides *Pythagoras* before mentioned, there was another a * Samian both, who by occupation was at the beginning a painter: of his handiwork are those 7 images halfe naked, which are to be seen in the Temple of * This daies *Fortune* at Rome; and one resembling an old man: all highly commended for singular art. This *Pythagoras* was so like vnto the other about named, M especially in face and countenance, that hardly (by report) one of them could be knowne from the other. As touching *Softratus*, it is said he was apprentice to *Pythagoras* of Rhegium, and his sisters son besides. As for *Lysippus* of *Sicyone*, *Durus* saith, That he learned the art by himselfe, and neuer was taught by other. But *Tullius* affirmeth, That hee was an Apprentice vnto it, and

A hauing bin at first by occupation a poore tinker or a plain braiser and coppersmith at the most, he began to take heart vnto him and to proceed further, by a speech or answer that *Eupompus* the painter gaue him: for when he seemed to ask this painters counsell, what pattern and whom he were best to follow of all those workmen that were gon before him? hee shewed vnto him a multitude of people, and said withall, That he should do best to imitate Nature her self, and no one artificer: and that was it (quoth he) which I meant by the former demonstration of so many men. And verily, so excellent a workman he proued in the end, that he left behind him the most pieces of any man (as I haue said before) and those of all sorts, and fullest of art and good workmanship: and among the rest, the image of a man, currying, rubbing, and scraping the sweat and filth off his own body, which *M. Agrippa* caused to be set before his own baine: and the Emperour *Tiberius Caesar* took to great pleasure in it, that notwithstanding at his first comming to the crown he knew well enough how to command and temper his own affections, yet he could not now rule himselfe, but would needs haue the said image to be removed from thence, vnto his own bed-chamber, and another to be set in the place of it: wherat the common people (see their contumacie and frowardnesse) were so much offended and displeased, that they rested not with open mouth to exclaim vpon him in all their theatres, when they met there together, and cried to haue their *Apoxyomenos* set again in the own place: inso much as the Emperour was content so to do, notwithstanding he loued it so well. This *Lysippus* also won great credit and commendation by another image that he made, representing a woman piping or playing vpon the flute, and drunken withall: also by a kennell of hounds, together with the huntman and all belonging to the game. But about all, he got the greatest name for making in brasse a chariot drawne with foure steeds, together with the image of the Sun, so much honored among the *Rhodians*. The personage of King *Alexander* the Great hee likewise expressed in brasse, and many images he made of him, beginning at the very childhood of the said Prince: and verily the Emperour *Nero* was so greatly enamoured vpon one image of *Alexander*, that hee commanded it to be gilded all ouer; but afterwards, seeing that the more cost was bestowed vpon it by laying on gold, the lesse was the art seen of the first workman, so that it lost all the beauty and grace that it had by that means, he caused the gold to be taken off againe: and verily the said image thus vngilded as it was, seemed far more pretious than it was whilest it stood so enriched with gold, notwithstanding all the hacks, cuts, gashes, and rases all ouer the body wherein the gold did sticke, remained still, which in some sort might disfigure it. Of this mans making was the statue of *Hephestion*, a great fauorite and minion of *Alexander* the Great; and yet some ascribed this piece of worke vnto *Polyclitus*; whereas in truth he liued almost an hundred yeres before the said *Hephestion*. He counterfeited also *Alexander* the Great how hee rode a hunting, with his hounds and all things belonging to the chace; and this Worke of his resembling hunting was thought worthy to be consecrated in the temple of *Apollo* at Delphi. At Athens he made a troupe of Satyrs. As for *Alexander* himselfe, with all his principall courtiers and friends about him, he resembled in brasse most liuely. All these pieces of his workmanship before rehearsed were transported to Rome by *Metellus*, after the subduing and conquest of Macedonia. Finally, Coaches drawne with foure horses, he made of many sorts and fashions, all in brasse. And in a word, the art of founderie and imagerie was brought to far greater perfection by this Artificer, as it was thought; for hee expressed the very haire of the head as fine and small as Nature made them. The heads to the images of his making were nothing so big in proportion to the rest of the body as they were in old time: his images shewed not so great and corpulent, but more lank, slender, and lean; as well to expresse the knitting of joints, the ribs, veins, and sinues the better, as to cause them also to seem the taller. The Symmetrie, which about all things hee obserued most precisely in all his workes, is a terme that cannot properly be expressed by a Latine word. A new deuice he had that neuer before him any practised, and that was, to make his images of a quarry and square stature, as the Antients before his time did: for an ordinary speech it is of his, That in times past men were made plain, such as they were; but he made them as they would seem to be. Finally, it seemeth, that this singular gift he had about all others in all his workes, to shew finenesse and subtiltie, which hee obserued most curiously in the smallest things that passed vnder his hand. When he died, he left behind him three sonnes, which all were his apprentices: of whom, *Lysippus* and *Bodas* were passing good Workemen, and very well regarded; but *Enthyocrates* his third sonne ouerwent his brethren. Although I must needs say, That hee

was the workman, who cast in brasse the full proportion and similitude of *Protesilaus*, and of *Pythodorus* the famous wrestler. *Alexander*, otherwise called *Paris*, was of *Euphranor* his making: The excellent art and workmanship wherof was seen in this, that it represented vnto the eie all at once, a iudge between the goddesses, the louer of *Helena*, and yet the murtherer of *Achilles*. The image of that *Minerva* at Rome, which is called *Catulliana*, came out of this mans shop: and it is the same which was dedicated and set vp beneath the Capitoll by *Quintus Lutatius Catulus*, whereupon it tooke that name. Moreouer, the image that signifieth good lucke, or happie success, carying in the right hand a boule or drinking cup, in the left an eare of corne and a Poppy head, was his handie worke. Like as the princeesse or ladie *Latona*, newly deliuered of *Apollo* and *Diana*, holding these her two babes in her armes: and this is that *Latona* which you see in the church of *Concordia* in Rome. He made besides many chariots, drawne as well with foure as two horses: as also a key-bearer or *Cliduchus*, of incomparable beautie. Semblably two other statues, resembling Vertue and Vice, both which were of an extraordinary stature and bignes, gyant-like, in manner of Colosses. He made besides a woman ministring, and yet worshiping withall. Item King *Alexander* the Great, and King *Philip* his father, riding both in chariots drawne with foure horses. *Entychides* a renowned imageur, represented the riuer *Eurotas* in brasse: and many men that saw this worke, werewont to say, That the water ran not so cleare in that riuer, as art and cunning did appeare in this workmanship. *Hegyas* the imageur made *Minerva* and King *Pyrrhus*, which be much praised for the art of the maker: likewise boies practising to ride on horsebacke: the images also of *Castor* and *Pollux*, which stand before the temple of thundring *Jupiter* in Rome. In the colonie or city *Parium*, there is an excellent statue of *Hercules*, the handy worke of *Isidorus*. *Buthyrcus* the Lycian was taught his cunning by *Myron*, who among many other pieces, befeeming the apprentice of such a master, deuised in brasse to represent a boy blowing at a fire halfe out: and he it was that cast in the same mettall the famous *Argonautes*, in that voyage to *Colchos*.

Leocras made the *Egle* that rauished *Ganymede*, and flew away with him: but so artificially, as if she knowing what a fine & dainty boy she had in charge, and to whom she caried him, clasped the child tenderly, that shee forbore with her tallons to pierce through the very cloths. The boy *Autolikos* also, winning the prize in all games and feats of actiuitie, was of his making; for whose sake *Xenophon* wrote his booke entituled *Symposion*: likewise that noble image of *Jupiter* in the Capitoll of Rome, surnamed *Thundering*, which is commended aboue all others: as also *Apollo*, with a crowne or diademe.

* i. Good health.

Lyciscus counterfeited *Lago* a boy, who in maner of a page or lacquey, seemed to be double diligent, & after a flattering and deceitfull sort performed nothing but eie-seruice. *Lycus* also made another boy blowing the coales for to maintain fire. *Menechmus* deuised to cast in brasse a calfe, turning vp the neck & head at the man that setteth his knee vpon his sides, and keeps his body down. This *Menechmus* was a singular imageur, and himself wrote a booke as concerning his own art. *Naucides* was iudged to be an excellent workman, by the making of *Mercury*, & of a discobole or coiter: as also for counterfeiting in brasse one that was a sacrificing or killing a ram. *Nancernus* woon credit by making of a wrestler, puffing & blowing for wind. *Nicerates* had the name for the curious workmanship of *Esculapius* and **Hygia*, which are to be seen at Rome within the temple of *Concord*. *Porymachus* got great reputation by a coach drawn with four steeds, & ruled by *Alcibiades* the coachman, all of his making. *Policles* was the maker of that noble piece of work that goeth vnder the name of *Hermaphroditus*. *Pyrrhus* counterfeited in brasse another *Hygia* & *Minerva*. And *Phanix* who learned his art of *Lysippus*, liuely counterfeited the famous wrestler *Epitherses*. *Stipax* the Cyprian got himselfe a name by an image resembling one *Splanchnoptes*: This was a pretty boy or page belonging to *Pericles*, surnamed *Olympius*, whom *Stipax* made frying & roasting the inwards of a beaſt at the fire, puffing and blowing therat with his mouth full of breath and wind for to make it burne. *Silantion* did cast the similitude of *Apollodorus* in brasse, who likewise was himselfe a founder and imageur, but of all other most curious and precise in his art, he neuer thought a thing of his owne making well done, and no man censured his worke so hardly as himselfe: many a time when he had finished an excellent piece of work, he would in a mistlike vnto it, path it in pieces, and neuer stood contented and satisfied with any thing when it was all done, how ful of art foeuer it was, and therefore he was surnamed *Mad*: Which furious passion of his, when *Silantion* aforeſaid would expresse, he made not the man himselfe alone of brasse, but the

A the very image of Anger and Wrath also with him, in habit of a woman.ouer and besides, the noble *Achilles* was of his making, a piece of worke well accepted and much talked of. Of his doing is *Ephistates*, teaching men how to wrestle and exercise other feats of actiuitie. As for *Strongylion*, he made one of the Amazons, which for an excellent fine and proper leg that she had, they call *Eucnemus*; and in that regard *Nero* the Emperour set so great store by this image, that it was carried ordinarily wherefoeuer he went. This artificer made likewise another braſen image resembling a faire and sweet boy, which for the singular beautie *Brutus* of *Philippo* so loued, that it was commonly called by his surname *Philippensis*.

Theodorus who made the Maze or Labyrinth at *Samos*, caused his own image to bee cast in brasse, which besides the wonderfull neere resemblance and likenesse to himselfe, was contriued so artificially besides, and so set out with other fine deuises, that he was much renowned for the workmanship, and in the sight of all men it was admirable: he carrieth yet in his right hand a file, and in his left hand he bare sometime (with three fingers) a little pretty coach, and the same with four horses at it, which was afterwards taken from the rest, and had away to *Præneste*: but both the coach, the teeme of horses, and the coachman were couched in so small a roome, that a little flie (which also he deuised to be made to the rest) couered all with her pretie wings.

Xenocrates was apprentice to *Tisicrates*, or as some say, to *Euthyocrates*; but whether of the twaine foeuer was his master, he outwent them both in the number of statues and images that he wrought, and besides compiled bookes of his owne art and workmanship.

Many artificers there were, that by imagerie delighted to counterfeit in brasse the battailes that king *Attalus* and *Eumenes* both, fought against the Galatians or Gallogreekes; and namely, *Ifigonius*, *Pyromachus*, *Stratonicus*, and *Antigonius*, and this artificer last named, composed bookes also of his own art. *Boethius*, although he was a better workman in siluer, yet one piece of worke he made in brasse, which had an excellent grace, and that was a child throttling a Goose by the necke.

Of all these pieces of antique worke which I haue reckoned vp, the most choise and singular aboue the rest, *Nero* before time had by his violent edicts and commandements caused to bee brought from all parts to Rome, and he disposed them in diuerse roomes of his golden house for to adorne and beautifie the same; but now they be consecrated by *Vespasian* the Emperour, in the temple of Peace, and in other stately buildings and edifices of his.

D Many other excellent artificers there are besides these aboue rehearsed: but they may be all ranged in one ranke, and counted for their skill and cunning equall, for a man shall not find one piece of worke of their making, that carieth any singularity aboue the rest, and namely *Ariston*, who also was wont to graue and chafe in siluer, *Callias*, *Cleſias*, *Cantharus* of *Sicyone*, *Dionysodorus* who was an apprentice trained vp vnder *Critias*, *Deliaides*, *Euphorion*, *Eunicus*, and *Hecataeus*. As touching famous engrauers in siluer, I read of *Lesbocles*, *Prodorus*, *Piſiodicus*, and *Polygnorus*, who also were most excellent and renowned painters. Likewise, of siluerſmiths or grauers in siluer, we haue *Stratonicus*, and *Scymnus*, who had for his master *Critias*.

Now will I reckon vp those worthy and famous Imageurs, who employed themselues in one and the same kind of workes. In the first place, *Apollodorus*, *Androbulus*, *Asclepiodorus*, and *Alcetas* tooke pleasure to expresse the similitudes of learned men & Philolophers. As for *Apelles*, he delighted besides to represent women at their deuotions, adoring the gods, and offering sacrifices. *Antigonius* had a grace likewise to represent one *currying and scraping his skin al ouer the body in a stoue, as also the murderers of the Tyrants abouenamed. *Antimachus* and *Athenodorus* loued to haue in their shops the statues of great ladies and noblewomen. *Aristodemus* tooke much pleasure to busie himselfe about the portraying of wrestlers, coaches with two horses set therto, and a coachman, Philolophers and great clearkes, old matrons, and king *Selenus*: There is also of his making a *Doryphorus*, resembling one of *Darius* his guard, which is a proper piece of work & a louely. As touching the *Cephiſſodori* (for two of them there were) the elder had a great dexterity in making *Mercurie* fostering prince *Bacchus* in his infancie: He made also one, preaching to the people, and casting forth his armes; but what person of quality he should be, it is not certainly knowne: the younger was wont to represent the Philolophers. *Colothus*, who joined with *Phidias* in the making of *Jupiter Olympius*: He delighted also to be doing with the images of Philolophers. So did *Cleon* and *Cenchramis*, *Calicles*, and *Cephis*. As for *Calcoſthenes*, he busied and amused himselfe in the counterfeits of Comedians, players of enterludes, and champions. *Daphippus*

* i. exerciſing
the same that
Apoſtomon:

hippus had a very good hand, in making one scraping and rubbing his body in an hot-houfe. *G Daiphron*, *Democritus*, and *Demon*, were as cunning and perfect in the personages of Philosophers and Sages, *Epigonus* would haue his hand in all those works in manner which I haue rehearsed, and laboured to imitate those artificers: but he surpassed them all in a Trumpetter of his owne devising, and a little infant, who seeing the mother slaine, made toward the dead corps, and hung about it as if it would play and be played withall, full pittiously to behold. *Eubolides* made one, as if he were counting vpon his fingers. *Mycon* his cunning was most seen in the counterfeiting of wrestlers and such as practise feats of actiuitie: and *Menogenes*, in making chariots with foure horses. *Niceratus* likewise enterprised all manner of works wherein others were best seen: and besides represented the personage of *Alcibiades*, together with his mother *Demarete*, as shee sacrificed with lampe light burning by her. *Pisicrates* shewed much skill with a chariot of two horses, H

* *Suadas*, i. Per-
suasio, or *Diana*
as some think.
Some read *Pi-
sa*, i. the god-
desse of Cere-
dulitie.

wherein he bestowed * *Pitho* sitting in the habit of a woman: The images *Mars* and *Mercurie* also, which stand at Rome in the temple of *Concordia*, be of this mans making. As for *Perillus*, there is no man commendeth him for his workmanship, but holdeth him more cruell than *Phalaris* the Tyrant, who for that he deuised a brazen Bull, to roast & frie condemned persons in, assuring the Tyrant, that after the fire was made vnder it, they would when they cried seeme to bellow like a Bull, & so rather make sport than moue compassion: but this *Perillus* was the first himselfe that gaue the handsell to the engine of his own inuention, & although this was cruelty in the Tyrant, yet surely such a workman deserued no better a reward, & justly he felt the smart of it: For why? The art and cunning foundery, which of all others is most ciuile & agreeable to our nature, and which had beene employed ordinarily in representing the personages of men and gods, this monster of men abused, and debased to this vile and vnaturall ministry of tormenting man. Would one haue euer thought, that after so many witty & worthy men who had trauelled in this science to bring it to some perfection, all their labours should turne in the end to this prooue, for to make instruments thereby of torture? And certes, there being many pieces of his workmanship, they be kept and saued for this cause onely, that as many as see the same, may detest and abhor the wicked hand that made them. But to proceed forward to other workmen in this kinde. Of *Sthenis* making are the images of *Ceres*, *Iupiter* and *Minerva*, which at Rome are within the temple of *Concord*. The same man took pleasure in counterfeiting ancient dames and matrons, weeping, praying, and offering sacrifice. *Simon* [of *Egina*] was very good at the making of a dog and an archer. *Syratonius* that famous cutter and engrauer, was neuer well K but when he pourtraied some Philosopher or other: no more than *Scopas*, both the one and the other. As for wrestlers and champions, armed men, hunters, and sacrificers, they were the onely workes that these artificers following delighted most in, to wit, *Batten*, *Eucher*, *Glaucides*, *Heliodorus*, *Hicarus*, *Lyphon*, *Lyson*, *Lcon*, *Menodorus*, *Myagrus*, *Polycrates*, *Polydorus*, *Pythocritus*, and *Protagenes* (who also was a most excellent & renowned painter, as I will hereafter shew more at large) also *Patrocles*, *Polis*, *Polidonius* born at *Ephesus*, who likewise chased and engraved in siluer most finely, *Periclimenus*, *Philon*, *Simenus*, *Timotheus*, *Theomnestus*, *Timarchides*, *Timon*, *Tisias*, and *Thrason*. But aboue all other, *Callimachus* is the workman of greatest note, in regard of a by-name giuen vnto him, and that was *Cacizotechnos*: and well he might be so called, for hee would alwaies be finding fault with his own workmanship, & neuer could see when to make an end, thinking still L that he had not bestowed art ynough vpon that he had vnder his hand. And so he brought forth little or nothing perfect in the end: A notable and memorable example to teach all men not to be ouer curious and exquisit in any thing, but to hold a measure in all. And there is a daunce of Lacedemonian women of his making: a piece of work which he went about also to amend, and when he thought to make it better, he marred it clean, so that it lost all the grace it had before. Some say, that this *Callimachus* had bin in former time a painter. And since I haue entred so far into this Treatise of statues & images, I may not passe ouer in silence, but note (as it were) by the way one thing of *Cato*, although haply it may be thought but a meere vanity: In that expedition or voiage wherein *Cyprus* was conquered and reduced vnder the dominion of Rome, hee made port-faile of all the pillage taken there, saue only one statue of *Zeno*, not for the excellencie of the matter, for it was but brasse, nor yet for the art and curious workmanship thereof, but for that it was the image of a Philosopher. In this discourse of statues and images, I must not passe by one, although it is not certainly known who was the maker of it, and this is *Hercules* in his shirt and other habit that he wore vpon the mount *Oete*: standing now at Rome neere vnto the publicke M pulpit

A pulpit called *Roftra*: Made he is (whosoever did it) with a grim, sterne, and fower countenance, and such indeed as doth bewray and feel those intollerable torments which the body sustained by that poisoned thirst [sent to him from *Deianira*.] Vpon this statue there stand 3 titles or inscriptions: the first is this; *L. Luculli Imperatoris de Manubius*, i. *L. Lucullus* Lord Generall, erected this statue out of the spoile of the enemies: the second, *Pupillus Luculli filius ex S. C. dedicauit*, i. The son of *L. Lucullus*, being orphan or ward, dedicated this, by an order or act from the Senat: the third, *T. Septimius Sabinus Aedilis Curulis, ex priuato in publicum restituit*, i. *T. Septimius Sabinus*, Aedile Curule for the time being, hath from a priuat house caused it to stand againe in publick place. This is the image of that worthy *Hercules* that fought so many battels, indured such hard conflicts and labors, and was so highly honored.

B Now is it time to return to the different kinds and sundry temperatures of brasse, from which I haue digressed: first and foremost therefore this is to be noted, That in Cyprian brasse or copper there is to be considered, one sort which is named *Coronarium*, and the other that they call *Regulare*; and both the one and the other will abide the hammer & be brought into thin plates As for the *Coronarium* or *Laron*, when it is reduced into thin leaues or plates, and then coloured or rubbed ouer with the gal of an oxe, it looketh like gold, and maketh a faire shew in those coronets that plaiers weare; whereupon it tooke the name *Coronarium*: the same, after that to euery ounce of it there be put six scruples of gold, and be reduced into a very thin foile, resemblerth the color of fire, like a rubie or carbuncle stone. As touching this brasse, it is found also in other mines of mettall, like as the pot-brasse *Caldarium*: this only is the difference, that this *Caldarium* wil melt only, for vnder the hammer it will break; whereas the other sort of copper named *Regulare*, yeeldeth to the hammer and will be drawne out, whereupon some there be who call it *Ductile*, i. battable; and such is all the kind of copper or Cyprian brasse. That also which is found in the mines of other mettalls, by art refined, differeth from the foresaid pot-mettall, for out of what mine soeuer it commeth, after that the drosse & imperfections thereof be thoroughly purged by the fire, being thus (I say) clenfed, it becommeth *Regulare* and wil abide the hammer. As for all other sorts besides the Cyprian brasse aboue named, the *Campane* brasse is counted best: like to which, there is much in other parts also of Italy, and in the prouinces: but to e-uery [hundred pound of brasse] they put 8 pound of lead: then they boile it as it were and melt it again with a soft fire, for want and scarcitie of wood and fuell. And what difference there may be in that regard, it is most of all seen in the heart of France, where it is commonly melted (for lack of other fuel) among stones made red hot: for by reason that this is a swift & scorching fire, it becommeth black and brittle withall: besides, they melt it but once: but surely to doe so oftner, maketh very much for the goodnesse thereof.

CHAP. IX.

¶ The difference in Brasse: the diuers mixtures thereof: and how Brasse should be kept.

E Moreouer, it were not amisse to note thus much also, that all kind of brasse melteth best in coldest weather. Now there is another temperature of brasse which serueth for founders, imageurs, and brazen tables, called thereupon in Latine, *Statuaria* and *Tabularis*, which is made in this manner following: first, the masse, ore, or stone as it commeth out of the mine, is melted in the bloome-smithie; and so soone as it is melted, they put thereto a third part of the brasse *Collectaneum*, that is to say, broken pieces of old vessels that haue bin vsed, and bought vp here and there. In the choice whereof, this care would be had, that for to giue vnto this temperature the kind seasoning as it were, which peculiarly it requireth, there would be gotten such pottain or old mettall which is ouerworne, and by ordinary occupying and vsing to the hand, bright-shining, and as one would say tamed, made gentle, and pliable. It would not be forgotten also, to euery 100 pound weight of the said melted ore, to mix 12 pound and a halfe of Tin. But to haue a kinde of Brasse mettall that is most tender and soft, there must bee giuen vnto it that mixture or temperature which is called *Formall*, namely, by putting thereto of ordinarie lead a tenth part, and of Tin a twentieth part; and by that means especially it taketh that colour which they call *Grecanicke*. The last temperature is that, which in Latine they call *Ollaria*, as one would say, the pot-brasse, for it taketh the name of that vessell whereto it is most employed; and

and this is by tempering with euery hundred pound weight of brasse, 3 or four pound weight of G argentine lead or tin. To Cyprian brasse or copper, if you put lead, you shall haue that deep red or purple colour which giueth the tincture to the robes that statues are pourtraied with. Moreover, this is to be noted, that the more you do scoure any vessels of brasse, the more are they subject to rust, and sooner will they gather it, than if they were neglected and not medled withall; vnlesse they be well annointed with oile. It is said, that a vernith made of tarre, is singular for to preferue and saue any brasse from rust. To conclude, brasse hath serued many a yeare ago, for the perpetuity of memorials and registers, as we may see by those brasen tables here in Rome, wherein be cut and ingrauen all our publick laws and constitutions.

CHAP. X.

¶ Of Cadmia or Brasse ore, and the medicines wherein it is usually employed.

THE mines and veins of brasse ore do many waies furnish vs with medicines: a good proofe whereof this may be, that any vlcers be soonest healed there: but the most medicinable of all minerals that belong to brasse mettall, is Cadmia [artificial.] And verily there is a kind of Cadmia made in the furnaces where siluer is fined, of a whiter colour and lesse ponderous, but nothing comparable to that which cometh from the brasse furnaces. And sundry sorts there be of Cadmia: for the very stone of which they make brasse, is called Cadmia, and as it is necessary for founders, so it is of no vse at all in Physick. Now is there a Cadmia besides which is made in the furnaces, and so called, but the reason thereof is far different: and this kinde of Cadmia commeth of the finest and thinnest part of the ore or matter in the furnace, cast vp aloft by the flame & blast, sticking to the rooffe or sides of the furnace, higher or lower according to the proportion of the lightnesse that it carrieth, more or lesse. The finest and the floure as it were of Cadmia, is found in the very mouth of the furnace, whereas the flames * do strue to get forth; the Greeks call it Capnitis, for that it is smokie and burnt, and for the exceeding leuity thereof resemble flying cinders. That which is more inward and hangeth downe from the coping and vaulted rooffe of the furnace, is the best: and in that respect, because it hangeth so as it were by clusers, they giue it the name Botrytis: heauier this is than the former, but lighter than those that follow after. As for the colour thereof, it is in two sorts: that which you see of a dead hew like ashes is the worse, whereas the red is the better; the same also is brittle and will soone crumble small: for eie-salues and collyries reputed soueraign. A third kind of Cadmia sticketh by the way, to the sides and wals of the furnace; for by reason of the heauinesse and ponderosity, it was not able to mount vp to the bending rooffe of the furnace: this the Greeks call Placitis: and well it may be so named; for a crust rather it is than a scaly substance: break it, you shall find many colours in it; and this Cadmia for to heale scabs and scurfe, as also to cicatrice or skin a sore, is better than the former. Out of this kinde, there proceed other twaine, to wit, Onychitis, which in the outside is after a sort blewish, but within, it resemblenth the flecks or spots of the onyx stone; and Ostracitis, blacke throughout, of all the rest most foule and grosse, howbeit, fittest for wounds.

Generally, that Cadmia, of what kinde soeuer, is best, which is found within the furnaces of Cyprus: this the Physitians doe burne a second time with pure coles; and when it is calcined and turned to ashes, they quench it with Amminean wine, if they meane to prepare it for plasters, but with vinegar, for scabs and scurfe. Some there be, who after it is stamped grosse, burne or calcine it in an earthen pot, then wash it well in a mortar, and afterwards dry it. *Nymphodorus* taketh the very stone or the ore as it lieth in the mine, the heaviest and most compact that may be found, which he burneth among coles; and after it is sufficiently burnt, quencheth it in wine of Chios: he beateth and punneth it then again, anon he driueth or bouldeth it through a linnen cloth, and grindeth it finer in a mortar: this done, soon after he steepeth and soketh it wel in rain water, and that which setteth in the bottom he stampeth: and this he doth, vntill such time as it be like ceruse or white lead, and wil not crash between the teeth. The same maner of preparing useth *Tollas*, but he chuseth the purest and brightest stone that he can get.

The medicinable operations of Cadmia, bee, to drie, to heale throughly, to stay fluxes, to cleanse the filthinesse in the eyes, and to scoure the pin and web, to extenuate any roughnesse; and

* *Eiusantur*, or rather *Eruantur*, i. are breathed and sent forth.

A and in one word, to worke all those effects which I shall attribute hereafter to Lead.

Furthermore, brasse it selfe may be burnt; and being so prepared, it serueth for all those purposes before named: ouer and aboue, it cureth the pearls, films, and skars in the eies: if it be incorporat with milk, it healeth the vlcers in the eies: the same likewise they vse to grinde vpon hard stones, after the manner of the Egyptian collyrie; taken as a lohoch inwardly with hony, it causeth vomit. Now as touching copper, the manner is to burn it in vnbacked earthen pans, with the like weight of brimstone; but all the breathing holes of the furnace ought to be well closed and luted vp where they must stand, vntill such time as the said pans be thoroughly baked hard: some put salt thereto: others in stead of brimstone take alumne; and there be againe, who vse neither the one nor the other, but sprinkle it well with vineger onely: when it is thus calcined, they put B it in a mortar of Thebaick marble, and then wash it in rain water. Howbeit, this first lotion of it maketh it but weak and of small effect: and therefore it had need of a second washing, in a greater quantity of water, and to be braied againe therein, and left so standing vntill it be settled: this would be reiterated often, vntill such time as it be brought to looke like vnto Minium: after that, it ought to be dried in the Sun, and saued in a brasen box.

CHAP. XI.

¶ Of the drosse or refuse of Brasse: of the skales of Brasse: of Verdegreece or Spanish greene: of Stomoma: of Verdegreece which is the rust of Brasse, and of Hieracium.

THE drosse of Brasse is washed after the same manner, but of lesse effect it is than Brasse it selfe: howbeit the floure of Brasse or verdegreece, is much vsed in Physick: and engendred it is, when Brasse is melted by much blowing, and then transferred out of the furnace into other receptacles; and there, are shaken out certain skales of miller, and this they call Elos æris. Verdegreece. Now these skales vse to fall off, when as the masses of brasse be cooled with water and be red. Likewise of the same masses, there is made that which they call Lepis; and thus the verdegreece may be sophisticated, so as the said Lepis or skales be sold for it. Now these skales come, by being driuen & smitten off from those nails which they vse to forge of the said masses and lumps of brasse, and all these most commonly are found in the Cyprian forges: therein D only is the difference; that the foresaid skales are driuen forcibly & smitten from the said pains or masses of brasse, whereas the floure of verdegreece falls off by it selfe. And yet there is a second kind of these skales more fine and subtiler than the other, to wit, driuen and smitten from the very outside and vppermost part of the brasse, and this they call * Stomoma.

Howbeit, Physitians in these daies (with reuerence to their profession and with their good leaue be it spoken) are ignorant wholly of all these things; yea, and the greater part of them bee not so much as acquainted with the terms and bare names (so far be they from the true composition of medicines;) and yet in times past, it belonged properly vnto Physitians, for to be acquainted with the terms of all simples, and to be perfect in the knowledg of them. But our physitians in this age, when they are to make any composition of simples, they haue recourse straightwaies, to their books to be directed by them, that is to say, they try experiments by the hazard of their poore patients; and there finding the names of this and that, they set downe a receipt, & for the making thereof trust the Apothecaries, as also for the ingredients; which commonly they do sophisticat and corrupt by all deceitfull meanes that possibly they can deuise; selling their emplasters and collyries that are old made, and such drugs as are past all goodnesse, seruing the bills of the Physitians with the very refuse of their shop. And thus the deceitfull wares that they haue, they rid their hands of, to the discredit of the Physitian, and danger of the sicke.

But to come againe vnto our skales, and floure of brasse or verdegreece; the manner is, first to calcine both the one and the other, either vpon earthen vessels or brasse pans; then, to wash the same, as is before said, and for the same vses. But ouer and aboue, these being prepared thus accordingly, are singular for the carnosities and excrescences within the nostrills, or the fundament: for hardnesse also of hearing, if they be blowne into those parts by meanes of a pipe: and the sores or cankers of the mouth they doe heale, by application of their powder: this powder also taketh away the inflammations and accidents of the tonsils or almonds about the throat, if it be tempered and incorporat with honey, and vsed in a collution or gargarisme. There is besides,

* *Stomoma*, nothing, but steel, therefore here doth like as in m. of this chap.

side, a scale that commeth of laton or white brasse, farre better than that which the red brasse or G copper doth yeeld.

Moreover, there is a deuife that some vse, namely, to let first the nails and panes of brasse to lie wet in the vrine of a boy: others, so soone as the scales be driuen off, bray them, and afterwards wash them in rain water; which they vse to giue for the drop sicke, to the weight of two drams in one hemine of honied wine; and besides they make a liniment with it and fioure, for to vse outwardly to the belly.

* As touching the rust * of brasse, great vse there is of it in Physick : but it commeth after many sorts; for first and foremost, it is found sticking (in manner of the floure aforesaid) vnto the stone or ore out of which brasse is tried, in such sort, as it must be * scraped from it before a man can haue it. Also it is made after an artificiall manner, by hanging certain plates of laton driuen full of holes, and hung in a pipe or barrell ouer vineger ; but the same ought to be close couered and stopped with a lid of brasse, so as the said plates do not touch the vineger : and verily, verdegreece thus made, is far better than of skales in the same wise vsed. Some there be that take vessels of white brasse or laton, and put them in earthen pans, where they suffer them to lie in vineger for ten daies together, and then scrape off the verdegreece or rust that is gathered vpon the said laton. Others there are who couer the said vessels of laton in the refuse of grapes after they be pressed (skins I meane and stones,) and after ten daies, as is aforesaid, scrape off the Verdegreece which they find vpon the brasse. There be againe, who take the fine dust which the file fetcheth from brasse, and strew the same in a vessell of vineger, stirring it with spatules or ladles oftentimes in a day, vntill it be resolued into the vineger and consumed : and yet many think it better to work and stamp the said file-dust with strong vineger in a brassen mortar, for to gather verdegreece. But the speediest way of ingendring the said rust of brasse or verdegreece, is to take the cuttings, parings, or small pieces of laton plates, such as be employed about coronets, and to put them in vineger: and you shall haue diuers, who will not sticke to sophisticated verdegreis (such especially as is brought out of Rhodes) by mixing it and the powder of marble together; others with the pumish stone puluerized, or els with gum. But the cunningest deuice that they haue to falsifie it and deceiue chapmen by, is to mingle vitrioll amongst : for all the other deceitfull tricks be soone found out by the teeth, because a man shall feele the verdegreece to crash and grate between them like grit, which hee shall not perceiue if it be sophisticate with vitrioll : howbeit, this sophistication also and fraudulent cast, may be soone detected and found out by an experiment made with a slice or fire-pan of yron made red hot in the fire : for cast vpon it the right and true verdegreece indeed, it will hold and keep the owne colour still ; but if it be corrupted with vitrioll, you shall see it turne red. You may discouer likewise the fraud abouesaid with * paper, tempered beforehand and soked in gall-nuts ; for besmeare therewith the verdegreece that is falsified, it wil quickly become black. The eie also wil soon bewray the falshood that is vsed therein, for if it be naught, a man shall perceiue it to looke with a weak green color, nothing full nor fresh. But be the verdegreece true or false, the best way is, before it be employed in Physick, after it be dried, to calcine it vpon a new earthen pan that neuer was occupied, and in the burning to turne it often with a slice or spatule, vntill such time as it be reduced into light cinders, and then after it is finely puluerized, to lay it vp for vse. Others prepare it after another sort, they put it in an earthen pot vn timer, and set the same into an ouen, where they let it stand to be calcined so long vntill the said pot of clay be well and thoroughly baked. Finally, there be, that before they vse Verdegreece, put thereto the male Frankincense, the best that can possibly be had.

The manner also is to wash verdegreece before it be occupied, after the same order as Cadmia is vsed. Being thus made & prepared as is abouesaid, it is excellent to be put into eie-salues or collyries, for by a * mordicative quality it helpeth weeping and watering eyes: in which regard, necessarie it is that it be washed first with pencils well bathed in hot water, so long vntill it haue lost that corrosiue quality.

As touching *Hieracium*, a composition it is or collyrie so called, and made in this manner: Take four ounces of *Sal Ammoniack*, of *Cyprian Verdegreace* two ounces, of shoemakers blacke, or that coppereflow which the Greekes name *Chalcanthum* as much, that is to say, two ounces, of *Myfi* or yellow *vitrioll* one ounce, and of *safran* six: let all these bee stamped together and tempered in the *vineger* of *Thafos* untill they be incorporat, and then reduce them into

A into trochiques. A singular collyrie or eyefalue this is to withstand the beginning of pearls, catarrhes, and such accidents of the eyes; to discombe also the webs that come over their sight, to leuigat the roughness of the tunicles, to dispatch the white skars, and in one word to cure all the infirmities of the cielids. As for verdegreece, that is not calcined at all, it is excellent good to be put into vulnerarie or healing plaisters: the same also is of a wonderfull operation to cure the exulcerations of the mouth or the gumbs; the lips also exulcerat it heales, being reduced into a liniment with oyle: but if you put wax thereto, it doth mundifie, and withall skin and heale perfectly. Verdegreece is proper to eat away and consume the callositie growing in a fistula, and in those infirmities which are incident to the feat or fundament, whether it be brought into a liniment with gum Hammoniack and so applied, or else in forme of a collyrie, that is to say, a B tent thrust into the hollow fistula. The same verdegreece incorporat with a third part of the true rosin called Turpentine, is souveraigne for foule leprosy and wild-fires.

С H A P. XII.

¶ Of ¹ *Scolecia*, and ² *Chalcitis*, of ³ *Myfy*, ⁴ *Sory*, and ⁵ *Chacanthum*.

Another sort there is of Brasse-rust or Verdegreece, which commonly is called Scolecia: this is made of alume, salt or salnitre, of each a like weight, stamped well together with the strongest white wine vinegre that can be gotten, in a mortar of Cyprian brasse or copper: and this must not be done but in the hottest daies of the yere, to wit, about the rising of the Dogstarre. Now must all the ingredients aforesaid be pnned and incorporat together, vntill such time as the masse become green, and that it gather and draw together in manner of *crawling wormes, whereupon it taketh the name Scolecia. But if so be, that this manner of working and making it, chance to faile and doe not well, for to amend the same, the two parts of vinegre which entred into the mixture, ought to be tempered with as much vrine of a boy vnder fourteene yeares of age. Now if you would know the medicinable effects and vertues of this kind of verdegreece, both it and the artificiaall Borax before said (which I named Santerna) be of the very same operation that the ordinary rust of brasse or verdegreece, called in Latin *Ærugo*. There is a kind of Scolecia naturall or minerrall of it selfe, without addition of any thing els whatsoeuer; whereof I purpose to speake in this place, and the same is scraped from the stone or ore of which commeth brasse. There is a stone lying in the mine which they name Chalcitis, out of which also (with burning) they excoit brasse: differ it doth from Cadmia, for Chalcitis is hewed out of the mines that lye aboue, very ebb and exposed to the aire, whereas the other is digged from vnder the ground in those mines that lie hidden. *Item*, Chalcitis (as being of a tender and soft nature) presently will crumble into pieces, so as it seemeth to be a certaine fine mosse concreat and gathered together. Also, there is another difference betweene these two Marcaffins, for that, Chalcitis containeth in it three seuerall kinds of matter, to wit, Brasse, Myfy, and Sory; of which I purpose to speak seuerally by themselves in their due place. Now this Chalcitis lies within the brasse mine in long veins: that which is of a yellowish colour like hony, full of small veins running here and there, brittle and apt to crumble, and not of a stony hardnesse, is counted the best: the fresher also and more newly gathered that it is, the more effectuaill and wholesome men take it to be; for that being long kept, it will grow into the nature of Sory. Being thus in the right nature, it hath a facultie (if it be puluerized) to consume the excrefcence of proud or dead flesh in vlcers, to staunch blood, to repress also the accidents befalling to the gumbs, uvula, and tonsils: the same put vp into the naturall parts of a woman within a locke of wooll in manner of pessarie, helpeth the infirmities of those places: but if it be tempered and incorporat with the juice of porret, it serueth to put into those plaisters which are appropriated to the vlcers and sores of the priuities or members of generation. Now if you sleepe it in vinegre, and let it lie so infused within an earthen pot well luted with beasts dung, for the space of forty daies, it will come to the colour of saffron: put then vnto it of Cadmia stone the like quantitie in weight, you shall haue that medicine which is called Pforicum. Also, if in this composition you put two parts of Chalcitis to one third part of Cadmia, & so temper them together, this foresaid medicine will be more quick & agre: but in case you would haue it yet more mordicant and stronger in operation, let the said ingredients be tempered rather with vinegre than wine. Calcine the same or torrifie it, you shall find it more effectuaill in all operations aforesaid.

1 A kind of
 veydegris or
 rust of brasse
 2 In manner of
 a worme, as
 3 *Pliny* taketh it
 4 2 The Flour of
 copper, fle,
 whereof is
 made vittroll,
 as to me think,
 3 *Bravallus*
 holdeth it to
 be vittroll Ro-
 mane : oth-
 4 take it for yel-
 low coppere,
 4 Duskith or
 ash-colour
 coppere,
 5 Vittroll.
 6 It seemeth
 that *Pliny*
 doth here err,
 by reading in
Diole. scythegre
 or *skithgre*; &
 so in *scythia*;
scythium : for
 the said mix-
 ure is to be
 reduced into
 certain ore
 -hiques or
 thin cakes cal-
 led *scythia*, and
 into the
 inn of worms

* 2. The veine
or minerall,
whereof com-
meth the dus-
kish Vitrioll.

As for * Sory, that which is brought out of Ægypt is counted best, and farre better than the Cyprian, Spanish, or African: neuertheless, some hold that which commeth from Cypresse, to be more appropriat to the cure of the eies. But of what country fouer it be, the principall is that which to smell vnto is of the rankest and most stinking sauour: the same also in the bruising will grow black and be vntoous or fatty, and such lightly is hollow in manner of a sponge. A minerall this is altogether hurtfull to the stomack, and so contrary vnto the nature of it, that to some the very smell thereof is enough to ouerturne it and to cause vomit: and especially the Ægyptian Sory is of this operation. That which commeth from other nations, when it is broken or braied, shineth againe.

Touching Myfy, it is of a more hard and stony nature than Sory; but good it is for the tooth ache, if either it be held in the mouth, or a collution be made therewith to wash the teeth and gums: also it healeth the grievous and irkesome sores of the mouth, yea though they grow to be cancerous and corrosiue. The manner is to burne and calcine it vpon coles of fire as Chalcitis. Some neuertheless haue written, that Myfy is engendered by the means of a fire made with pine wood, in the hollow veins or mines of brasse ore: and they hold, that the cinders or ashes of this pine sewell, being mingled with the yellow greines or floure of the said mettall, is that which begetteth Myfy. But the truth is, of the foresaid stone or ore it is ingendered naturally: howbeit, a thing it is by it selfe gathered, distinct and separat from it apart: and the best is that which is found in the mines and forges of Cypresse. You shall know it by these signes: break it (for crumble it will) there appeare within it certain sparks shining like gold: and in the braying or stamping, it runneth into the nature of a sand or earth, like vnto Chalcitis. This Myfy is the Minerall that they put to gold ore, when it is to be tried and purified.

To come vnto the medicinable vertues thereof: being infused or powred into the eares with oile of roses, it cureth the running with matter: the same being applied in a frontal within wool to the head, easeth the ach thereof: it doth extenuat also and subtiliat the asperities of the eies, such especially as be inueterat and haue continued long: but soueraigne it is found to bee for the inflammation or swelling of the tonsils, for the squinancy, and all impostumat sores growne to suppuration. For which purpose, prepared it would be in this wise, and after this proportion: Take of it 16 drams, seeth the same in one hemin of vinegar with some addition of hony, vntil it begin to yeeld and relent; and in this manner ordred, it serueth in cases aforesaid: but when fouer need requireth to mollifie the violence thereof, and make it more mild, it were good to wet it with some sprinkling of hony. If there be a lortion or fomentation made with it in vinegar, it doth consume and eat away the hard callositie in fistuloes, and fortifieth greatly the collyries or tents to be made thereof, and put it into the concavity of the fore: it serueth also for the collyries that be eie-falues: it stancheth bloud, represseth the malice of fretting humors in corrosiue vlcers and such as do putrifie: the excrecence of proud or ranke flesh it taketh downe and consumeth: a peculiar property it hath to cure the accidents of the members of generation in men: and withall stoppeth the immoderat flux of the moneths in women.

As concerning Vitrioll, which wee call in Latine Atramentum Sutorium, i. Shoemakers blacke, the Greeks haue fitted it with a name respectiue vnto brasse, and by a neere affinity therunto call it Chalcanthum: and verily there is not a mineral throughout all the mines, of so admirable a nature as it is. There haue been found in Spaine certaine pits or standing pooles, containing a water of the nature of Vitrioll: they vsed to seeth the same, putting thereto of other fresh water a like quantitie, and poure it into certaine troughs or broad keelers of wood: ouer these vessels, there be certaine barres [of yron] or transoms ouerthwart, lying fast that they cannot stirre, at which there hang downe cords or ropes with stones at the end stretching them out-right, that they reach to the bottome of the sayd decoction within those keelers, to the end that the viscous substance of the water may gather about those cords, which you shall see sticking fast thereto in drops, congealed in manner of a glasse, and it doth represent as it were the forme of grapes; and that is Vitrioll. Being taken forth and separated from the cords aforesaid, they let it dry for the space of thirtie dayes. In colour it is blew, and carrieth with it a most pleasant and liuely lustre, so cleare, as a man would take it to be transparent glasse. Of this being infused in water, is made that blacke tincture which Curriers and Corumers occupie in colouring of their leather. This Vitrioll is ingendred many waies of the coppere-se vein within the mine, being hollowed into certaine trenches: out of the sides whereof you shall see in the midst of

Winter

A Winter when it is a frost, certaine ystickles depending, as the drops distilled and grew one to another whereupon this kind of Vitrioll they call Stalagmias, and a purer or clearer thing there is not. But look what part thereof is whitish of colour, but not transparent, and the same inclining to the wall floure or * white violet, the same they call Leucoion. There is a Vitrioll likewise made artificially in receipts and concauties (diggd of purpose in the stonie mines of Copercite) by occasion of raine water there congealed, which had been conueighed into them, and gathered a viscous slime or mud in the passage. Also there is a cast to make it in maner of salt by letting fresh water into such hollow receptacles, and permitting the same to ferment in the sun when he is at the height and full strength of his heat in the summer, vntil it be gathered and hardened as salt. And therefore some there be who make two sorts of Vitrioll, to wit, the Naturall, or Minerall, and the Artificiall: this that is made by the industry and art of man is paler than the other, and looke how much the colour is abated, so much inferior it is in goodnesse. The Cyprian Vitrioll is thought best to be imploied in Physicke. For, to expell the wormes out of the belly, it is giuen vnto the patient to the weight of one dram in honey, after the manner of an electuary. If the same be dissolved and conueyed vp into the nostrills, it purgeth the head. In like manner it purgeth the stomacke, in case it be taken in hony or honied water. The asperities of the eies, their paine, and the dimnesse or mists ouergrowing the sight, it dispatcheth and healeth the sores in the mouth. It stancheth bleeding at nose, and the immoderat running of the Hæmorrhoids. It draweth forth spels of broken bones: and tempered with the seed of Henbane, it stoppeth the course of a rheum running to the eies, if it be laid in a cloth to the forehead in manner of a frontale. Of great effect it is in plaisters, both for to mundifie wounds and to consume the excrecence of flesh in vlcers. If the Vvula be fallen, it putteth it vp againe, by touching it only with the decoction thereof. Moreover, being incorporat with line-seed, it is singular good to be applied aloft vpon plaisters, for to mitigat pain. Of this kind, that which is white is preferred before any that are of a yellowish colour like * wall-floures aforesaid. Moreover, if it be blown into the ears by the means of a pipe, it doth remedy the hardnesse of hearing. A liniment made of Vitrioll alone, healeth vp wounds, but it draweth the skar too neare together: in regard of which astringencie of Vitrioll, there hath bin an inuention deuised of late, to cast the powder of Vitrioll into the mouths of Bears and Lions when they are to be baited: for so great a knitter and binder it is, that it will draw their chaws together in manner of a muzzle, that they shal not be able to bite.

* Viola alba;

* Violaris: hec
meaneth those
that resemble
Leucoion, and
which he cal-
led before by
that name.

CHAP. XIII.

¶ Of Pompholyx. Of Spodos, Antispodos, and of Diphryges. Of the Trient of Seruilius.

Here be found ouer & besides in brasse smithies or furnaces, those matters which they call Pompholyx and Spodos: and the difference of the one from another, consisteth in this, that Pompholyx requireth washing for to be prepared; Spodos neuer commeth into water or liquor. And yet some distinguish them otherwise, calling the whitest and lightest part, Pompholyx: holding opinion, that it is nothing els but the very cinders of brasse, or the Calamine stone Cadmia, whereof brasse commeth: whereas Spodos (say they) is blacker and more weightie than Pompholyx, as being scraped from the wals and sides of the furnaces, among which you shall see many times grosse sparks, yea, and otherwhiles coles intermingled. Well, this Pompholyx being tempered or foked in vinegar, smels of brasse: and if a man touch it at the tongues end, hath a horrible tast that goeth against ones stomacke. Proper it is to enter into those compositions which be ordained for the eies, for it helpeth all the infirmities incident thereto: and in one word, serueth for the same purposes that Spodos doth: herein onely lieth the difference, that Spodos is thought to be more mundificatiue, by reason that the strength of Pompholyx is delaied by the washing aforesaid. It is one of the ingredients also to those implasters which are deuised for gentle refrigeratiues and exiccatiues. And for what fouer it shal be imploied, better it is found to be, in case it were washed first with wine.

As touching Spodos, the Cyprian is most esteemed: and ingendred it is, whiles Cadmia and the brasse ore or stone be melted together in the furnace. Exceeding light it is, and apt to mount aloft with the smoake of the bloome smithie, very speedily, yea, & ready to flie out of the

sur-

furnace: and much of it sticketh to the rouse and vppermost part thereof, differing onely from foot in whitenesse. That which is not so white as the rest, signifies that the furnace was not quick ynough, and that it is not yet come to the full perfection & concoction: and this, some there be who call Pompholyx. But looke how much thereof is found of a redder colour, the same hath much acrimonie in it, and is of a more biting nature: yea, so fretting and corrosiue it is, that in the washing, if it chance to touch a mans eies, it will put out their light and make him blind. There is a kind of Spodos besides that looks yellowish like hony, wherein a man may perceiue that it standeth very much vpon brasse: but of what sort fouer it is, washing mendeth it much. First, before it be washed, they vse to cleanse it lightly with a wing or a bristle brush: & then afterwards to wash it in grosser manner, till the water be thick and muddie, rubbing it well with the fingers, vntill it haue lost all the roughnesse that it had. That which is washed in wine, is thought to be of a middle and indifferent operation. And when I say wine, you must think there is some difference therein also. For being washed in a small & mild wine, it is thought to be very good for those colleries which serue to comfort and fortifie the eies that haue been wearied and weakened with long watching: the same also thus prepared, is more effectual to heale vlcers that be matterie and run: the sores likewise in the mouth that are moist and rheumatick: and generally it serueth well to go into those salues and plaisters which are deuised against gangreenes tending to mortification. Another kind there is besides of Spodos called Laurioris, found in the furnaces where siluer is tried, but commonly it is held, & for certain affirmed, That the best

* Spodos is called Nil, whereof commeth the pretty ambiguous speech, Nil prodest oculis.

* Spodos for the eies, is that which commeth in the furnaces where gold is fined. Neither in any thing belonging to our life, is the wit & invention of man more admirable than in this. For, because we should not take the pains to search into mines & furnaces for such matters, they haue deuised means to help themselves withal in the same cases, even by the basest things: that be in stead of Spodos, which thereupon they tearme by the name of Antispodos; for so they call the ashes of the Figtree, whether it be the gentle or the wild; the ashes likewise of the Myrtle tree leaues, and the tenderest parts of the branches; as also of the wild Olive, the Quince, & the Lentiske trees. They haue a kind of Antispodos besides made of the vnripe Mulberries, that is to say, whiles they be white, dried in the Sun: like as, of the tops of the box tree or the bastard Cyprus, of brier crops, the leaues of the Terebinth or the wild vine Oenanthe floures. Finally, they vse in stead of Spodos, the ashes of strong Buls glew, or of linnen rags: which is found to be as effectual as the right Spodos. Now for to haue the said ashes for this purpose, the manner is to burne and calcine all these matters abouenamed within some vessell of cley, and to set it into the oven or furnace, where they are to be torried vntill the said vessell be thoroughly baked.

In the smithies where brasse is made and wrought, there commeth a certaine refuse or offall thereof, called Pseuma: to wit, when after the brasse ore is sufficiently melted and concocted, there be new coales put thereto, and the same set on fire and kept burning with the blast of bellows: for then of a suddaine (as it were by some extraordinary strong puffed) there are reiected and cast forth from it certain huls or chaffe (if I may so say) of brasse. Now the ground or floore to receiue this refuse as it falleth, ought to be well paved.

There is another stuffe found in the said forges or bloom-smithies, easily discerned from this Pseuma, which the Greeks (for that it is, as it were, twise burnt or concocted) call Diphryges. And this is made three manner of waies: For first they say it comes of the Marquesit stone burnt in a furnace vntill it be calcined and reduced in the red chalke Rubrica. It is engendred also of the earth or cley within a certain caue in Cyprus, first dried and soon after gently burnt in a fire round about it, maintained with small sticks put thereto by little & little. There is a third way of making it, to wit, of the grosse dregs or drosse of brasse settling downe to the battome of the furnace: in which furnace a man shall perceiue these different matters, to wit, the brasse it selfe, which being melted, runneth into pans and vessels ready for to receiue it; the refuse, called Scoria, which flies out of the furnace; the florey that floteth aloft; & the Diphryges or drosse which remaineth behind. Some yeeld another reason and making of Diphryges in this manner, namely, That there be certain round bals or pellets (as it were) of hard stones found within the mines of brasse, which together with the Marquesit or brasse ore doth not melt in the furnace, & a man shall see the brasse it selfe boile about the same: which round hard stones are vnited and soudered only, one to another by this means; but themselves resolute not nor melt perfectly, vnlesse they be translated into other furnaces: for they be the very heart (as it were) of the whole matter.

But

A But in the second triall and boiling, that which remaineth behind, is called Diphryges. Well, be it what it will, the same reason there is of it in Physicke, as of the rest of this kind found in furnaces: for by nature it is deficacitue: it consumeth besides all excrecences, & doth cleanse mightily. The triall of it is by the tongue, for if it bee good Diphryges, no sooner toucheth it the tongue, but it drieth it, and withall tasteth of brasse.

But before I depart from these brasse mines and furnaces, I cannot conceale from you one miraculous thing as touching this mettall. There is (you know) a noble family in Rome of the *Servily*, well renowned, as may appeare by the Roman Kalender and acts of record: and these haue among them a certaine piece of brasse coine called a Triens. The third part * of a Roman Asse which they do keepe and feed with siluer and gold. For eat and consume it doth both the one and the other: from whence it came first, and what the reason in nature of this property is, I know not yet. But for my warrant, I will set downe as touching this matter the very words of old *Messala*: The house (quoth he) of the *Servily* hath a certain sacred Trient, in the honor of which piece they do sacrifice yerely with great deuotion and solemnity, omitting no magnificence nor ceremonies thereto belonging. And this Trient the common speech is of them all, that it seemeth one while to grow bigger, and another while to diminish and be smaller: according to which increase or decrease, the said *Servily* take presage, That their family shall either rise to more honour, or decay in credit and reputation.

* which is our farthing.

CHAP. XIV.

¶ Of Iron, and Iron mines, and the different kindes of Iron.

I T remaineth now in the next place to discourse of the mines of yron, a mettall which we may well say is both the best and the worst implement vsed now in the world: for with the helpe of yron we break vp and ear the ground, we plant and plot our groues, we set our hortiards and range our fruitfull trees in rewes: we prune our vines, and by cutting off the superfluous branches and dead wood, we make them euery yere to look fresh and yong againe: by meanes of yron and Steele we build houses, hew quarries, and cut in stone; yea, and in one word, wee vse it to all other necessary vses of this life. Contrariwise, the same yron serueth for wars, murders, and robberies, not onely to offend and strike therewith in hand, but also to reach and kill as farre off, with diuers sorts of darts and shot, one while discharged and sent out of engines, another while lanced and flung by force of the arme; yea, and sometime let flie with wings: and this I take to be the wickedest inuention that euer was deuised by the head of man: for to the end that death may speed away the faster to a man, and surprise him more suddenly, we make it to flie as a bird in the aire, and to the arrow headed at one end with deadly yron, we set feathers at the other: whereby it is euident, that the mischief proceeding from yron, is not to be imputed to the nature of it, but to the vnhappy wit of man. For good prooffe wee had already by many experiments otherwise, that yron might be imploied and occupied, without any hurt or harme at all to mankind. And verily in those capitulations of peace, which after the expulsion of the kings, *Porfena*, king of the Tuscans tendred to the people of Rome, I find this expresse article & imposition, that they should not vse yron, but only about tillage of the ground. And as our Chronicles of greatest antiquity haue left recorded, it was not thought safe to permit writing and ingrauing letters with a style of yron. Certes, in the third Consulship of *Pompey* the great, by occasion of a tumult and commotion raised within the city of Rome for the murder committed vpon the person of *P. Clodius*, there was an edict come forth (which now is extant vpon record) after the manner of an inhibition in this form: *Ne vllum telum in vrbe esset*. That no man throughout all Rome should be seene to weare a weapon. Neuerthelesse men did not forbear and giue ouer to doe some honour vnto yron also in some other occasions of this life, tending to the entertaining of civility and humanity; for *Aristonides* the cunning artificer, minding to represent in an image the furious rage of *Athamas*, beginning now to coole and be allaiied, together with his repentance for the cruell murdering of his owne sonne *Learchus*, whom he flung headlong against the hard stones, and thereby dashed out his braines; made a temperature of brasse and yron together, to the end, that the rustie yron appearing through the bright lustre of the Brasse, might liuely expresse a blushing red in the countenance, becoming a man confused and dismayed for so vnnatural a fact. This Statue is at this day to bee seene at Thebes. Within the same Citie there is another

Image

* O Pliny, what wouldst thou say, if thou didst see & hear the Pistols, muskets, Culuerines, & Cannons in these daies.

image of *Hercules* all of hard yron or steele, which *Alcon* the famous workman made of purpose to signifie the vndaunted heart of that deified *Hercules*, who vnderwent and indured all labours and perils whatsoeuer. Here also in Rome we may see certain drinking cups of steele dedicated in the temple of *Mars* the Reuenger.

But to come vnto the nature of yron, herein appeareth still the same goodnesse of Nature, that this mettall working such mischiefe as it doth, should be reuenged of it selfe, and receiue condigne punishment by the own rust. See also the wonderful prouidence of Nature, *who maketh nothing in the world more subiect to death and corruption, than that which is most hurtfull and deadly to mankind.

As touching mines of yron ore, they are to be found almost in euery country, for there is not so much as the Island *Iliua* here within Italy, but it breedeth yron. And lightly wherefoeuer any such be, they are easily found, for the very leere of the earth, resembling the colour of ore, bewraith where they lie. And when it is found out, they burn, try, and fine it, as other veins of mettall. Onely in *Cappadocia* there is some question and doubt made, whether in the making of yron they be more beholden to the earth that yeeldeth the ore, or to the water for the preparing and ordering of it: for this is certain, that vnlesse the vein of ore be well drenched and soaked with the water of one riuer there, it will neuer yeeld yron out of the furnace. As for the kinds of yron many they are, and all distinct. The first difference ariseth from the diuersity of the soile and climats where the mines be found: for in some places, the ground & the position of the heauens do yeeld onely a soft ore, and coming nearer to the substance of lead than yron: in another, the mettall is * brittle and short, standing much vpon a veine of brasse, such as will not serue one whit for stroke and naile to bind cart-wheels withall, which tire indeed would be made of the other that is gentle and pliable. Moreouer, some kind of yron there is that serueth onely, if it be wrought in short and smal works, as namely, for nailes, studs and tackes imploied about greeues and leg-harnes: another againe, that is more apt to take rust and canker than the rest. Howbeit, all the sorts of yron ore are termed in Latine *Sctitura*, a word appropriat to this mettall & to no other, * *fringenda acie*, i. of dazling the eies, or drawing a naked sword. But the furnace it self, where the ore or yron stone is tried, maketh the greatest difference that is: for therein you shall haue to arise by much burning and fining, the purest part thereof, which in Latine is called *Nucleus ferri*, i. the kernell or heart of the yron [and it is that which we call steele] and the same also of diuers sorts: for the best is it that hardeneth the edge of any weapon or tooke: there is of it which serueth better for stithy or anuill heads, the faces of hammers, bits of mattocks, and yron crowes. But the most variety of yron commeth by the means of the water, wherein the yron red hot is eftssoons dipped and quenched for to be hardened. And verily, water onely which in some place is better, in other worse, is that which hath innobled many places for the excellent yron that commeth from them, as namely, *Bilbilis* in Spaine, and *Tarassio*, *Comus* also in Italy; for none of these places haue any yron mines of their owne, and yet there is no talk but of the yron and steele that commeth from thence. Howbeit, as many kinds of yron as there be, none shall match in goodnesse the steele that commeth from the *Ceres*: for this commoditie also, as hard ware as it is, they send and sell with their soft silks and fine furs: in a second degree of goodnesse, may be placed the *Parthian* yron. And setting aside these two countries, I know not where there be any bars or gads tempered of fine and pure steel indeed, for all the rest haue a mixtue of yron, more or lesse. And generally in this West part of the world wherein wee liue, all our steel is of a more soft and gentle temperature than that of the *Leuant*. This goodnesse of steele in some countries ariseth from the nature of the mine, as in *Austrich*: in others from the handling and temperature thereof, like as by quenching, as I said before, and namely at *Sulmo*, where the water serueth especially for that purpose: and no maruell, for we see a great difference in whetting and sharpening the edge of any instrument, between oyle whetstones that barbars vse, and the common water grind-stones: for surely the oile giueth a more fine and delicat edge. Furthermore, this is strange, that when the ore or vein is in the furnace, it yeeldeth yron liquid & cleare as water, and afterwards, being reduced into bars and gads when it is red hot, it is spongy and brittle, apt to break or resolu into flakes. And considering the difference that is betweene the nature of oile and water (as I haue said) this is to be obserued, that the finer any edge tooles bee, the manner is to quench them in oile for to harden the edge: for feare lest the water should harden them ouer much, and make the edge more ready to breake out into nickes, than to bend

* *Nihil in rebus mortalibus facient, quam qd. inf:issimum mortalitatem, the grace of this Latine cannot be so well expressed in English.*
* Which our smiths call Col far-yron.
* Some read *fringenda* (ocularis) i. of dazling the eies, which is red hot, or the bright blade of sword & other weapons, doth: but neither any copies of the author haue the word (*ocularis*) neither haue I read *fringere*, but *perfringere*, to signifie, to dazle: others vnderstand it of drawing a naked sword: & yet it is not so proper in Latine to say in that sense, *fringere aciem*, as *fringere ferrum*, or *gladium*: howbeit, I incline rather to this, for that *Pliny* a little after calls the best steele *Acies*, which word haply is the primitive, from whence *acies* also is vsed for an edge, &c. and yet it may be, that those *fringere* i. sparkling scales, flying from iron vnder the smiths hammer, & from other mettall, (which do *perfringere aciem* oculari, if any thing els) may giue occasion herof. See *huc viderint Critici*

A and turne again. But wonderfull it is about all, that mans blood should haue such a vertue in it, as to be reuenged of the yron blade that shed it, for being once embrued therein, it is giuen cure after eftssoons to rust and canker.

Concerning the load-stone, and the great concord or amity betweene yron and it, I meane to write more amply in the due place. Howbeit, for the present thus much I must needs say, that yron is the onely mettall which receiuet strength from that stone, yea, and keepeth the same a long time, in so much, as by vertue thereof, if it be once well touched & rubbed withall, it is able to take hold of other pieces of yron: and thus otherwhiles we may see a number of rings hanging together in manner of a chaine, notwithstanding they be not linked and inclosed one within another. The ignorant people seeing these rings thus rubbed with the load-stone, and cleauing one to another, call it quick-yron. Certes, any wound made by such a tooke, are more eager and angry than by another. This stone is to be found in *Biskay*, scattered here and there in smal pieces by way of bubbaton (for that is the term they vse,) but it is not that true *Magnet* or load-stone indeed, which growes in one continued rock. And I wot not whether these be so good for glasse-makers, and serueth their turn so well in melting their glasse, as the other: for no man yet hath made experiment therof. But sure I am, that if one dorub the edge, back, or blade of a knife therewith, it doth impart an attractive vertue of yron thereunto, as well as the right *Magnet*. An here I cannot chuse but acquaint you with the singular inuention of that great architect and master deuifer, of *Alexandria* in *Egypt*, *Dinocrates*, who began to make the arched rooffe of the temple of *Arfinoe* all of *Magnet* or this load-stone, to the end, that within that temple the statue of the said princeffe made of yron, might seeme to hang in the aire by nothing. But preuented he was by death before he could finish his worke, like as *K. Ptolomae* also, who ordayned that temple to be built in the honour of the said *Arfinoe* his sister.

But to returne again to our yron: of all mines that be, the vein of this mettall is largest, and spreadeth it self into most lengths euery way: as we may see in that part of *Biscay* that coasteth along the sea, and vpon which the Ocean beateh: where there is a craggy mountaine very steepe and high, which standeth all vpon a mine or veine of yron. A wonderfull thing, and in manner incredible, howbeit, most true, according as I haue shewed already in my *Cosmography*, as touching the circuit of the Ocean.

CHAP. XV.

The temper of yron. The medicinable vertues thereof, as also of the rust of Brasse and yron: Of the scales that shed and flie from yron: and of the liquid emplaster called by the Greekes *Hypgrimplastrum*.

Iron made once hot in the fire, vnlesse it be hardened with the Hammer, doth soone waste and corrupt. So long as it looketh but red, it is not ready for the hammer, neither would it be beaten before it begin to look white in the fire. Besmeare it with vineger and Allum, it wil looke like copper or brasse. If you be desirous to keep any yron worke from rust, giue it a vernish with cerusse, plaster, and tar, incorporat all together. And this is that composition, which is called by the Greekes * *Antipathia*. And some say also, that there is a kind of hallowing yron that will preferue it from rust: as also that there is at this day to be seen the chaine of yron within the city called *Zeugma*, seated vpon *Euphrates*, wherewith king *Alexander* the Great somtime bound and strengthened the bridge ouer the riuer there: the linkes whercof, as many as haue been repaired and made new since, doe gather rust, whereas the rest of the first making, be all free therefrom.

As touching the vse of yron and steele, in Physicke it serueth otherwise than for to launce cut and dismember withall: for take a knife or dagger and make an imaginarie circle two or three times with the point thereof, vpon a yong child, or an elder body, and then goe round withall about the party as often, it is a singular preseruatiue against all poisons, forceries, or incantments. Also to take any yron naile out of the coffin or sepulchre wherein man or woman lieth buried, and to sticke the same fast to the lindle or side-post of a dore, leading either into the house or bed-chamber where any doth lie who is haunted with spirits in the night, hee or shee shall be deliuered and secured from such phantastical illusions. Moreover, it is said, That if one be lightly pricked with the point of sword or dagger which hath bene the death of a man, it

* *Videtur in m.*

is an excellent remedy against the paines of sides or brest, which come with sudden pricks and stitches. An actuall cauterie of yron red hot, cureth many diseases, and especially the biting of a mad dog, in which case it is so effectuall, that if the poison inflicted by that wound, haue pre-uailed so far, that the patient be fallen into an Hydrophobie thereby, and cannot abide drinke or water, let the sore be feared therewith, the party shall find help presently. Gads of Steele or other yron red hot quenched in water, so long vntil the same water be hot, causeth it to be a whole- some drinke in many diseases, but principally in the bloody flux.

The very rust of yron also is counted medicinable: for so *Achilles* is said to haue healed *Telephus*: but whether the head of his speare were yron or brasse, of which he vsed the rust, I doe not certainly know. Certes, he is paynted thus: with his sword scraping and shaking off the rust into the wound. But if you would fetch off the rust from any old nails, scrape it with a knifewet before in water. As touching the vertues thereof, it is clensing, exiccative, and astringent; it recouereth the haire in places despoiled thereof, if they be annointed therewith in the forme of a liniment: being reduced into a salve with wax and oile of Myrtles incorporate together, many vse it for roughnesse about the eie-lids: the pimples also breaking forth all ouer the body. For shingles and *S. Antonies* fire, it is singular good to apply it in an vnguent with vineger: likewise it killeth scabs, and healeth whitlawes of the fingers, and the excrescence or turning vp of the flesh about the roots of the nails, if linnen rags wet therein be applied conueniently. The same conueyed vp in wooll after the manner of a pessary into the naturall parts of women, staieth the immoderat flux both of whites and reds. The rust of yron tempered in wine, and wrought together with Myrrhe, is good for a greene wound: put thereto vineger, and then it helpeth the piles and swelling bigges of the fundament. A liniment made with it, mitigareth the paine of the gout.

As touching the skales of yron that flie from the edge or point of any weapon wrought in the smiths forge: they serue in the same cases, that the rust doth, and haue the like effects, saue only this, that they haue greater acrimonie, and work more eagerly: in which regard they are employed about the repressing of the flux that falleth into watering eies. But marke this one thing: Yron being that which woundeth most and sheddeth blood, yet the skales that come from it, stanch the same: a property they haue besides to stop the flux in women: and being applied to the region of the spleene, they do open the obstructions thereof, and ease other infirmities incident thereto: the running hæmorrhoids they repress, and such vlcers as are giuen to spread farther and corrode as they go. Reduced into a fine powder, and gently strewed vpon the eye-lids, they are good for the accidents thereto belonging. But the principal vse of them, and for which they are most commended, is in a certain liquid plaster called *Hygrementum*, which serueth to mundifie wounds, vlcers, and fistulaes: to eat away all callosities, and to incarnate and engender new flesh about bones that are perished. And this is the receipt of that composition: Take of the scouring Tuckers earth the weight of two oboli, of brasse six drams, of the skales of yron as much, and no lesse of wax, incorporate all these according to art in one sextar of oile. But in case there be need to mundifie any sores, or to incarnate, there would be put thereto some plain cerot besides.

CHAP. XVI.

¶ Of the Mines of Lead ore: of *white lead and blacke.

*Which some hold to be Tin-glasse.
*Our ordinary lead.

Now insueth the discourse of lead, and the nature of it; of which there be two principall kindes, the blacke, and the white. The richest of all, and that which carrieth the greatest price, is that which we in Latine name *Plumbum candidum*, the white bright lead, and the Greeks *Cassiteron*. But I hold it a meere fable and vaine tale, that all of it is fetched as farre as from the Islands of the Atlantick sea, and that the inhabitants of those parts doe conueigh it in little twiggen boats, couered all ouer with feathers. For the truth is, that there is found of it in these daies within Portugall and Gallæcia, growing ebbe vpon the vpmost face of the earth, being among the sands, of a black colour, and by the weight only is knowne from the rest of the soile: and here and there among, a man shall meet with small stones of the same stuffe, most of all within the brookes that be dry sometimes of the yere. This sandie and graucly substance, the mine masters and mettall finers vse to wash, and that which setleth downeward, they burne and

A & melt in the furnace. There is found likewise in the gold mines a kind of lead ore which they cal *Elutia*; for that the water that they let into those mines (as I said before) washeth and carrieth down withall certain little blacke stones streaked and marked a little with a kind of white, and as heauy they be in hand as the very ore of gold; and therefore gathered they be with the same ore, and laid in the paniers together therewith: and afterward in the furnace when the fire hath made a separation between them and gold, so soone as they are melted do resolue into the substance of the white lead or tinglasse aforesaid.

Moreover, this is strange, that throughout all Gallæcia you shall not find a mine of common black lead, & yet in Biskay (which confineth hard vpon it) there is abundance of it & no other; neither out of the vein of this white lead shall you try any siluer, whereas out of the black it is an ordinary thing to extract siluer. Again, this is certain, that two pieces of black lead cannot possibly be sodered together without this tinglasse; neither can this be vnited to the other but by means of oile: nay it is vnpossible to conioyne a piece of tin-soder or white lead with another, but with a soder of the black. This white lead or tinglasse hath bin of long time in estimation, even since the war of Troy, as witnesseth the poet *Homer*, who calls it *Cassiteron*. As for blacke lead, ingendred it is two maner of waies, for either it groweth in a vein of the owne without any other mettall with it, or els it doth participat with siluer in the same mine, and being intermixt in one piece or lump of ore, it is separated from it at the melting and fining only; for the first liquor that runs from it in the furnace is tin, and the second siluer. As for the third part of the vein which remaineth behind in the furnace, it is *Galena*, that is to say, the very mettall it selfe of lead; which beeing once againe melted and tried in the fire, after two parts thereof be deducted, yeeldeth that black lead whereof we now do treat.

CHAP. XVII.

¶ Of Tin, of Argentine Lead, and other points pertinent to these matters.

T In hath a proper vse to enhuile vessels of brasse, partly to take away the euil tast they haue, and to make them sweeter, and partly to preserve them from rust, or to qualifie the malitious nature of brasse: and yet wonderfull it is, that such vessels thus tinned are neuer a jot the heauier by that means. Also in times past there were (as I haue already said) excellent Mirrors made of tin, and the same were tempered & wrought at Brundise: but those of siluer haue put them down since, that euery chamber-maid and such like seruing creature would be at their looking-glasse of siluer. But tin is found much counterfeited in these daies, by putting to White lead aboue said a third part of white brasse: yea and there is another deuise to sophisticate tin, to wit, by mixing white and blacke lead one with another by euery weight and portion: and this maassen some call at this day, *siluer lead or argentine. As for that mixed matter wherein be two parts of black lead, and one of the white, they cal it *Tertiarium*: this kind of tinne is sold after *30 the pound, and it is that wherewith they vse to soder conduit pipes: but the lewder disposed pewterers haue a cast to put vnto this tin called *Tertiarium*, an equal quantity of white lead and then they call it *Argentarium*: which mettall they employ in vessels for the kitchen, to seeth meat or what they list in them: and this kind of pewter wanteth no price, for they set it at 130 the pound, whereas a pound of white lead or tinglasse pure and fine of it selfe, is sold for thirty, and the blacke for sixteen. As touching the temperature and nature of the white lead, it standeth more vpon a dry substance, contrariwise, that of blacke is wholly moist and liquid: which is the reason that the said white lead or tinglasse will serue to no vse or purpose vnlesse it be mixed with some other mettall; neither is it good to lead or soder siluer with, for sooner will siluer melt in the fire than it. There is a deuise to tin pots, pans, and other pieces of brasse so artificially with white lead or tinglasse (an inuention which came out of France) that hardly a man shall discern them from vessell of siluer; and such leaded vessels are commonly called *Incoctilia*. After the same maner they haue taken vp of late another custome, to siluer the trappings especially and caparisons of their horses of seruice, yea and the harness of coach-horses and draught jades, and namely in the town Alexia. As for the former inuention, those of Bourges haue the honour of it. Neither rested they so, but haue proceeded to adorn and garnish in

*I. Pewter, as some take it.

*This place seemeth to be corrupt.

Y y

that

that maner their chariots, wagons, and coaches. But our vain and wastful wantons not herewith contented, are come now to their wagon seats, not of siluer only, but also of gold: and that which in times past was condemned as monstrous prodigality, to be put into drinking vessels; the same to tread vpon now with the feet, and to waste and consume about waggons and chariots, is commended for finenesse, neatnesse, and elegancie. But to return againe vnto our white lead, if you would know whether it be right and good or no, the proof is to be made in paper: for put it melted into a sheet of paper, if it be not falsified, it will seem to break and rend the paper with the weight, and not with the scalding heat thereof.

Moreouer, it is worth the obseruation, that the Indians haue no mines among them either of brasse or lead, but are content to part with their pearles and pretious stones vnto merchants, by way of counterchange for these mettals.

Black lead or common lead is much vsed with vs for sheets to make conduit pipes; also it is driuen with the hammer into thin plates and leaues. This metall requireth much labor & toile in Spain and France, before it be gotten out of the mine, so deepe it lieth; whereas in Brittain it runneth ebb in the vppermost coat of the ground, and that in such abundance, that by an expresse act among the Islanders themselves, it is not lawfull to dig and gather ore about such a proportion, set down by stint. Furthermore, all the black lead which now men haue in request, is known by these names, to wit, Iovetanum, Capariense, and Oleastrense. As for the drosse and refuse that is purged from it, there is no difference at all, so that it haue the due cleansing by the fire as it ought. These mines alone of lead haue one wonderfull and admirable gift about all others, That if they be forelet a time and suffered to rest, they will grow againe and be more fertile of ore thereby. And in truth this seems to be the reason thereof, for that the aire hath good means and libertie to infuse it selfe, and to enter in at the pores and passages which it findes enlarged and open: much like as we obserue in certain women, who vpon their slips of abortiue fruit, proue thereby more fruitfull and apt to conceiue. And that this is true that I say of lead mines, it was found of late by good experience in the mines of Santaria in the prouince of Boticia in Spain: for whereas in times past for two hundred yeares together, it was wont to be set for a rent of ten pound weight, after it had taken repose and was opened againe, it yeelded for euerie ten, 55. Likewise the lead mine named Antimonianum within the said prouince, which paid in old time but a chiefe of ten pound weight, is come now to a yearly reuenue of four hundred pound. To conclude, one marvellous quality lead hath besides, That no vessel made thereof will melt ouer the fire, if there be water in it: and yet cast into the said water a little stone, or a small piece of brasse coin, although it be no more than a Quadrant, you shall see it melt, and a hole burnt through it by and by.

CHAP. XVIII.

¶ *The medicines that we haue from Lead, and the refuse and drosse of Lead: of the wine of Lead called Molybdæa or Galena: of Ceruse, white Lead, or Spanish White, called Pimmithyum: and of Sandarach.*

Great vse there is in physicke of lead applied by it selfe alone, and namely to repress and keepe downe the skars and cicatrices that rise about the other skin: also by the refrigeratiue quality that it hath to coole the heat of fleshly lust, if there be bound vnto the loins and region of the reins a thin plate or leafe thereof. And verily Calvus the Orator, who by occasion of much dreaming in his sleepe of venereous sports, fell into mighty pollutions, and so farther into the grievous maladie of Gonorrhæa or running of the reins, with wearing ordinarily these leaden plates, stayed (by report) all such vaine and wanton fantasies and imaginati- ons: by which means he preferred also his strength, and had a body able to endure the labor of much study and sitting at his booke. And Nero the Emperor (since the gods would haue it so) vsed ordinarily to weare a plate of Lead to his breast, vnder which he would chaunt out lustily with a wide throat and strong voice, his filthy Sonnets and beastly Ballads: but hee shewed thereby that Lead was a singular meanes to maintaine a good voice. But to serue otherwise in

Physicke,

A Physick, lead ought to be prepared and baked after this manner: take an earthen pan of potters worke, and lay one bed therin of brimstone finely powdered, vpon which, bestow another couch of thin leaues or plates of lead, and a third course ouer them of brimstone and yron file dust together, for to couer all: this being done, set the vessel into a furnace; but while these things are calcining, meet it is and necessary that the vessell or pan aforesaid be well luted and stopped close, that there be no venting or breathing hole at all; for otherwise the lead within the said pan would send forth a noisome vapour and pestilent, most dangerous to all that be within the sent thereof, but to dogges especially, whom it killeth out of hand: and verily, as this exhalation of lead is deadly vnto them, so the aire of all mettals in generall, is aduerse and contrary vnto flies and gnats: which is the reason, that a man shall neuer see any of these insects in mines, forges, B and bloome-smithies, where mettals be vsually tried. Now in the calcining of lead, some there be who chuse rather to take the dust of lead gotten off with a file, & to mix the same with brimstone: others think it better to vse cerusse rather than brimstone. Furthermore, lead doth yeeld from it selfe a certaine substance by way of loture, which is of right great and manifold vse in physicke: the making whereof is in this manner, They take a leaden mortar, they pun and stamp the same with a leaden pestill, casting in raine water estloones; and thus they labour at it continually vntill such time as the water grow to some consistence and be thicke againe; this they permit to rest and settle: the pure and cleare portion that is aloft, they suck and soke away with sponges: the grossest part that is settled in the bottome, after it is dried, they reduce into trochisks. There be some who stamp in the same order, the file-dust which commeth of lead: others C put thereto some lead ore among: and as there be many that vse vineger or wine in this operation, so there are some againe who take greace or roses in lieu thereof. You shall haue those that for this purpose make choice of a stone mortar, especially of Thebaicke marble, but they take a leaden pestill rather than any other, to bray and pun withall: and by this means the medicinal lead will be the whiter.

Now as touching the lead calcined in manner aforesaid, it may be washed also after the order of Antimonie and Cadmia: and in this manner prepared, it is of power astringent, good to stop any flux or rheume, proper also to skin and make a final skar. Much vse there is of lead thus burnt and washed, in collyries or eie-salues, and principally if the eies either stand out too far, or be sunke in too deepe: also it is singular to repress the excrescence of flesh in vlcers, to heale D the chaps in the seat or fundament, to cure the running hæmorrhoids, and to discusse or keepe downe the blind and swollen piles: and for all these accidents in generall, the loture of lead aforesaid is most excellent. But the ashes of lead burnt and calcined, is more proper for the cure of corroding vlcers and filthy sores. And in one word, the same effects and operations it hath, that the ashes of paper. Also the manner of burning and calcining lead, is to put into a pan certaine little plates thereof, together with brimstone, turning the same euery and anon either with some yron rod or stiffe stalke and stem of Ferula plants, vntill such time as both the one and the other being liquefied, be conuerted & turned into ashes: the same, after that they be once cooled, ought to be punned and beaten againe, and reduced into a most pure and exquisite fine powder. Some there be who take file-dust of lead, put the same in an earthen pot or greene potters E clay, set the same into an oven, and so let it calcine therein vntill such time as the pot be well and thoroughly baked: others againe there are, who mix with lead the like quantity of cerusse, or els of barly, and pun the same like crude lead vncalcined in manner aforesaid, for a loture; and when it is reduced thus into powder, they make more reckoning of it than of the Cyprian Spodium.

Ouer and besides, the drosse or refuse of lead is medicinal: and the best is that accounted, which commeth nearest to a yellow colour, without any reliques at all of the lead among; or else inclining to the hew of brimstone, and cleansed from all earthly substance: this also being braied and broken into small parcels, may be washed in manner aforesaid, and stamped with water in a mortar, vntill such time as the water looke yellow; then must it bee powred forth into a pure cleane vessel; and this tranflation ought so long to be continued out of one vessel into another, vntill such time as it haue done casting any residue downward; for the sediment that resteth in the bottome is the best, working the self-same effect as lead doth, but with more acrimony. When I consider all this, mee thinkes I cannot sufficiently admire the diligence of men, who haue made such experiments of all things in the world, sparing not so much as the very ordure,

ordure, offall, and filthy excrements, but haue tried conclusions therein so many waies, and left G nothing vnattempted.

There is a kind of Spodium also made of lead in the furnace, after the same manner as I shewed before, of copper or Cyprian brasse: the order of washing wherof, is this; to put it in a course linnen cloth, and to lay the same in rain water, that the terrene substance may be separated from the rest that is transfused or passeth through the cloth with the water: and yet the same must be cribled or serced afterwards, and beaten to pouder. Some thinke it better to wipe and scoure off the dust from the Calamine with wings, and then to beat it in a mortar with the most odoriferous wine they can get.

There is besides, a minerall named Molybdena, which elsewhere I haue called Galena; by which I meane in this place, the ore or veine that containeth within it, both siluer and lead: the better this is thought to be, the more that it inclineth to the colour of gold, and the lesse that it standeth vpon lead: the same also is brittle, apt to crumble, and in proportion of the quantity not very weighty in hand: the same, if it be boiled with oile, will in colour resemble liuer. There is a kind of Galena likewise that sticketh to the furnaces of gold and siluer: but this (whereof I now speake) they call Metallica: that is to say, the Minerall: and verily the best of this kinde, is that which is found in Zephyrium: the marks whereof are these; if it haue little or no earth in it, nor be any waies stony: the same is burnt, calcined, and washed, neither more nor lesse than the drosse Scoria. Much vsed this minerall is in those vnctuous liniments or salues called Liparæ,

* *Quæ non alligantur* it is thought that Plinie mistook in Dioscor. and for *arsenicus*, read *crumulus*, which he hath translated without any sense at all or congruity to the place.

deuised as lenitiue & refrigerant, for vlcers: also it entrench into plasters which are * not mordicant: but being applied to any sore in tender and delicat bodies, and in the softest parts, it doth I heale faire, and skin throughly. The composition of which plasters, is after this manner; Take three pound weight of this minerall lead Molybdena, put thereto of wax one pound, and of oile three hemines which done, incorporate all together (according to art) into the forme of an em-plastre. Now if it so fall out that the patient be an elderly body, there would be an addition put thereto of the lees or mother of oile aliue. This minerall may be tempered also to right good purpose, with litharge of siluer, and the drosse of lead, and then it is a most excellent medicine (to be injected by a clystere) for the dysenterie or bloody flux; for the tinesm also, which is an inordinat desire to the stoole without doing any thing; provided alwaies, that the belly be fomented besides with hot water.

There is another mineral besides, called Pimimithum, which is al one with Ceruse: and this, K the furnace and mine of lead ore doth yeeld: but the best of this kind is brought from the Island Rhodes. The manner of making it is this: Take the finest pieces that are scraped from lead, let the same be hung ouer a vessell of the strongest and sharpest vinegar that possibly can be had, that they may distill thereinto: and looke what of it is fallen into the said vinegar, must be dried afterwards, ground into pouder, and searced; & then a second time it ought to be tempered with vinegar, and so reduced into seuerall trochiske to be dried in the Sun during Summer. There is another way of making Ceruse besides this, namely, to put lead into certaine pots or pitchers of vinegar well and thoroughly stopped, that no aire go out, and therein to let it rest for ten daies space together: after which time, to take it forth, and scrape from it the mouldinesse or vine- L ing that doth surr or gather about it: which done, to cast it in againe into the said vessels, con- tinuing so, vntill such time as the lead be consumed to nothing. Now that which hath been thus scraped from it, they take and beat into pouder, they serce it also very fine, calcin it ouer the fire in a pan, stirring and mixing it together with little slices or pot-sticks, vntill such time as it wax red, and be like vnto Sandarach. After all this, they wash it in fresh water so long vntill that all the grossenesse be scoured off: which when it is dry, in like manner as before, they digest into trochiskes. This Ceruse serueth to the same purposes that the rest abouenamed (onely of al the other it is lightest in operation) and besides serueth to make an excellent blanch for women, that desire a white complexion: but deadly it is, being taken inwardly in drink; like as letharge also. This ceruse thus made, as white as it is, in case it be afterwards burnt againe, turneth to be reddish.

As touching Sandarache, I haue already shewed in manner all that concerneth the nature of it; howbeit, this would be noted ouer and aboue, that it is found in the mines as well of siluer as of gold; the redder it is, and of a more strong and violent smell, the better men take it to be; such also is pure, clear, and brittle withal, or easie to crumble: mundificatiue it is and astrigent, heating

heating also and exceeding corrosiue: and the principal vertue that it hath, is to fret and putrifie whatsoeuer it worketh vpon: in a liniment with vinegar, it causeth the haire to come vp thicke againe in places despoiled thereof by any disease. It entrench into collyries or cie-salues: reduced into a lioch with hony, it cleneth the throat, and maketh a cleare thrill, and loud voice: eaten by way of a bole with turpentine, it is a gentle and pleasant medicine for those that be short-winded and troubled with the cough: a perfume also made with it and Cedar together, is good in the same cases, so that the smoke be receiued vp at the mouth. As for * Arsenicke, it is of the same stuffe: that which is best of this kind, resembleth burnished gold in colour: the paler kind inclining to the colour of Sandarach, is thought to be the worse. A third sort there is, of a mid- dle and medled colour, compounded as it were of gold and Sandarach. These two later kinds be B skaly aloft: as for the first, which is dry and pure, it is ful of small veins running here and there, whereby it is apt to cleaue as the veine goeth. Of the same operation is Arsenicke as the rest, but that it is more hot and biting; in which regard, it is vsed in potentiall cauteries, and depila- tories: it taketh away the carnosities and apostemations about the nailes of the fingers: the superfluous flesh also within the nostrils: the bigs that hang forth of the fundament: and in one word, it eateth away any excrecence whatsoeuer. To conclude, much better it is and more pow- erfull in operation, in case it be calcined in a new earthen pan, where it must torrifie so long vntill it change the colour.

* Yellow orpi- ment.



THE XXXV. BOOKE OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIUS SECVNDVS.

The Proem.

E **H**is discourse of Mines and Metals, wherein principally consisteth the wealth of the world: of other Mineralls also growing to them, with the Natures, Operations, and effects of them all, is an argument so knit and annexed to Physicke, that the handling thereof, (which I haue already well-near performed) not onely discovereth a world of wholesome medicines profitable for the life and health of man, but also inferreth a number of hidden secrets, couched within the Apothecaries shops; yea, and openeth the way vnto the curious Art and subtil deuises of Grauers, Painters, and Diers, inducing me withall to take them also before me, and to treat thereof accordingly: which when I haue done, there remaineth yet for mee a new worke to take in hand; namely, to write of sundry kinds of Earth and Stone, and those linked together & carrying with them a longer traine by far, than the former mineralls. Concerning which, other authors, and the Greeke writers especially, haue so particularized, that of each one of them they haue written many volumes. For mine owne part, I mean not to follow their steps, but by way of compendious breuitie, to proceed as I haue begun, and yet to omit nothing that is necessary, profitable, and pertinent to Nature.

Y y 3

CHAP.

CHAP. I.

¶ The honour of flat picture in old time.



O begin then with that which remaineth as touching Picture and Painting, this would be knowne, That in times past it was reputed a noble and excellent art: in those daies I meane, when Kings and whole Sates made account thereof; and when those onely were thought innobled and immortalized, whom Painters vouchsafed to commend by their workmanship to posterity. But now, the marble and porphyrit stones haue put painting clean down: the gold also laid vpon them hath woon all credit from painters colours: gold I say, wherewith not only plain and entire walls are richly guilded all ouer, but also the polished works of marble engrauen vpon them after the manner of inlaid work and marquettage of diuers pieces, resembling men, beasts, and floures, and all things else: for in these daies contented we are not with plaine squares and tables of marble, nor with the riches of mighty mountains, coucht vnder couert, & laid within our bed-chambers in that sort as they grew, but come we are now to paint-stones. Deuised this was first in the daies of *Claudius Caesar*: but when *Nero* came to be Emperour, the inuention was taken vp, to giue those colours to stones in their superficiall outside, which they had not of their own; to make them spotted, which naturally were of one simple colour: that by the helpe of mans hand, the * Numidian red porphyrit should be set out with white spots in * eg-fashion: the * Sinadian grey marble distinguished with marks and strakes of purple: as if our delicate wantons I shewed thereby how they could haue wished the stones to grow. Thus would they seem to correct the works of Nature, to supply the wants of mountains and quarries, and to make amends for the hills clouen in sunder for gold, and hewed in pieces for marble. And what is the end of all this prodigious prodigality and wastfull superfluity? but that the fire when it commeth, may consume in one houre a world of wealth.

CHAP. II.

¶ The estimation and account that was made of Images in times past, represented by liuely pictures.

The manner was in antient time, to continue and perpetuat the memorial of men, by drawing their pourtraitures in liuely colours, as like to their proportion and shape as possibly could be; but this custome is growne now altogether out of vse: in stead whereof wee haue shields and scutcheons set vp of brasle: we haue faces of siluer in them, without any liuely distinction of one from another: and as for our sesterces, the heads vpon them otherwhiles be changed one for another: which hath giuen occasion long since of many a jest and libel spread abroad in time and sung in euery street. In so much as all men now adaies are more desirous to haue the rich matter scene that goeth to the making of images, than to be knowne by their own personage and visage as it is: and yet euery man delighteth to haue his cabinet and closet well furnished with antique painted tables: the statues & images of other men they think it enough to honor and adore, whiles they themselues, measuring worship by wealth, & thinking nothing honorable that is not sumptuous and costly, see not how by this meanes they giue occasion to their heires for to break open their counters and make spoile of all, or els before that day come, entice a thiefe to be hooking or twitching them away with gins and snares. Considering then, that no man careth for a liuely picture, all the monuments that they leaue vnto their heires, are images rather of their monies, than resemblances of themselues. Howbeit, these great men take pleasure to haue their owne wrestling places and halls of exercise, yea and the roomes where they are annoiued, beautified and adorned with the pourtraitures of noble champions: they delight also to haue the face of *Epicurus* in euery chamber of the house, yea and to carry the same about them vpon their rings wheresoever they go: in the remembrance and honour of his natiuitie, they doe offer sacrifice euery 20 day of the Moone, and these moneth-minde they keep as holy-daies duly, which thereupon they call *Idades*: and none so much as they who will not abide to be knowne another day by any liuely image drawne whiles they be aliue. Thus it is come to passe, that whiles artificers play them and sit still for want of worke, noble arts by the

* Numidicum.
* Oatium.
* Sinadicum.

* for they were
so made that
they might be
taken off and
set on againe.

G

A means are decayed and perished. But I maruel nothing hereat: for thus it is verily and no otherwise, when we haue no respect or care in the world to leaue good deeds behind vs, as the Images of our minds, we do neglect the liuely portraitures and similitudes also of our bodies. In our forefathers daies ywis it was otherwise: their halls and stately courts were not set out with images and pourtraitures after this sort, therewere not in them to be seene any statues or images wrought by artizan strangers, none of brasle they had, none of marble, their Oratories & Chappels were furnished with their own and their ancestors * pourtraitures in wax, and those liuely and expressely representing their visages; these were set out and disposed in order, these were the images that attended the funerals of any that was to be interred out of that stock & linage. Thus alwaies as any gentleman died, a man should see a goodly traine of all those which were B liuing of that house, accompanying the corps, causing also the images of their predecessors to march ranke by ranke in order, according to their seuerall descents: in which solemne shew, the whole generation that euer was of that family, represented by these images, is there present, ready to performe that last duty and honour to their kinsman. Moreover, wheresoever these images stood within the oratory and chappell before said, there were lines drawne from them vpon the wall, directing to the seuerall titles and inscriptions which contained their stile, their dignities and honors, &c. As for their studies and counting houses, full they were of books, records, and rols, testifying all acts done & executed by them both at home & abroad, during the time they were in place to beare office of state.ouer and besides those images within house, resembling the bodily shape & countenance, there were others also without dores, to wit, about the portals C and gates of the house, which were the testimonies of braue minds & valiant hearts: there hung fixed the spoiles conquered and taken from the enemies, which notwithstanding any sale or alienation, it was not lawfull for the purchaser to pluck down; in such sort, as the house it self triumphed still and retained the former dignity, notwithstanding it had a new lord and master: and verily, this was to the master and owner a great spur to valour and vertue: considering, that if he were not in heart & courage answerable to his predecessor, he could neuer come in at the gates, but the house was ready to reproch and vpbraide him daily for entering into the triumph of another. Extant there is vpon record, an Oration or act of *Messala* (a great Orator in his time) wherein vpon a great indignation he expressely forbad that there should be intermingled one image D of confounding the race of his family and ancestors. The like occasion moued and inforced old *Messala* to put forth and publish those bookes which he had made of the descents and pedigrees of the Roman houses: for that vpon a time as he passed through the gallerie belonging to *Scipio Africanus* his house, he beheld therein his stile, augmented by the addition of *Salutio* (for that was one of his synames) which sel vnto him by the last wil and testament of a certain rich man so called, who adopted him for his owne son: as being greatly discontented in his minde, that so base a name as that (to the shame and dishonor of the *Africanus*) should creepe into the noble family of the *Scipios*. But if I may speak without offence of these two *Messala*, it should in my conceit be some token of a noble spirit and good mind that loueth and imbraceth vertue, to entitle his owne name, although vntruly, to the armes and images of others, so long as they E be noble and renowned: and I hold it a greater credit so to doe, than to demeane our selues so vnworthily, as that no man should desire any of our armes or images. And seeing that I am so far entered into this team, I must not passe ouer one new deuise and inuention come vp of late, namely, to dedicat and set vp in libraries the statues in gold or siluer, or at leastwise in brasle, of those diuine and heavenly men, whose immortall spirits do speak still and euer shall, in those places where their bookes are. And although it be vnpossible to recouer the true and liuely pourtraits of many of them, yet we forbear not for all that to deuise one Image or other to represent their face and personage, though we are sure it be nothing like them: and the want thereof doth breed and kindle in vs a great desire and longing, to know what visage that might be indeed which was neuer deliuered vnto vs: as it appeareth by the statue of *Homer*. Certes, in my opinion there can be no greater argument of the felicity & happinesse of any man, than to haue all the world euermore desirous to know, What kinde of person hee was whiles he liued? This inuention of erecting libraries, especially here at Rome, came from *Asinius Pollio*, who by dedicating his Bibliothecque, containing all the bookes that euer were written, was the first that made the wits and workes of learned men, a publique matter and a benefit to a Commonweale.

* These images
were no other
than theuill ge
& head: as
as to the shoul
ders.

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L

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means

But

* Ptolomæus.
* Philadelphus.
* Attalus.

But whether the kings of * Alexandria in Egypt, or of * Pergamus, began this enterprife before (who vpon a certain emulation and strife one with another, went in hand to make their stately and sumptuous libraries) I am not able to auouch for certain. But to returne againe to our flat images and pictures, that men in old time delighted much therein, yea, and were carried away with an ardent and extraordinary affection to them, may appeare by the testimony, not only of *Atticus* that great friend of *Cicero's* (who set forth a book intituled, A Treatise of painted images) but also of *M. Varro*, who in all his volumes, whereof hee wrote a great number, vpon a most thankfull and bountifull mind that he carried, deuised to insert not onely the names of 700 famous and notable persons, but also in some sort to set down their physiognomy & resemblance of their visage: not willing as it might seem that their remembrance should perish, but desirous to preferue the shapes and portraits of so worthy personages against the injury of time, which H weareth and consumeth all things, indeuoring by this means, & as it were in a kind of emulation struing to do as much for them in this behalf, as the gods could do, not only in giuing them immortality, but also by dispersing those pourtraits into all parts of the world, to shew them personally in euery place to the eyes of men, as if they were present.

CHAP. III.

¶ At what time scutchions and shields, with images ingrauen in them, were first erected in publique place. Where they began to be set up in priuat houses. The originall of pictures. The first pourtrait that was of one single colour. Of the first Painters. How antient the Art of Painting was in Italy.

And this verily which *Varro* did, namely, to insert the names & counterfeits of famous men in his books, was to gratifie strangers only. But of those who were desirous in this kinde, to honour Romans, I find in the Chronicles, that *Appius Claudius* was the first (him I meane, who in the 259 yeare after the foundation of the city of Rome, bare the Consulship with *Seruius*, and namely, by dedicating in temples and publicke places of the city, the shields of his predecessors by themselves alone. For within the chappell of *Bellona*, hee caused to bee set vp the scutchions and shields of his ancestors, taking great contentment to haue the armes of his predecessors seen on high, and the same accompanied with the titles of their honorable dignities K to be read. A goodly shew, no doubt, and a magnificent, in case there should be shewed withall a long descent of petty images representing a number of children, as it were the nest of a faire brood and off-spring: for who would not take great joy and pleasure to see such a sight, who would not fauorably behold the arms of such a race and linage? After that *Appius Claudius* had giuen this precedent at Rome, there followed *M. Æmilius*, companion in the same Consulship with *Q. Lutatius*, who not contented to haue the Armoires and coats of his Progenitors, to be aduanced aloft in the stately hall and pallace *Æmilia* only, tooke order, that they should stand also at home in his owne house: and this also was a matter of right great consequence, beeing done according to the pattern and example of the martiall worthies in *Homer*: for within these shields & scutchions, resembling those which were vsed in old time in the battels before Troy, L were represented the images of such as serten with them, ingrauen therein: for thereupon such shields took the name * *Clypeis*, chafed and ingrauen, not of the old word in Latine *Cluere*, which signifieth to fight, or to be well reputed, as our thwarting Grammarians would with their subtile sophistric seeme to etymologize and deriue it. Certes, this originall of shields and coats of armours, implied abraue mind and noble spirit full of vertue and valour, when euery mans shield shewed the liuely pourtrait of him that bare it in the warres. The Carthaginians were wont to make their targuets of beaten gold, and those likewise they caused to bee ingrauen with their own portraits, & carried the same with them to the wars. And verily, *Q. Martins* that worthy warrior, and reuenger of the 2 *Scipio's* in Spain, hauing defeated the Carthaginians & taken many of them prisoners, found among other spoils and pillage, the shield of *Asdrubal*, made in maner M afore said: Which shield was erected & hung vp ouer the porch of *Iupiters* temple vpon Capitoll hill, and remained there vnto the first fire that consumed the temple. And seeing I am fallen vpon this poynt, namely, of erecting the armours woon from enemies, in publicke place; I may not passe ouer in silence the securitie and carelesse regard that our forefathers had in this behalfe:

* Quasi clypeus.
* In armis.
* In Calinde.

A behalfe: which was so great, that *M. Aufidius*, who farmed and vnder took the custody or keeping of the Capitoll, the temple, and all therein, the same yeare wherein *L. Manlius*, and *Q. Fulvius* were Consuls, and which was from the foundation of the city of Rome 575 yeares, aduertised the Senat, That those shields there, which for so long together were appointed & assigned thither by the Censors, were not of brasse, as they had been taken for, but of siluer.

Concerning pictures, and the first originall of painters art, I am not able to resolue and see downe any thing for certain: neither is it a question pertinent to my designe and purpose, I am not ignorant that the Egyptians do vaunt thereof, auouching that it was deuised among them: and practised 6000 yeres, before there was any talk or knowledge thereof in Greece: again brag and ostentation of theirs, as all the world may see. As for the Greeke writers, some ascribe the B inuention of painting to the Sicyonians, others to the Corinthians. But they do all jointly agree in this, That the first pourtrait was nothing els but the bare pouring and drawing onely the shadow of a person to his iust proportion and liniments. This first draught or ground, they began afterwards to lay with one simple colour, and no more: which kind of picture, after that they fell once to more curious workmanship, they called Monochromaton, i. a pourtrait of one colour, for distinction sake from other pictures of sundry colours: which notwithstanding, yet this plaine manner of painting continueth at this day, and is much vsed. As for the linearie: portraying or drawing shapes and proportions by lines alone, it is said, that either *Philoctes* the Egyptian, or els *Cleantes* the Corinthian was the inuention thereof. But whosoever deuised it, certes *Arctices* the Corinthian, and *Telephanes* the Sicyonian, were the first that practised it: howbeit their colours they vsed none, yet they proceeded thus far as to disperse their lines within, as well: as to draw the pourtrais, and all with a coale and nothing els. And therefore their manner and order was to write also the names of such as they thus painted, and alwaies to set them close to the pictures. But the first that tooke vpon him to paint with colour, was *Cleophantus* the Corinthian, who (as they say) took no more but a piece of a red potsherd, which he ground into powder, and this was all the colour that he vsed. This *Cleophantus*, or some other of that name, was he who by the testimony of *Cornelius Nepos*, as I will anon shew more at large, accompanied *Demaratus* the father of *Tarquinius Priscus* king of Rome, when he fled from Corinth to auoid the wrongs of *Cypsellus* the tyrant, who persecuted and oppressed him. But it cannot be so: for surely before this *Tarquines* time, the art of painting was grown to some perfection, euen in Italy: for D prooue wherof, extant here be at this day to be seen at Ardea within the temples there, antique pictures, and indeed more antient than the city of Rome: and I assure you, no pictures came euer to my sight, which I wonder so much at, namely, that they should continue so long, fresh, and as if they were but newly made, considering the places where they be, so ruinated and vncovered ouer head. Semblably, at Lanuvium there remaine yet two pictures of lady *Atalanta*, and queen *Helena*, close one to the other, painted naked, by one and the same hand: both of them are for beauty incomparable, and yet a man may discern the * one of them to be a maiden, for her modest and chaste countenance; which pictures, notwithstanding the ruins of the temple where they stand, are not a whit disfigured or defaced. Of late daies, *Pontius* lieutenant vnder *C. Caligula* the Emperor, did what he could to haue remoued them out of the place, and carried them away whole and entire, vpon a wanton affection and lustfull fancy that he cast vnto them: but the plastre or porget of the wall whereupon they were painted, was of that temper that would not abide to be stirred. At Cære there continue certaine pictures of greater antiquity than those which I haue named. And verily, whosoever shall well view and peruse the rare workmanship therein, will confesse, that no art in the world grew sooner to the height of absolute perfection than it, considering that during the state of Troy no man knew what painting was.

CHAP. IIII.

Of Romanes that were excellent Painters. When the art of painting came first into credit and estimation at Rome. What Romanes they were that exhibited the pourtraits of their owne victories in pictures. And about what time painted tables made by strangers in forreine parts, were accepted and in great request at Rome.

Amongst the Romanes also this Art grew betimes into reputation; as may appeare by the * *Fabij*, a most noble and honourable house in Rome, who of this science were synnamed Pictures,

Pictores. i. Painters: & the first who was intituled with that addition, painted with his own hand G the temple of *Salus*; and this was in the 450 yeare after the foundation of our city: which painting continued in our age, even vnto the time of *Claudius Caesar* the Emperor, in whose daies the temple it selfe with the painting, was consumed with fire. Next after this, the workmanship of *Pacuvius* the Poet (who likewise painted the chappell of *Hercules* in the beaſt-market at Rome) was highly eſteemed and gaue much credit to the art. This *Pacuvius* was *Ennius* the Poets ſiſters ſonne: and being as he was a famous Tragædian beſides, and of great name vpon the ſtage, the excellency of his ſpirit that way, much commended at Rome his handy-work and painting aforeſaid. After him, I doe not finde that any perſon of worth and quality tooke penſill in hand and praïſed painting, vneſſe haply a man would nominat *Turpilus* a gentleman of Rome in our time, and a Venetian born, of whose workmanship there be many faire parcels of paynting H extant at this day in Verona: and yet this *Turpilus* was altogether left-handed, and painted therewith; a thing that I doe not heare any man did before him. As for *Aterius Labeo*, a noble man of Rome, late Lord Pretour, and who otherwiſe had been vice-conſull in Gallia, Narbonenſis or Languedoc, who liued to a very great age and died not long ſince, he praïſed painting; and all his delight and glory that he tooke, was in ſine and ſmal works of a little compaſſe: howbeit he was but laughed at, and ſcorned for that quality, and in his time the handicraft grew to be baſe and contemptible. Yet I thinke it not amiſſe to put downe for the better credit of painters, a notable conſultation held by certaine right honourable perſonages as touching the Art, and their reſolution in the end. And this was the caſe: *Q. Papius*, the little nephew of *Q. Papius* I who had bin Conſull in his time and entred Rome in triumph, him I mean whom *C. Caesar* Dictator, made co-heire with *Augustus*, hapned to be born dumb; and *Meſſala* the great Oratour, out of whose houſe the grandmother of this child was deſcended, being careful how the boy ſhould be brought vp; after mature aduiſe and deliberation, thought good that hee ſhould by ſignes and imitation be trained vp in the art of painting, which counſell of his was approoued alſo by *Augustus Caesar*. And in truth, this yong gentleman being apt thereto, profited maruellous much therein, and died in his youth. But the principall credit that painters attained vnto at Rome, was, as I take it, by the means of *M. Valerius Maximus*, firſt ſurnamed *Meſſala*, who beeing one of the grand-ſeigneurs of Rome, was the firſt that propoſed to the view of all the world, and ſet vp at a ſide of the ſtately hall or court Hoſtilia, one picture in a table, wherein hee cauſed to be painted that battell in Sicily wherein himſelfe had defeated the Carthaginians and *K. Hiero*, K which happened in the yeare from the foundation of Rome 490. The like alſo, I muſt needs ſay, did *L. Scipio*, and hung vp a painted table in the Capitol temple, containing his victory and conqueſt of Asia, whereupon he was ſurnamed *Aſiaticus*. But (as it is ſaid) *Africanus* although hee were his owne brother, was highly diſpleaſed therewith: and good cauſe he had to be angry and offended, becauſe in that battell his own ſon was taken priſoner by the enemy. The like offence was taken alſo by *Scipio Emilianus*, againſt *Lucius Hoſtilius Mancinus*, who was the firſt that entred perforce the city of Carthage; for that hee had cauſed to be ſet vp in the market place of Rome a faire painted table, wherein was liuely drawne the ſtrong ſcituation of Carthage; and the warlike means vſed in the aſſaulting and winning of it, together with all the particulars and circumſtances thereof: which *Mancinus* himſelfe in perſon ſitting by the ſaid picture, deſcrip- L hred from point to point vnto the people that came to behold it; by which courteſie of his hee wooon the hearts of the people, inſomuch, as at the next election of Magiſtrates, his popularitie gained him a Conſulſhip. In the publicke plaies which *Claudius Pulcher* exhibited at Rome, the painted clothes about the ſtage and Theatre (which repreſented building) brought this art into great admiration: for the workmanship was ſo artificiall and liuely, that the very rauens in the aire, deceived with the likenefſe of houſes, flew thither apace for to ſettle thereupon, ſuppoſing verily there had been tiles and ereſts indeed. And thus much concerning Painters craft, exerciſed in Rome.

To come now to ſorrain pictures, *Lu. Mummius*, ſurnamed *Achaicus* (for his conqueſt of Asia) was the firſt man at Rome, who made open ſhew of painted tables wrought by ſtrangers, and cauſed them to be of price and eſtimation: for when as in the port-fale of all the bootie and pillage gotten in that victory, king *Attalus* had brought one of them, wrought by the hand of *Ariſtides*, containing the picture only of god *Bacchus*, which was to coſt him * ſix thouſand Se- ſterces, *Mummius* wondering at the price, & ſuppoſing that this table had ſome ſpeciall and ſe- cret

A cret propertie in it more than himſelfe knew of, brake the bargain, called for the picture again, & would not ſuffer it to be caried away, notwithstanding *Attalus* complained much at the hard meaſure offered vnto him; and ſo he brought it with him to Rome, and dedicated it in the chap- pel of *Ceres*. And verily this I take to be the firſt painted table of a forreiners making, that euer was ſet vp in publick place at Rome. But after he had once begun, I ſee it was an ordinary thing to adorn and beautifie euen the common place alſo with ſuch like: for vpon this occaſion arole that pretty ſcoffe which was given by *Craſſus* the Oratour, as hee pleaded vpon a time vnder the * old Roſtra: for when there was a Witneſſe produced to depole againſt him, whom hee would ſeeme to challenge and reprove, whereupon the party replied again and vrged him inſtantly in theſe termes, Speake out *Craſſus*, and in the face of all this Court ſay, what kinde of perſon you would make me to be? Mary (quoth he again) I take thee to be ſuch an one (pointing directly to a table hanging there by, wherein was painted a certain Frenchman yawning and ſtretching out his tongue full ſilauoredly.) In the ſame Forum or Grand place at Rome there ſtood ſometime the picture of an old ſheepheard leaning vpon his crooke, as touching which (for that as it ſhould ſeem it was very common like made) when a certain Dutch Embaſſador who beheld it was de- manded, at what price hee eſteemed it; answered ſhort & quick, What a queſtion is that? I would not haue ſuch an one (were hee aliuie, as I ſee he is but painted) though hee were giuen me for nothing. But if I ſhould ſpeake at once, who it was that gaue the greateſt countenance vnto ſuch tables in open view, I muſt needs ſay it was *Cæſar* Dictator, who ſhrined the pictures of *Ajax* and *Medea* in no meaner place than before the temple of *Venus Genetrix*. Next after him came *M. Agrippa*, a man by nature inclined rather to ruſticitie than to delights, and more like a rude pea- ſant than a ciuill gentleman. But ſurely there is extant a worthy Oration of his, and beſeeming the principal perſon of a whole city, as touching the open ſale of all painted tables, ſtatues, and images, that were in the hands of priuat men, and the ſetting of them vp in publicke places for to adorn the city: which no doubt had bin far better than to haue them baniſhed (as it were) and ſent as they be into the country, to beautifie manors and retyring houſes of pleaſure: howbeit as ſterne and grim a ſir as he was, hee could find in his heart to beſtow vpon two tables with the pictures of *Venus* and *Ajax*, 12000 ſeſterces, which hee paid vnto the Cyzicenes for them. Alſo hee had cauſed to be ſet in marble ſtone inchaſed, within the hotteſt part of his baths, many rich pictures of a ſmall making, and couched in ſmall tables, the which were taken away but a little before the ſaid baths were repaired. But aboue all that euer were, *Cæſar* *Augustus* the Em- peror of famous memory, did ſet vp in the moſt frequented or perſpicuous place of his Forum or ſtately hal, two excellent painted tables, one containing the liuely portrait of War, the other of Triumph. Hee alſo dedicated the pictures of *Caſtor* and *Pollux*, beſides others, whereof I will write in my catalogue of Painters: which hee hung vp all within the temple of *Iulius Caesar* his father. The ſame *Augustus Caesar* incloſed within the wall of that Curia, which hee erected and conſecrated in the common place called Comitium, two Tables painted; the one reſembling the Forreſt Nemea, in habit of a woman ſitting vpon a lion, ſhe carrierh in her hand a date tree; and there ſtandeth by her an old man reſting vpon his ſtaffe, ouer whose head there was a pretty table hanging down as a label, from a chariot drawn by two horſes, with this inſcription, *Nicias me inuſit*. *Nicias* inamelled or wrought me with fire: for that verb [*inuſit*] it pleaſed him to uſe. As for the other table, the admirable workmanship therein was this, An old grey-beard accompanied with his ſon, a youth exceeding like his father, ſaue onely for the difference in age; which appeared in the yong down that ſprung vpon his cheeks and chin. A deuſe there was be- ſides of an *Ægle* flying ouer their heads, claſping a dragon within her talons: and as it appeared by the ſuperſcription, *Philocharis* was the workman. By which one table (if there were no more but it in the whole world) a man may make an eſtimate of the infinite power that is in this art, which could cauſe the Senat & people of Rome to take ſuch pleaſure ſo many yeares together to look vpon *Glaucion* and his ſon *Ariſtippus*, perſons otherwiſe moſt baſe and contemptible, on- ly in reſpect of *Philocharis* who painted them. As for *Tiberius Caesar* the Emperor, albeit hee was a prince of all other leaſt courteous and affable, yet he delighted to hang vp thoſe painted tables within the temple of *Augustus Caesar*, whereof I mean to write hereafter.

* *Sub uentibus*, which ſome interpret *Taverna*.

Quintilianus reporteth this otherwiſe.

CHAP. V.

¶ The art and manner of Painting: the Colours that Painters vse.

Thus far forth may suffice to be spoken of the antient dignitie of that art, which begins already to decay and die. What were the colors also that the first painters vsed in old time, when they drew their portraicts with one simple colour, I haue written already in my treatise of Mines & Minerals, where I discoursed likewise of painters colours. Touching those that named certain kind of pictures Monochromateas, as also who enriched them with more colours, who inuented this or that for the bettering and perfecting of them, and at what time each of these additions accrued thereto, I mean to referre vnto my catalogue of painters: for the order and consequence of my work requireth, that I should first set down the nature of euery colour.

First and formost therefore this is to be noted, That in proceffe of time the artificer who began with one bare colour, found out the difference himselfe between * light and shadow, & deuised by this distinction to set vp and debate the one and the other alternatiuely, and the same more or lesse according to his feuerall intentions. After these lights and shadowes there was inuented a kind of lustre or glosse, different from the light aforesaid, which because it is of a mean nature between the shade and the light, and participates of both, they called by a Greeke word Tonos. As for the apt coherence of one colour with another, the ioint as it were between, and the passage from one to another, they named it Harmoge.

CHAP. VI.

¶ Of Painters colours, naturall and artificiall.

* 1. White and blacke.

1 Because they be rich and costly.
2 Minium.
3 Armenium.
4 Cinabaris.
5 Ceryficolla.
6 Jadicum.
Lacta mixta cum cerulo.
7 Purpurissum.
8 Sinapis.
9 Rubrica.
10 A white kind of faerie earth like plastre.
11 A white earthlike chalker.
12 A whitish earth or ash-colour white.
13 Auripigmentum.
* Or rather three denarij, for otherwise there were no proportion betwene it and the other of that kind.

All colors be either sad or liuely, and those be so either naturally, or by artificiall mixture. Liuely or gay colors be such as the * master deliuiers to the painter by weight & measure: as namely, * Vermilion, * Verd d'Azur, * Sang-dragon, * Verd de terre, or Borrax, * Indico, and * Roset. The rest be sad or duskyish, and as wel the one as the other be all either naturall or artificiall. Among the naturall of this sort (to wit the sad colours) I reckon the * common bole Armin, * Ruddel or red stone, * Paretonium, * Melinum, * Eretria, and * Orpin. The rest of these kinds be artificiall, & principally those which I haue already spoken of in the treatise of mines. Moreouer, of the baser sort are Ocre and Ruddel, burnt Cerusse or Spanish white, Sandix mineral, and Scyricum, Sandaracha, Vitriol, or Black. As for Sinapis or common bole Armin, found out first it was at Sinope, a maritime town in the kingdom of Pontus, wherof it took that name; it groweth also in Egypt, the Baleare Islands, and Africk; but the best is found in the Isle Lemnos, and in Cappadocia, digged out of certain caues and holes. That which sticke fast vnto the rocks excelleth all the rest. The pieces of this earth if a man do breake, shew the owne naturall colour which is not mixed, without-forth they be spotted. And this earth in old time was vsed for to giue a lustre vnto other colours. Of this Sinapis or Bole Armin common there be three kindes, the deepe red, the pale or weake red, and the meane between both. The best Sinapis is esteemed worth * thirteene denarij Roman by the pound: this may serue the painters penfill, yea or in grosser work, if a man list to colour posts, beams, or wood: as for that which commeth out of Africk, it is worth eight asses euery pound; and this they call Cicirculum: that which is redder than the rest serueth better for painting of tablements: as for that which is most brown and duskyish, called in Latine Pressior, it is of the same price that the other, and employed in the bases and feet of such tablements. And thus much for the vse in painting. Touching Physicke and the medicinable properties thereof, milde it is of nature, and in that regard of gentle operation, whether it enter into hard emplaires of a dry composition, or into immolitiue plasters that are more liquid, and principally such as are deuised for vlcers in any moist part, as the mouth or fundament. This earth, if it be injected by a clistere, stoppeth a laske: and being giuen to women in drinke to the weight of one denarius, i. a dram, it stayeth their immoderate fluxes of the matrice. The same burnt or calcined drieth vp the fretting roughnesse of the eyes, principally if it be applied with vineger. This kinde of red earth some would haue to be counted in a second degree of Rubrica for goodnesse, for they alwaies reckoned that of Lemnos to be the chiefe

A chiefe & simply best, as comming next in price to Minium, i. Vermilion. And in truth, this Terra Sigillata or Lemnia, was highly accounted of in old time, like as the Island Lemnos from whence it comes: neither was it lawfull to sel any of it before it was * marked or sealed, & then upon they vsed to cal it Sphragis. The painters ordinarily lay a ground of this vnder their vermilion, and sophisticate it many waies. In physick it is holden to be a soueraigne thing: for if the eyes be annointed round about therewith in manner of a liniment, it representeth the flux of rheumatick humors and doth mitigate the pains incident to them: the fistulous sores likewise about the angles or corners of the eyes, it drieth vp that they shall not run as they vse to doe. Inwardly also it is commonly giuen in vineger, to such as cast vp blood at the mouth. It is taken also in drinke, for the opilations and other accidents as wel of the spleen as kidnies: and besides, to stop the excessiue fluxes that be incident to women. Singular it is against any poison or venomous sting of serpents, either vpon land or sea; and therefore is a familiar ingredient into all antidors or counterpoisons. Of all other sorts of red earth, the ruddle of Egypt and Africke is fittest for Carpenters; for if they strike their line vpon timber with it, they shall be sure that it will take colour and be marked very well. Moreouer, another sort there is of this red earth mineral, found with yron ore, and the same is good also for painters. There is a kind of ruddle also made of ochre burnt and calcined in new earthen pots well luted all ouer: and the greater fire that it meeteth withall in the furnace, the better it is. In generall, any ruddle whatsoever is exiccative, in which regard it agreeth wel with salues and healing plasters, and is very proper for to repress shingles & such cutaneous wild-fires that wil stand in drops. Take of Sinapis or Bole Armin common that commeth out of Pontus * halfe a pound, of bright Sil or ochre 10 pound, of the Greek white earth Melinum 2 pound; pun them all together, and mix them wel, so as they may ferment 12 daies together: and hereof is made Leucophorum, i. a kind of gum or size to lay vnder gold-foile for to guild timber.

Touching the white earth Parætonium, it carieth the name of a place in Egypt from whence it commeth: and many say, that it is nothing but the some of the sea, incorporat and hardened together with the slime & mud of the shore: and therefore there be winkles and such shell-fishes found therewith. It is ingendred also in the Isle Candy, and the country of Cyrenæ. At Rome they haue a deuise to sophisticate it, namely by boiling fullers earth vntil it be of a fast & massie consistence: the price of the best is after 6 denier, the pound. Of all white colors it is the fastest, and for that it runs out smooth in the working, it is the fastest parget to ouercast walls withall.

As for the earth Melinum, white it is likewise, but the best is that which the Isle Melos doth yeeld, whereupon it took that name. In Samos also it is to be found, but painters vse it not, because it is ouer clammy and vnctuous. The Islanders are wont to creep on all foure and to lie along at their work when they dig it forth of the rocks, for search it they must among the veines that run therein. The same * operation it hath in physicke that the earth Eretria also, if a man touch it with the tongue, he shall find it astringent and drying: howbeit, a depilatory it is in some sort, and fetcheth away haire, or els causeth it to grow thin. A pound of it is worth a Sesterce.

There is of white colors a third kind, and that is Cerussa or white lead, the reason & making whereof, I haue shewed in my discourse of minerals: and yet there was found of it in the nature of a very earth by it selfe at Smyrna, within the land belonging to one Theodosius, wherewith in old time they vsed to color and paint ships. But in these daies we haue no other cerusse or Spanish white but that which is artificiall, made of lead & vineger, in manner aforesaid. As touching cerusse burnt, the inuention thereof came by meere chance, vpon occasion of a skare-fire happening in the harbor of Piræum, which caught the pots and boxes wherein the Athenian dames that dwelt by the said harbor kept their blanch of cerusse for complexion: and this cerusse thus calcined, the first that vsed in picture was Nicias, of whom I haue already spoken. The best that we haue in these daies comes out of Asia, and for that it inclineth to a purple colour, they call it Purpurea: a pound of it is sold for 16 deniers Roman. This also is made in Rome, namely by calcining Sil or ochre mineral, which standeth much vpon marble, and then quenching it with vineger. Such vse the painters make thereof thus burnt, that no shadowes will do well without it.

Concerning Eretria, another kind of white earth, it takes the name of the place from whence it commeth. Nicomachus & Parasius vsed this colour much. In Physick, it is found to be cooling and emolitiue. Being burnt or calcined, it is an excellent incarnatiue: singular good for to drie any sore; proper also to be applied to the forehead for the headach, like as, to discouer any festring

* With the image of a goat, as Diofscorid faith: or of Diana, according to Galen.

Thus Dalerchamp reads this place according to the Islander, out of Diofscorid and Theophrast. * Sclibris: rather read St. x. libris.

* To staunch blood.

or rankling matter that lieth secret within: for if a place be anointed therewith, when it is reduced into a liniment with water, in case it wax not dry, be sure there is some suppuration vnderneath

As touching Sandaracha and Ochra, *K. Iuba* writeth, that they are to be found in Tapazus, an Island within the red sea; but that which we haue, was neuer brought from thence. How Sandaracha is ingendred, I haue said already in the discourse of mines. There is an artificiall and sophisticated Sandaracha, made of cerusse burnt in a furnace. The colour of Sandaracha ought to be fiery like a flame: a pound thereof is bought for 5 Asses, i. halfe a denier. Calcine this and Ruddle together, and of both, being concorporat in euall quantity, you shall haue the color called Sandyx. Howbeit, I do obserue in *Virgil*, that he took Sandyx for an herb, as may appear by this verse:

Sponte sua Sandyx pascens vestiet agnos.
A ruddie fleece shall Sandyx yeeld,
To lambs, as they do graze in field.

This Sandyx to be bought and sold, carrieth but halfe the price of Sandaracha: neither bee there any colours more weighty than these in the ballance.

Among the artificiall and made colors, I reckon Scyricum, which as I haue already said, serueth for a good ground to take vermillion. The maner of making it, is to mix the best ruddle Sinopis and this Sandyx together.

Painters black [called in Latine *Atramentum*] I count an artificiall colour, although I know there is a vitrioll or coperofoe going vnder that name, which is minerall, and is ingendred two manner of waies: for either it issueth and oofeth out of the mine in maner of a salt humor or liquor, or els there groweth an earth it self of a brimstone colour, which serueth for it, that it may be drawn out thereof. Some painters haue bin knowne, who for to get black, haue searched into sepulchres for the coles there, among the reliques and ashes of the dead. But in mine opinion, all these be but new deuises, and foolish irregular toies without any reason; for a man need seek no farther but to foot, and that made many waies, by burning either of rosin or pitch: in which regard, many haue built places and forges of purpose to burn them in, without any emissaries, tunnels, or holes, that the said foot or smoke may not get forth: but the best black in that maner made, comes of the smoke of torchwood. This fine foot is sophisticated with grosse foot that doth gather and ingender in forges, furnaces, & stouphs: and this is that inke wherewith wee vse to write our books. Some there be who take the lees or dregs of wine, and when it is dried, boile it thoroughly; and they affirme, that if the wine were good whereof those lees came, the said inke or black will make a colour like Indico. And in truth, *Polygnotus* and *Mycon* (two as renowned painters as euer were) vied no other black at all, but that which they made of the mare or refuse of grapes after they be pressed, & this they call Tryginon. *Apelles* deuised a way by himself, to make it of yuorie or the elephants tooth burnt, and this they named therupon Elephantinum: as touching the black called Indicum, it is brought from India: but as yet I know not the maner either of the making or the ingendring of it. A kind thereof I see the diers do make, of that black florice which sticketh to their coppers. Also, there is a black made of torchwood burnt, & the coles that come of it punned to powder in a mortar. And here commeth to my mind the wonderfull nature of Cuttle fishes, which do yeeld a black humor from them like to inke: howbeit, I do not find that painters or writers make any vse thereof. But all blacks whatsoeuer take their perfection by sunning: if it be writing inke, with gum (Arabick); if to colour pargetting or walls, with glew among; and looke what blacke is dissolved and liquified in vineger, the same will hold well and hardly bewashed off. And thus much of the ordinary colours low prized.

Of all the colours besides, which (as I said once before) for their high price the poore painters be serued with from their masters hands who set them on worke, the rich roset or purple red that is made of Tripolie or goldsmiths earth, is simply the best: for this Tripolie is commonly died together with purples, and no silk, wooll, or cloth, will so soon take that tincture as it. The principal is that, which hauing had the floure of a fatt, hath drunk the fil as it were, whiles the liquor is yet boiling, and the drugs within the caudron be in their verdure and haue not lost the heart. When this first Tripoly thus deeply died, is cast vp and taken forth, that which is put in next into the said liquor, is counted the second in goodnes; & so consequently by degrees; for the former euer taketh the higher die, & the oftner you dip therein, the weaker will the tincture be: which is the reason that the roset or purple red of Puteoli, is more commended, than either the

the Tyrian, Getulian, or Lacedemonian, notwithstanding from thence come the most rich and pretious pearls. The reason is, because the Tripoli in Puteoli is died most with the juice of the Magaleb berries among, which yeelds the gallant red, & besides, is forced to drink the tincture of Mader. That roset which is made at Canusium is the worst of all other, and carrieth the lowest price: a pound of roset costeth vually * 30 deniers Roman. Painters or complexioners, when they would counterfeit a lustre or glosse of vermillion, lay a ground first with Sandyx, and then charge roset vpon it with the white of an egg: but if they be desirous to make a purple colour, the first course or ground is azur, and straitwaies they come vpon it with * roset and the white of an egg abouesaid. After this rich and liuely roset or purple red, Indico is a colour most esteemed: out of India it comes, wherupon it took the name; and it is nothing els * but a slimy mud cleauing to the some that gathereth about canes and reeds: while it is punned or ground it looketh black, but being dissolved, it yeelds a wonderfull louely mixture of purple and azur. There is a second sort of it found swimming vpon the coppers or vats in purple Diers worke-houses: and in truth, nothing els but the very fume or scum that the purple casts vp as it boileth, in maner of a florey. Some there be that do counterfeit and deeply coloured with the true Indico: but the prooffe thereof is by fire; for cast the right Indico vpon liue coles, it yeeldeth a flame of most excellent purple, and while it smoketh, the fume senteth of the sea; which is the reason that some do imagine it is gathered out of the rockes standing in the sea. Indico is valued at 20 denarij the pound. In physicke there is vse of this Indico, for it doth assuage swellings that do stretch the skin: it represseth violent rheums and inflammations, and drieth vlcers.

The land of Armenia doth furnish vs with the colour verd d' azur, and of that country it is named Armenicus: a stone it is that is likewise died before it can die, in manner of Borrass or verd d' terre: the best is the greenest, & yet withall it doth participat the colour of azur; in which regard it may properly be called Verd d' azur. In times past a pound of it was held at 300 Sesterces: but since there was found in Spain a kind of sand that would take the like tincture and do as well, the price hath bin well abated, and is come downe to six deniers. All the difference between this colour and azur is this, for that it stands more vpon the white, which causeth this colour to be lighter and weaker. The only vse that it hath in physick, is to nourish hairs, & especially those of the eie lids.ouer and besides all these colours aboue named, there be two more newly come vp, and those beare but a very low price; to wit, the green called Appianum, & oft times it is taken for Borrass or Verd d' terre, as if there were not other things enough that did counterfeit and resemble it. Made it is of a certain Greene chalky earth, & is worth but one Sesterce a pound. The second new colour is a white, called Anulare, being that which in womens pictures giues a lightfom carnation white: this also is made of a kind of chalk, & certain glassy gems or bugles, which the common sort vse to weare in rings, & thereupon is called Anulare.

CHAP. VII.

¶ What Colours refuse to be layd vpon some grounds: with what colours they painted in old time: and when the sight of Sword-fencers was first proposed to be seen at Rome.

Of all colours, Rolet, Indico, Azur, Tripoli or Melinum, Orpiment, white lead or Cerusse, loue not to be laid vpon plaister-work or any ground, while it is moist; & yet wax will take any of these colours abouesaid, to be imploied in those kind of works which are wrought by fire (so it be not vpon plaister, parget, & wals, for that is impossible) whether they be inameld or damaskd, yea and in their painting of ships at sea, as well hulks & hoies of burden, as gallies and ships of war: for now wee are come (forsooth) to inamel and paint those things that are in danger to perish & be cast away euery houre: so as we need not maruel any longer, that the coffin going with a dead corps to a funerall fire, is richly painted: and we take a delight when wee mind to fight at sea, to sail with our fleet gallantly dight & enriched with colours, which must cary vs into dangers, either to our own death, or to the carnage of others. And when I consider so many colours, & those so variable, as be now adaies in vse, I must needs admire those artificers of old time; and namely of *Apelles*, *Echion*, *Melancthius*, and *Nicomachus*, most excellent painters, and whose tables were sold for as much apiece, as a good town was worth; and yet none of these vsed aboue foure colours in all those rich and durable works. And what might those be?

* *Ja. singularis
libris ad dena-
rijs triginta.*

* our painters
in stead thereof
vse Lac.

* They say it is
made of Oade
and in those
counties from
whence it com-
meth, Gallia
Nila.

Of all whites they had the white Tripoli of Melos; for yellow ochres they took that of Athens: G
for reds, they sought no farther than to the red ochre or Sinopie ruddle in Pontus: & their black
was no other than ordinarie vitriol or shoemakers black. And now adaies, when we haue such
plenty of purple, that the very walls of our houses be painted all ouer therewith, when there com-
meth from India store enough not only of Indico, which the mud of their riuers do yeeld, but
also of Cinnambre, which is the mixed bloud of their fel dragons and mighty elephants, yet a-
mong all our modern pictures we cannot shew one faire piece of worke: insomuch as wee may
conclude, All things were done better then, notwithstanding the scarcitie that was of stufte and
matter. But to say a truth, the reason is, Giuen wee are now (as I haue oftentimes said) to e-
steem of things that be rich and costly, neuer regarding the art that is imployed about them.
And here I thinke it not amisse to set down the outrageous excessse of this age, as touching pi- H
ctures. Nero the emperor commanded, that the portraict of himselfe should be painted in linnen
cloth, after the maner of a gyant-like colosse 120 foot high; a thing that neuer had been heard
or seen before. But see what became of it! when this monstrous picture (which was drawne and
made in the garden of *Marius*) was don and finished, the lightning and fire from heauen caught
it, and not only consumed it, but also burnt withall the best part of the building about the gar-
den. A slave of his infranchising (as it is wel known) when he was to exhibit at Antium certain
solemnities, and namely a spectacle of sword-fencers fighting at sharp, caused all the scaffolds,
publique galleries, and walking places of that city to be hung & tapisied with painted cloths,
wherein were represented the liuely pictures of the sword-players themselves, with all the wif- I
fers and seruitors to them belonging. But to conclude, the best and most magnanimous men,
that for many a hundred yeares our country hath bred, haue taken delight (I must needs say) in
this art, and set their minds vpon good pictures. But to portray in imagery tables and painted
cloth the publick shews of fencers & sword-players, and to set them vp to be seen in open place
to the view of the world, began by *C. Terentius* a Lucan: for this man to honour his grandfather,
who had made him his own son by adoption, exhibited a shew for three days together of thirty
paire of such fencers fighting with vnrebat swords; and a faire painted table which carried
the liuely resemblance of this spectacle, hee set vp and dedicated within the sacred groue of
Diana.

CHAP. VIII.

¶ The antiquitie of Painting, and the severall ages wherein the famous Painters liued. A
survey of excellent Pictures, and the Artificers that made them, together with
the prices that their workmanship was valued at: and no-
table pictures to the number of 305.

This argument
or title reacheth
to many
chapters fol-
lowing.

NOW will I after a cursorie sort run through all the famous professors and Artizans in this
kind, and that with as great breuitie as possibly I can; for the scope I haue proposed to my
selfe tends another way: and therefore let not the Reader think much if I do but touch
the names of some, as it were passing by, and by occasion of others whose catalogue I meane to L
deliuer. Howbeit, in making this list, my purpose is not to omit any excellent piece of worke
which is worth the remembrance and relation; whether the same be extant at this day, or lost
and perished. Where I must aduertise the readers, that in this argument my meaning is not to
stand much vpon the authoritie of Greeke writers, who indeed deliuer no certitude, nor agree in
their records as touching this point (notwithstanding that they would seeme diligent in that
behalf) and namely, in that they haue written, That the excellent painters flourished so many
Olympiads after the famous Imageurs; and haue nominated for the first and chiefe to haue li-
ued in name, about the time of the 90 Olympiad: whereas this is for certain reported, that *Phi-*
dius himself was a painter in the beginning, and that the noble shield of *Minerva* in Athens was M
by him painted: besides, this is confessed and resolu'd vpon for a truth, that *Panaus* his brother
liued in the 83 Olympias, and painted the inside of the said shield; who also in another scut-
chion of *Minerva*, which *Colores* the apprentice of *Phidias* had made; as also in making the statue
of *Iupiter Olympius*, wrought with the said *Colores* and helped him. But what should I dwell long
in this matter? Is there any doubt made, that *Candaules* King of Lydia, the last of the race and
family

A family of the *Heraclidae*, who also was commonly caled *Myrsilus*, bought the painted table which
contained the battell of the Magnetes, and paid for it to *Bularchus* (the painter or workman ther-
of) as much gold as it came to in weight. See of what price and estimation pictures were euen
in those daies! And needs it must be that this hapned about that age wherein *K. Romulus* liued:
for the said *K. Candaules* died in the 18 Olympias; or as some write, in that very yeare that *Romu-*
lus departed this life: at what time this skill of painting (if I be not much deceiued) was in
great request euery where, and growne already to an absolute perfection. Which being gran-
ted, as of necessitie it cannot be denied, euident and apparent it is, that the originall and begin-
ning of this art, was much more antient: and that those painters who vsed one colour and no
more in their plain draughts called Monocromata (towit, *Hygieon*, *Dinius*, and *Charmas*) liued
B a good while before, although it be not recorded in any writer in what age precisely they flou-
rished: as also that *Eumarnus* the Athenian painter, who deuised first to distinguish male and fe-
male in painting; and besides, vndertook to draw with his pensill the proportion & shape of any
thing that he saw; together with *Cimon* the Cleonæan, who followed his steps, and practised his
inventions, could not chuse but by a congruity & consequence be of more antiquity than *Bular-*
chus aforesaid, or the reign of *Romulus* & *Candaules*: this *Cimon* deuised the works called Catagra-
pha, i. pourtraits and images standing byas and side-long: the sundry habits also of the visage
and cast of the eie, making them to look, some backward ouer their shoulders, others aloft, and
some againe downward: his cunning it was to shew in a picture, the knitting of the members in
C every ioint: to make the veins appeare how they branched and spread: and besides, the first hee
was that counterfeited in flat pictures, the plaits, folds, wrinkles, and hollow lappets of a
garment. As touching *Phaneus* the brother of *Phidias*, hee painted also the battell betwene
the Athenians and the Persians, vpon the plains of Marathon; for now by this time were paint-
ers furnished in some sort with colours to their purpose, and the art was growne to such perfe-
ction, that in the picture resembling the said battell, the full personages were pourtraied most
liuely, of the captains on both sides, towit, *Milciades*, *Callimachus*, and *Cynegyrs*, for the Atheni-
ans; *Datis* also and *Artaphanes*, for the Barbarians or Persians.

CHAP. IX.

D ¶ The Painters that first entred into contention for to win the prize by their Art: and
who deuised to paint with the pensill.

MOREouer, during the time that the aboue-named *Panaus* flourished, there were prizes pro-
posed at Corinth and Delphos, for those painters that could win them: and the first that
struiued for the best game, was the said *Panaus*, who challenged *Timagoras* the Chalcidian
vpon this occasion, That the same *Timagoras* had giuen him the foile before at the Pythian
games; which also doth appeare by certain verses composed by *Timagoras* himselfe as touching
that argument, which fauor of great antiquity. Whereby the error of *Chronicles* before said is
manifestly conuinc'd, who haue failed much in the calculation of the times. Furthermore, be-
E sides these painters aboue rehearsed, others there were of great name, and yet all of them before
that 90 Olympiad whereof they write; as namely, *Polygnatus* the Thasian, who was the first that
painted women in gay and light apparell, with their hoods and other head attire of sundry co-
lours; and in one word, passed all others before him in deuises, for the bettering of this art. His
inuenition it was to paint images with their mouths open, to make them shew their teeth; and
in one word, represented much variety of countenance, far different from the rigorous and hea-
uy looke of the visage beforetime. Of this *Polygnatus* workmanship, is that picture in a table
which now standeth in the stately gallerie of *Pompeius*, and hung sometime before the Curia or
Hall that beareth his name, in which table he painted one vpon a scaling ladder, with a targuet
in his hand; but so artificially it is done, and with such dexterity, that whosoever looketh vpon
him, cannot tell whether he is climbing vp or coming downe. All the painting of *Apollo* his
F temple at Delphos, was of this mans doing; who also beautified with pictures, the great gallery
or walking place at Athens, which thereupon was called *Pœcile*; and this he did gratis, and
would not take one penny for it; whereas *Mycon* afore him, painted one part thereof, & was well
paid for his workmanship; which liberall mind of his, wan him the greater credit and honor be-
sides: for by a decree from the Amphyctions (who are the lords of the publick counsell of state
Z z 3
in

in Grece) it was granted, that in all cities and towns of Greece wherefoever he came, he should be lodged and entertained of free cost. Besides that *Mycon* before mentioned, there was another of the name, distinguished only by this, that the former was called *Mycon* the elder, and this *Mycon* the younger, who had a daughter named *Timarata*, & she could paint likewise excellently. But to come now to that ninetieth Olympia, there flourished in that time *Aglaophon*, *Cephisodorus*, *Phrylus*, and *Euenor*, who was both father and master to *Parasius* that most renowned painter, of whom I purpose to speak in his rank when the time comes; all these were reputed very good artists in their time, howbeit not so excellent that I should need stand long upon them or their workmanship, making haste as I do unto those glorious and glittering painters indeed, who shine as bright stars about all their fellowes; among whom, *Apollodorus* the Athenian was the first that gaue light, and he lived in the 93 Olympias; this man led the way to others, & taught them to expresse the fauor and beauty of any thing, which he obserued especially; of whom I may well and truly say, that he and none before him brought the penfill into a glorious name & especial credit. Of his making there is one picture, of a priest at his deuotions, praying & worshipping; as also another representing *Ajax*, all on a flaming fire with a flash of lightning, which at this day is to be seen at Pergamus, as an excellent piece of worke. And verily before his daies there cannot be shewed a table of any ones painting worth the sight, and which a man would take pleasure to behold and looke vpon any long time.

* For Olympias was counted the space of five yeares.

When this man had opened the dore once, and shewed the way to this art, *Zeuxis* of Heraclea entred in, and that was in the fourth yere of the 95 * Olympias: and now that the penfill was taken in hand (for now I speak thereof) he seeing that it made good worke, followed on therewith, and by continuall practise brought the same to great perfection, whereby he wan much credit to the art, and reputation to himselfe. Some writers there bee, who range him wrong in the 89 Olympias; at which time it must needs be, that *Demophilus* the Himeræan and *Neseas* the Thracian liued; for to one of them apprentice he was: but whether of the two was his master, there is some doubt made; and verily so excellent he proued in his art, that the abouenamed *Apollodorus* made verses of him; in which he signifieth, that *Zeuxis* had stolen the cunning from them all, and he alone went away with the art. He grew in proceesse of time to such wealth by the means only of his excellent hand, that for to make shew how rich he was, when he went to the solemnity of the games at Olympia, he caused his owne name to be imbrodered in golden letters, within the lozenge worke of his clokes, whereof he had change, and which he brought thither to be seen. In the end, he resolu'd with himselfe to work no longer for money, but to giue away all his pictures, saying, That he valued them about any price. Thus he bestowed vpon the Agrigentines, one picture of queen *Alcmena*; and to king *Archelaus* he gaue another of the rustical god *Pan*: there was also the pourtrait of lady *Penelope*, which he drew in colours, wherein he seemeth not only to haue depainted the outward personage and feature of the body, but also to haue expressest most liuely the inward affections and qualities of her mind: and much speech there is of a wrestler or champion of his painting, in which picture he pleased himselfe so well, that he subscribed this verse vnder it, * *invisurus aliquis facilius quam imitaturus*. Sooner will a man enuy me, than set such another by me. Which thereupon grew to be a by-word in euery mans mouth. One stately picture there is of his workmanship, *Iupiter* sitting vpon a throne in his Majestie, with all the other gods standing by and making court vnto him. Hee pourtraied *Hercules* also as a babe lying in a cradle, and strangling two fell serpents with his hand, together with his mother *Alcmena*, and her husband *K. Amphitryon* in place, affrighted both at the sight thereof. Howbeit, this *Zeuxis* as excellent a painter as he was, is noted for one fault and imperfection; namely, that the head and joints of his pourtraicts, were in some proportion to the rest somely, that with the biggest, for otherwise so curious and exquisite hee was, that when he should make a table with a picture for the Agrigentines, to be set vp in the temple of *Inno Lacinia*, at the charges of the city, according to a vow that they had made, he would needs see all the mayden of the city naked, and from all that company he chose 5 of the fairest to take out as from seuerall patterns, whatsoeuer he liked best in any of them; and of all the lovely parts of those faire, to make one body of incomparable beaurty. Many draughts he made of one color, in white. There liued in his time *Timanthes*, *Androcydes*, *Eupompus*, and *Parasius*, who were his concurrents, and thought as well of themselves as he did.

* *Græcè melius inuenitur, quàm imitaturus*: which Iambick verse some attribute to *Apollodorus*.

CHAP.

CHAP. X.

Of birds deceived by pictures. What is the hardest point in the art of painting?

Of those foure before named, *Parasius* by report was so bold as to challenge *Zeuxis* openly and to enter the lists with him for the victory, in which contention and triall, *Zeuxis* for prooffe of his cunning, brought vpon the scaffold a table, wherein were clusters of grapes so liuely painted, that the very birds of the aire flew flocking thither for to bee pecking at the grapes. *Parasius* againe for his part to shew his workmanship, came with another picture, wherein he had painted a linnen sheet, so like to a sheet indeed, that *Zeuxis* in a glorious brauery and pride of his heart, because the birds had approoued of his handy worke, came to *Parasius* with these words by way of a scorn and frumpe, Come on sir, away with your sheet once, that we may see your goodly picture. But taking himselfe with the manner, and perceiuing his own error, he was mightily abashed, & like an honest minded man yeelded the victory to his aduersary, saying withall, *Zeuxis* hath beguiled poore birds, but *Parrhasius* hath deceiued *Zeuxis*; a professed artifice. This *Zeuxis*, as it is reported, painted afterwards another table, wherein he had made a boy carrying certaine bunches of grapes in a flasker, and seeing again that the birds flew to the grapes, he shook the head, and comming to his picture, with the like ingenious mind as before, brake out into these words, and said, Ah, I see well enough where I haue failed, I haue painted the grapes better than the boy, for if I had don him as naturally, the birds would haue bin afraid and neuer approched the grapes. He pourtraied also diuers pieces of earthen vessels in porterie, which onely were left behind in *Ambracia*, at what time as *Enluis* surnamed *Nobilior*, remoued the Mules from thence of his pourtraying, and brought them to Rome. Moreouer, there remaineth yet at Rome within the galleries of *Philippus*, the picture of *Helena*, wrought by the hand of *Zeuxis*: and in the temple of *Concord* another, resembling *Marsius* the Musitian bound to a tree.

As for *Parasius* before named, borne hee was at Ephesus, and inuented also diuers things of himselfe to the aduancement of this art: for the first he was that gaue the true symmetrie to a portraiture, and obserued the iust proportions: he first exactly kept the sundry habits and gestures of the countenance: he it was, that first stood vpon the curious workmanship of couching and laying the haire of the head in order: the louely grace and beauty about the mouth and lips, he first exactly expressest: and by the confession of all painters that saw his worke, he woon the praise and praise from them all in making vp the pourtrails and extenuities of his liniments, which is the principall point and hardest matter belonging to the whole art: for to draw forth the bodily proportion of things, to hatch also, yea, and to fill within, requireth (I confesse) much labour and good workmanship; but many haue bin excellent in that behalfe, many to pourtrill wel, i. to make the extremities of any part, to mark duly the diuisions of parcels, & to giue enery one their iust compasse and measure is exceeding difficult; and few when they come to the doing of it, haue been found to attaine vnto that felicity. For the utmost edge of a worke must fall round vpon it selfe, and so knit vp in the end, as if it shadowed somewhat behind, and yet shewed that which it seemeth to hide. In this so curious and inexplicable a point, *Antigonus* and *Xenocrates* both, who wrote as touching this art, haue giuen him the honour of the best, not onely confessing his singular gift herein, but also commending him for it. Many other plots and projects there doe remaine of his drawing, pourtraied as well in tables as vpon parchement, which serue as patterns (they say) for painters to learn much cunning by. And yet for inward works, and to expresse the middle parts of a portraiture, he seemeth not so perfect, nor answerable to himselfe otherwise. There is a notable picture of his making, which he called * *Demon Atheniensium*, that is to say, * *the spirit*. For his intention was in one and the same pourtrait, and vnder one object of the eye to expresse the nature of the people, variable, wrathfull, vnjust, and vnconstant; the same also he would haue to appeare exorable, milde, and pittifull; haughtie, glorious and proud, and humble, lowly, and submisse; fierce and furious, and the same coward-like, and ready to run away: all these properties, I say, he represented vnder one cast of the eye. This workman painted also *Theusus*, which stood sometimes in the capitoll of Rome; a certaine Admirall likewise of a nauie,

naue armed with a corselet. In one table also which is at Rhodes, he depainted *Melager*, *Hercules*, and *Perseus*. This table was thrice blasted with lightening; howbeit, the pictures were not defaced, but remained whole and entire as at the first: a miraculous thing, and that which maketh much for the credit of the picture. *Archigallus* was of his painting; a picture that *Tiberius* the Emperor tooke great pleasure in; and as *Escolio* mine author doth testifie, he esteemed it worth 60000 sesterces, and inclosed it within his bed-chamber. Moreover, he counterfeited one *Gressu* a nourse, with her infant in her arms: he pourtraied *Philisus*, and god *Bacchus* with the goddesse *Vertue* standing by him: also two boies, on whom a man might see most liuely resembled, the carelesnesse and simplicity of that age: likewise a priest, attended vpon with a pretty boy, holding a censar in his hand, and a coroner.ouer and besides, two pictures there be of his handie work, going vnder the name of *Hoplites*, i. armed: the one running in his armour in battel-wise, H so as he seemeth all in a sweat: the other disarming himself, all wearied, so as a man would think his hind were gone, or that he drew it very short. Great praise there is of one table of his, wherein are depainted, *Aeneas*, *Castor*, and *Pollux*; also of another, which contained *Telephus*, *Achilles*, *Agamemnon* & *Plysses*. An artfisan full of work, & who would euer be doing one thing or other; but so arrogant withall, as no man euer shewed more insolency than he, in regard that hee was cunning and well thought of: which he knew well enough, and no man needed to tell him. In this proud spirit of his, he would take vpon him diuers titles and additions to his name: among others, he would call himselfe * *Abrodiatus*: and other words he vsed, whereby hee would make himselfe known that he was prince of painters, and the art by him made perfect and accomplished. But it exceedeth how vaine-glorious he shewed himselfe, in that hee gaue out, hee was in I right line descended from *Apollo*: also that the pourtrait of *Hercules*, which is in a table at Lin-dos, he drew from the very person of *Hercules* himselfe, answerable in all points to the proportion and lineaments of his body, who (by his saying) had appeared to him oftentimes in his sleep of purpose, that he might paint him liuely as he was. In this veine of vanity, being vpon a time put down by *Timanthes* the Painter at Samos, where, by the judgement of all that were present, his picture representing *Ajax*, and the awarding of the armor of *Achilles* from him to *Plysses*, was not thought comparable to another of *Timanthes* his making: I am ill apaid (quoth he) and so-ry at the heart, for this noble knight and braue warrior *Ajax*, whose euill hap it is thus to be foiled once againe by so vnworthy a weight, and a far meaner person than himselfe. He delighted also to paint small pictures in pretie tables, and those representing wantonneffe and lecherie: K and this he did (as he was wont to say) for his recreation, and as it were to breath himselfe when he had laboured hard at greater workes.

As for *Timanthes*, an excellent fine wit he had of his owne, & full he was of rare inuentions: he it was that made the famous picture of *Iphigenia*, so highly commended by eloquent orators: and to say a truth, his conceit therein was admirable: for when he had deuised that the poor innocent lady should stand hard at the altar, ready to be slain for sacrifice, and had painted those that were present about her, with heauy and sad countenance, weeping & wailing all for the instant death of this young princeffe, and her vnckle *Menelaus* about the rest, full of sorrow and lamentation, and shewing the same as much as possibly might be: hauing by this time spent in them all the signes that might testifie the hearts griefe, and that he was come to pourtray her own father *Agamemnon*, he represented his visage couered with a vail, for that he was not able to expresse sufficiently the extraordinary sorrow about the rest which he had to see his own daughter sacrificed, and her guiltlesse blood spilt. Other pieces of worke there be, patternes all of singular wit: among the rest, he deuised within a very small table, a Cyclops lying a sleepe; and yet because he would seeme even in that little compasse to shew his giant-like bignesse, hee deuised withall to paint little eluifh Satyres hard by, and those taking measure of one of his thumbes with long perches. In sum, so inuentiue he was, that in the workes which passed through his hand, a man shal euer conceiue & vnderstand some hidden thing within more than is painted without: for albeit a man shal see in his pictures as much art as may bee, yet his wit went alwaies beyond his art. Moreover, his picture of a prince was thought to be most absolute; the majesty whereof is such, that all the art of painting a man, seemeth to be comprised in that one pourtrait. This piece of worke remaineth at this day within the temple of *Peace*, in Rome.

In this age flourished *Euxenidas*, and taught *Aristides* his cunning, who prooued afterwards a singular workeman. *Enpompus* also trained vp *Pamphilus* the painter vnder him, whose apprentice was

A was *Apelles*. There is a fine picture of *Enpompus* his making, to wit, one who had obtained the victorie at the publique Gymnick exercises of actiuitie, painted naked as hee performed his deuoir, holding in his hand the branch of a date tree. This *Enpompus* was of such authoritie, that whereas before his time there were but two kinds of pictures, to wit, Helladicum, i. the Greekish; and Asiaticum, i. Asiatick; he brought in a new diuision, and made 3 distinct members thereof: for in loue of him, because he was a Sicyonian borne, the foresaid Helladicum beeing parted in twain, there arose three feuerall forts, the Ionian, Sicyonian, and Attick.

As for *Pamphilus*, renowned he was for painting a confraternity or kindred; the battel fought before Phlius, and the victorie of the Athenians: semblably, of his making is the picture of *Vlysses* in a punt or small bottom. Himselfe was a Macedonian borne, but of all painters, the first B that gaue his mind to other good literature, and especially to Arithmetick & Geometry, without the insight of which two sciences, hee was of opinion, that vnpossible it was to be a perfect painter. He taught none his cunning vnder * a talent of siluer for 10 yeares together: and thus much paid *Apelles* and *Melanthus* vnto him for to learn his art. His authoritie brought to passe, that ordained it was at Sicyone, and so consequently throughout all Greece, that gentlemen sons or free-born should go to painting schoole, and there be taught first aboute all other things the art Diagraphice, that is to say, the skill to draw and paint in box tables: and for the credit of Painters he brought to passe, that the art should be ranged in the first degree of liberall Sciences. And verily this craft of painting hath bin alwaies of that good respect and so honored, that none but gentlemen and free-born at the first beginning medled therewith, yea, and afterwards C honorable personages gaue themselves to the practise thereof, with this charge from time to time, to teach no slaue the myserie of painting, who by a strict and perpetuall edict were excluded from the benefit thereof. Neither shall you euer heare of any piece either of picture or grauerie and embossing, that came out of a seruile hand.

Furthermore, about the 170 Olympias there flourished *Echion* and *Terimachus*, two renowned painters: as for *Echion*, ennobled he is for these pictures, god *Bacchus*, a Tragedie and a Comedie, represented by painting: also *Semiramis*, who of a bond-maiden came to be a queen; an ancient woman carrying a torch or lamp, going before a yong wife newly wedded, and leading her to the bride-bed, who followeth with a modest, shamefast, and bashfull countenance most apparant to the eie.

D But what should I speake of these painters, when as *Apelles* surmounted all that either were before, or came after. This *Apelles* flourished about the 112 Olympias, by which time hee became so consummate and accomplished in the art, that hee alone did illustrate and enrich it as much, if not more, than all his predecessors besides: who compiled also diuers bookes, wherein the rules and principles, yea and the very secrets of the art are comprised. The speciall gift that he had was this, that he was able to giue his pictures a certain louely grace inimitable: and yet hee beheld hee would praise them all, howbeit not without a but: for his ordinarie phrase was this, Here is an excellent picture, but that it wants one thing, & that is the *Venus* it should haue; which *Venus* the Greeks call *Charis*, as one would say, the grace: and in truth he would confesse, that other mens pictures had all things els that they should haue, this onely excepted; wherein E hee was perswaded that he had not his peere or second. Moreover, he attributed vnto himselfe another propertie, wherein hee gloried not a little, and that was that hee could see to make an end when a thing was well done. For beholding wistly vpon a time a piece of worke of *Protagenes* his doing, wherein he saw there was infinite pains taken, admiring also the exceeding curiositie of the man in each point beyond all measure, he confessed & said, That *Protagenes* in euery thing els had done as well as himselfe could haue done, yea and better too. But in one thing he surpassed *Protagenes*, for that he could not skill of laying worke out of his hand when it was finished well enough. A memorable admonition, teaching vs all, That double diligence and ouermuch curiositie doth hurt otherwhiles. This painter was not more renowned for his skill and excellencie in art, than he was commended for his simplicitie and singleness of heart: for as he gaue place to *Amphion* in disposition, so hee yielded to *Astelepidorus* in measures and proportion, that is to say, in the iust knowledge how far distant one thing ought to be from another. And to this purpose impertinent it is not, to report a pretty occurrent that fell between *Protagenes* and him: for being very desirous to be acquainted with *Protagenes*, a man whom hee had

* i. fine, delicate and sumptuous: for he would be in his purple, or his golden chaplets, his staffe, tipped with gold, and his shoon buckles of the same.

* *Minos* ten into annis decem: yet *Budeus* readeth *Annus talentis decem*, ten talents by the yeare.

had neuer seen, and of his works, whereof there went so great a name, he imbarqued and sailed to Rhodes, where *Protagenes* dwelt: and no sooner was hee landed, but he enquired where his shop was, and forthwith went directly thither. *Protagenes* himselfe was not at home, only there was an old woman in the house who had the keeping of a mighty large table set in a frame, and fitted ready for a picture: and when he enquired for *Protagenes*, she made answer, that he was not with-in; and seeing him thereupon ready to depart, demanded what his name was, & who she should tell her master asked for him. *Apelles* then, seeing the foresaid table standing before him, tooke a pensil in hand and drew in colour a passing fine and smal line through the said table, saying to the woman, Tell thy master, that he who made this line enquired for him; and so he went his wayes. Now when *Protagenes* was returned home, the old woman made relation vnto him of this that hapned in his absence; and as it is reported, the artificer had no sooner scene and beheld the draught of this small line, but he knew who had been there, and said withall, Surely *Apelles* is come to town; for vnpossible it is, that any but hee should make in colour so fine workman-ship. With that hee takes me the pensil, and with another colour drew within the same line a smaller than it: willing the woman when hee went forth of doores, that if the party came againe, she should shew him what he had done, and say withall, that there was the man whom he in-quired after. And so it fell out indeed, for *Apelles* made an errand againe to the shop, and seeing the second line, was dismayed at first and blushed withal to see himselfe thus ouercome; but taking his pensil, cut the foresaid colours throughout the length, with a third colour distinct from the rest, and left no room at all for a fourth to be drawn within it. Which when *Protagenes* saw, hee confessed that he had met with his match and his master both; and made all the hast he could to the haue to seeke for *Apelles* to bid him welcome & giue him friendly entertainment. In me-moriall whereof it was thought good both by the one and the other, to leaue vnto posterity this table thus naked without any more work in it, to the wonder of all men that euer saw it, but of cunning artificers and painters especially: for this table was kept a long time, and as it is well known, consumed to ashes in that first fire that caught *Cæsars* house within the Palatine hill: and ordinarily we took great pleasure before that, to see it many times, containing in that large & extra-ordinary capacitie that it had, nothing els but certaine lines, which were so fine and small, that vnneeth or hardly they could be discerned by the eie. And in truth, when it stood among the ex-cellent painted tables of many other workemen, it seemed a very blanke hauing nothing in it: howbeit as void and naked as it was, it drew many to it euen in that respect, being more looked vpon and esteemed better than any other rich and curious work whatsoever. But to come againe vnto *Apelles*, this was his manner and custom besides, which he perpetually obserued, that no day went ouer his head, but what businesse soeuer he had otherwise to call him away, he would make one draught or other (and neuer misse) for to exercise his hand and keepe it in vre, in so much as from him grew the prouerbe, *Nulla dies sine Linea*, i. Be alwaies doing somewhat, though you doe but draw a line. His order was when he had finished a piece of work or painted table, and layd it out of his hand, to set it forth in some open gallerie or thorow-fare, to be seen of folke that passed by, and himselfe would lie close behind it to hearken what faults were found there-with; preferring the iudgement of the common people before his owne, and imagining they would spy more narrowly, and censure his doings sooner than himselfe: and as the tale is told, it fell out vpon a time, that a shoemaker as he went by seemed to controlle his workmanship about the shoo or pantofole that he had made to a picture, & namely, that there was one latchet fewer than there should be: *Apelles* acknowledging that the man said true indeed, mended that fault by the next morning, and set forth his table as his manner was. The same shoemaker com-ming againe the morrow after, and finding the want supplied which he noted the day before, took some pride vnto himselfe, that his former admonition had sped so well, and was so bold as to cauil at somewhat about the leg. *Apelles* could not endure that, but putting forth his head from behind the painted table, and scorning thus to be checked and reprobud, Sirrha (quoth hee) re-member you are but a shoemaker, & therefore meddle no higher I aduise you, than with shoes. Which words also of his came afterwards to be a common prouerbe, *Ne sutor ultra crepidam*. Which Ouer and besides, very courteous he was and faire spoken, in which regard King *Alexander* the Great accepted the better of him, and much frequented his shop in his owne person: for, as I haue said before, he gaue streight commandement, That no painter should bee so hardie as to make his picture but only *Apelles*. Now when the King being in his shop, would seeme to talke much

A much and reason about his art, and many times let fall some words to little purpose, bewraying his ignorance, *Apelles* after his mild manner, would desire his grace to hold his peace, & said, sir, no more words, for feare the prentise boies there that are grinding of colours, do laugh you to scorn: So reuerently thought the king of him, that being otherwise a cholericke prince, yet hee would take any word at his hands in that familiar sort spoken in the best part, and be neuer of-fended. And verily, what good reckoning *Alexander* made of him, he shewed by one notable ar-gument; for hauing among his courtesans one named *Campaspe*, whom he fancied especially a-boue the rest, in regard as well of that affection of his as her incomparable beauty, he gaue com-mandement to *Apelles* for to draw her picture all naked: but perceiuing *Apelles* at the same time to be wounded with the like dart of loue as well as himselfe, he bestowed her on him most frank-ly. By which example, hee shewed moreouer, that how great a Commander, and high minded a prince he was otherwise, yet in this mastering and commanding of his affections, his magnani-mity was more seen: and in this act of his he was as much honor and glory, as by any victory o-uer his enemies; for now he had conquered himselfe, and not onely made *Apelles* partner with him of his loue, but also gaue his affection clean away from her vnto him, nothing mooued with the respect of her whom before he so dearly loued, that being the concubine of a king, she should now become the bed fellow of a painter. Some are of opinion, That by the patterne of this *Cam-paspe*, *Apelles* made the picture of *Venus* * *Anadyomene*. Moreouer, *Apelles* was of a kind bountifull disposition euen to other painters of his time, who commonly as concurrents, do enuie one ano-ther. And the first he was that brought *Protagenes* into credit and estimation at Rhodes; for at the first, his owne countrymen made no account at all of him (a thing ordinarily seen, that in our own country we are least regarded) but *Apelles*, for to countenance and credit the man, demanded of him what price he would set of all the pictures that he had ready made, *Protagenes* asked some small matter and trifle to speake of: howbeit, *Apelles* esteemed them at fifty talents, and promi-sed to giue so much for them: raising a bruit by this means abroad in the world, that he bought them for to sel againe as his owne. The Rhodians hereat were moued and stirred vp to take bet-ter knowledge of *Protagenes*, what an excellent workeman they had of him: neither would *Prota-genes* part with any of his pictures vnto them, vnlesse they would come off roundly and rise to a better price than before time. As for *Apelles*, he had such a dexterity in drawing pourtraits so liuely, and so neer resembling those for whom they were made, that hardly one could be known from the other; in so much, as *Apion* the Grammarian hath left in writing (a thing incredible to be spoken) that a certain Physiognomist or teller of Fortune, by looking onely vpon the face of men and women, such as the Greekes call *Metoposcopos*, judged truly by the portraits that *A-pelles* had drawne, how many yeres they either had liued or were to liue, for whom those pictures were made. But as gracious as he was otherwise with *Alexander* and his train, yet he could neuer win the loue and fauor of prince *Protolomeus*, who at that time followed the court of *K. Alexander*, and was afterwards king of Egypt. It fortun'd, that after the decease of *Alexander*, and during the reigne of *K. Protolomeus* aforesaid, this *Apelles* was by a tempest at sea cast vpon the coast of Æ-gypt, and forced to land at Alexandria; where, other painters that were no well willers of his, practised with a jugler or jester of the kings, and suborned him in the kings name to train *A-pelles* to take his supper with the king. To the court came *Apelles* accordingly, and shewed him-self in the presence. *Protolomeus* hauing espied him, with a stern and angry countenance demanded of him what he made there, and who had sent for him; and with that shewed vnto him all his seru-i-tors who ordinarily had the inuiting of ghefts to the kings table, commanding him to say which of all them had bidden him: whereat *Apelles*, not knowing the name of the party who had brought him thither, and beeing thus put to his shifts, caught vp a dead cole of fire from the hearth thereby, and began therewith to delineate and draw vpon the wall the proportion of that con-finer before said. He had no sooner pourtried a little about the visage, but the king presently tooke knowledge thereby of the party that had played this pranke by him and wrought him this displeasure. This *Apelles* drew the face of *K. Antiochus* also, who had but one eie to see withall: for to hide which deformity and imperfection, he deuised to paint him, turning his vi-sage a little away, and so he shewed but the one side of his face, to the end, that whatsoever was wanting in the picture, might be imputed rather to the painter, than to the person whom he por-trayed. And in truth, from him cameth this inuention first to conceale the defects & blemishes of the visage, and to make one halfe face onely, when it might be represented full and whole, if it pleased

* *Ortani mari*
rising out of
the sea.

pleased the painter. Among other principall pieces of worke, some pictures there be of his making, resembling men and women lying at the point of death, and euen ready to gasp and yeeld vp the ghost. But of all the pictures & portraitures that he made, to say precisely which be the most excellent, it were a very hard matter: as for the painted table of *Venus*, arising out of the sea (which is commonly knowne by the name of *Anadyomene*) *Augustus Caesar*, late Emperour of famous memory, dedicated it in the temple of *Iulius Caesar*, his father; which hee enriched with an Epigram of certaine Greeke verses, in commendation as well of the picture, as the painter. And albeit the artificiall contriuing of the said verses went beyond the worke, which they seemed to praise, yet they beautified and set out the table not a little. The nether part of this picture had caught some hurt by a mischance: but there neuer could be found that painter yet, who would take in hand to repaire the same and make it vp again as it was at first: so as, this wrong & harm done vnto the worke, and continuing still vpon the same, turned to the glory of the workman. This table remained a long time to be seen, vntill in the end for age it was worm-eaten and rotten: in such sort, as *Nero* being Emperour was faine to set another in the place, wrought by the hand of *Dorathus*. But to come againe vnto *Apelles*: he had begun another picture of *Venus Anadyomene*, for the inhabitants of the Island *Cos*, which hee minded should haue surpassed the former: howbeit, before he could finish it, surprised he was with death, which seemed to enue so perfect workmanship: and neuer was that painter knowne to this day, who would turne his hand to that piece of worke, and seeme to go forward where *Apelles* left, or to follow on in those traicts and liniments, which he had purfild and begun. One picture he drew of **K. Alexander* the Great, holding a * thunderbolt and lightening in his hand, which cost twentie talents of gold, and was hung in the temple of *Diana* at *Ephesus*. And verily, this deuise was so finely contriued, that as *Alexanders* fingers seemed to bear out higher than the rest of the worke, so the lightening appeared to be cleane without the ground of the table, and not once to touch it. [But before I proceed any farther, let the readers take this with them, and alwaies remember, that these rich and costly pictures were wrought with foure colours and no more.] And for the workmanship of this picture, the price thereof was paid him in good gold coine by weight and measure, and neuer told and counted by tale. Of his handy worke was the picture of a Megabyzus or guelded priest of *Diana* in *Ephesus*, sacrificing in his pontificall habits & vestiments accordingly. Also the counterfeite of prince *Clytus*, armed at all pieces (saue his head, mounted on horse-back and hasting to a battell, calling vnto his squire or henxman for his helmet, who was K. *Alexander* also reaching it vnto him. To reckon how many pictures *Apelles* made of *K. Alexander* and his father *Philip*, were but losse of time, and a needlesse discourse. But I cannot omit the painted table, containing the pourtrait of *Abron* that wanton and effeminate person; which piece of worke the Samians so highly extoll and magnifie: ne yet another picture of *Menander* the sonne of *Caria*, that he made for the Rhodians, and which they so much admire. Neither must I forget the counterfeite of *Ancus*: of *Gorgosthenes* the Tragedian, which he made at *Alexandria*: or while he was at Rome, one table containing *Castor* and *Pollux*, with the image of *Victoric*, and *Alexander* the Great: Likewise another representing the counterfeite of *Warre* in person, bound with his hands behind at the backe, and *Alexander* the king mounted in a charriot triumphant: both which tables *Augustus* late Emperour of immortal memory, had dedicated modestly, and in simplicity of heart caused them to be hung vp in the most conspicuous places of his Forum or hall that he built: but when *Claudius Caesar* came to weare the diademe, he thought it more for the honour of *Augustus*, to scrape out the face of *Alexander*, as well in the one as in the other, and to set in the place the liuely image of the said *Augustus* to be seen. It is thought likewise, that the full pourtrait of *Hercules*, painted in a table, standing now in the temple of *Antonia*, was of his doing: an exquisite piece of worke no doubt, for notwithstanding that the backe part stand toward them that looke vpon it, yet it sheweth the entire visage, which is an exceeding hard matter: a man that beholdeth this *Hercules*, would thinke that the picture it selfe turned the face to be seen, which the painter seemed by the rest of the worke to hide from the eie. Of his painting there is a * prince or worthy knight all naked, in which picture he seemed to challenge Nature: and to haue pourtraied euery part so well, as shew her selfe could not haue framed the same better. There is or was at leastwise, a horse of his painting, which he pourtraied, to set against other horses painted by diuerse workemen, with whom he was entred into contention for the victory: in which triall, he appealed from the sentence of men to the iudgement of foure-footed beasts,

* Of this picture *Apelles* was wont to say, That there were two *Alexanders*: the one begotten by *Philip*, who was *Alexander*; & the other painted by *Apelles*, and he was *Apelles*. The manner was to expresse lightening, by three shafts bound together in the middle.

* Some thinke he meant *Hercules* & *Leander*: and they read, He ro *Leander* pinning it, he painted *Hercules* and *Leander*.

A euen liuing horses indeed; for perceiuing that his concurrents were in fauor too mighty for him and that they were like to carry away the prize by corrupting the iudges and vmpires, he caused liuing horses to be brought vp into the place; and hauing presented before them the pictures of his concurrents horses one by one, they seemed not to joy nor make toward them: but no sooner had he shewed * that of his owne pourtraying, but they fell all to neigh, as taking it for one of their fellows; which experiment serued euery after for a rule, to know indeed a good piece of workmanship in that kind. Moreover, he made a picture representing *Neoptolemus* the sonne of *Achilles*, in habit of a man of armes, sitting on horsebacke and riding against the Persians: likewise another, resembling *Archelaus* with his wife and little daughter: also *K. Antigonus* armed before with a cuirace, & marching on foot with his horse of seruice led by him. Howbeit those B Painters that are counted more skilfull and cunning than others, preferre before all other pieces of his workmanship, one picture of the same king sitting vpon his horse; and another which doth represent the goddess *Diana*, among a confort or company of other virgins at sacrifice; whom he depainted so artificially in this table, that he seemeth to haue surmounted *Homer* the Poet, who effusions in his poems describeth the same maiden *Diana* with her traine of yong damosels. What would you haue more? he would seeme to pourtray those things which indeed cannot be pourtraied, crackes of thunder, leames or flashes of lightning, and thunderbolts; all which pictures go vnder the name of *Brontes*, *Astrape*, and *Ceraunobolus*; his inuentions serued as precedents and patterns for others in that art to follow. One secret he had himselfe, which no man was euer able to attaine and reach vnto, and that was a certain blacke vernish which he used to lay vpon his painted tables when he had finished them; which was so finely tempered, and withall driuen vpon the worke so thin, that by the repercussion thereof it gaue an excellent gloss and pleasant lustre to the colors; the same also preserved the picture from dust and filthiness: and yet a man could not perceiue any such thing at all, vnlesse he held the table close at hand, and looked very neere. And great reason hee had besides to vse this vernish, namely, lest the brightnesse of the colours without it, might offend and dazzle the eyes, which now beheld them as it were as farre off through a glasse stone; and withall, the same gaue a secret deeping and sadnesse to those colours which were too gay and gallant. And thus much may suffice for *Apelles*.

D In his time liued *Arifides* the Thebane, a famous painter. This *Arifides* was the first that would seeme to paint the conceptions of the mind, and to expresse all the inward dispositions and actions thereof, which the Greeks call *Erthe*: yea, the very perturbations and passions of the soule he represented in picture: howbeit, his colours were vnpleasant and somewhat too harsh: He represented in a table the winning of a towne by force, wherein was pourtraied most liuely a little infant winding it selfe and making pretty means to creep vnto the mothers pap, who lay a dying vpon a mortall wound receiued in her brest; but it passed, how naturally the poor womans affection was expressed in this picture; for a man might perceiue in her, very sensibly, a certaine sympathie and tender affection yet, vnto her babe, albeit she were now in her deadly pangs and going out of the world, tearing euen then, least the childe should meet with no milke when she was dead, but in stead of sucking it, fall to lick her bloud, and doe it selfe hurt and iniurie: this painted table *K. Alexander* the Great translated from Thebes to Pella, the city where himselfe was borne. The same *Arifides* painted the counterfeite of a battell betwene the Greeks and the Persians: in which table, he comprised an hundred fighting men: his bargain was to haue of *Anafon* the tyrant or *K. of Elate*, for euery personage that hee made * ten pounds of siluer. Hee haue thought he saw the wheels running about. And as for an humble suter or suppliant, he depainted him so naturally, making his petition and following it with such earnestnesse, that hee seemed in maner to cry with an audible voice from the very picture. He counterfeited in a painted table, hunters with their venison that they had taken. *Leontion* also the painter, and a woman vnder the name of *Anapaumene*, dying for kind heart and the loue of her brother: likewise prince *Bacchus*, and lady *Ariadne* his wife, which be pictures much looked vpon at Rome in these dayes within the temple of *Ceres*; a plaier besides in a tragœdy, accompanied with a boy (& these are to be seen in the chappell of *Apollo*) howbeit, this table hath lost the beauty which it first had, through the folly of an vnskillfull painter, vnto whom it was put forth to be scoured and refreshed, by *M. Innins* the Pretor, against the solemnities of the Apollinar games. Moreover, there was

* *Peter Mar.* reported that he painted a mare.

* *M. Mar.*

to be seen in the chappell of *Faith* within the Capitoll, the picture of an old man with an harp, G teaching a boy to play, which was of *Aristides* his making; but there is a man lying sicke in his bed, of his painting, that cannot be praised sufficiently. And verily to conclude with his owne word, so accomplished he was in this art, that *K. Attalus* (by report) gaue vnto him for one table with the picture, one hundred talents of siluer.

About the same time, there flourished (as I haue said before) *Protagenes*; born he was at *Cauos* a city in *Cilicia*, and subject to the *Rhodians*; he was so exceeding poore at the beginning, and withall, so studious, intenuate, and curious in his worke without all end, that fawer pictures by that means came out of his hands, and himselfe neuer rise to any great wealth. Who it was that taught him his art, it is not knowne for certaine: but some say that he painted ships vntill he was 50 yeres of age: which they collect by this argument, That when at *Athens* in the most H conspicuous and frequented place of the city, he was to adorne with pictures the porch before the temple of *Minerva*, wherein he depainted that famous * *Paralus* and * *Hemionis*, which some call *Nausicaa*, he deuised certaine borders without: wherein he painted among those by-works (which painters call *Parerga*) certaine small gallies and little long barks, to shew thereby the small beginnings of his art, and to what height of perfection hee was come to in the end, when his workmanship was thought worthy to be seen in the most eminent place of that citie. But of all the painted tables that euer he wrought, that of * *Ialysus* is accounted the principall, which is now dedicated at *Rome* within the temple of *Peace*: whiles he was in painting this *Ialysus*, it is said, that he liued only vpon steeped Lupines, which might serue him in stead of meat and drinke both, to satisfie his hunger and quench his thirst: and this hee did, for feare least too much sweetnesse of other viands should cause him to feed ouerliberally, and so dul his spirit and senses. And to the end that this picture should be lesse subiect to other injuries, and last the longer, he charged it with foure grounds of colours, which he laid one vpon another: that euer as the upper coat went, that vnderneath might succeed in the place and shew fresh againe. In this table, the pourtraiture of a dog is admirable and miraculous; for not only art, but fortune also ment together in the painting thereof; for when he had done the dog in all parts to the contentment of his owne minde (and that ywis was a very hard and rare matter with him) & could not satisfie and please himselfe in expressing the froth which fell from his mouth as he panted and blowed almost windlesse with running, displeased he was with the very art it selfe: and albeit he thought that he had bin long enough already about the said froth, and spent therein but too K much art and curiositie, yet somewhat (he wist not what) was to be diminished or altered therein: the more workmanship and skill that went thereto, the farther off it was from the truth in: the deed and the nature of froth (the onely marke that he shot at:) for when he had done all that he could, it seemed still but painted froth, and not that which came out of the dogs mouth, where- as it should haue been the very same and no other, which had been there before. Hereat he was troubled and vexed in his mind, as one who would not haue any thing scene in a picture of his, that might be said like, but the very same indeed. Many a time he had changed his penfill and colours, as often, he had wiped out that which was done, and al to see if he could hit vpon it, but it would not be, for yet it was not to his fanfic. At the last, falling clean out with his own work- manship, because the art might be perceived in it, in a pelting chafe he flings me the sponge-ful L of colors that he had wiped out, full against that vnhappy place of the table which had put him to all this trouble: but see what came of it! the sponge left the colours behind, in better order than hee could haue laied them, and in truth, as well as his heart could wish. Thus was the froth made to his full mind, and naturally indeed by meere chance, which all the wit and cunning in his head could not reach vnto. [After whose example, *Neacles* another painter did the like, and sped as well, in making the froth falling naturally from a horses mouth; namely, by throwing his sponge against the table before him, at what time as he painted a horse-rider cheering and cher- king vp his horse, yet reining him hard as he champed vpon his bit.] Thus (I say) Fortune taught *Protagenes* to finish his dog. This picture of *Ialysus* and his dog, was of such name and so highly esteemed, that *K. Demetrius* when hee might haue forced the city of *Rhodes*, on that side onely M where *Protagenes* dwelt, forbore to set it on fire, because he would not burne it among other pain- ted tables: and thus for to spare a picture, he lost the opportunitie of winning a towne. During this strait siege and hot assault of *Rhodes*, it chanced that *Protagenes* himselfe was at worke in a little garden that he had by the townes side, euen as a man would say within the compasse of *Demetrius*

* Names of gallies.

* A worthy knight, sonne of *Ochimus*.

A *Demetrius* his camp. And for all the fury of warre and the daily skirmishes within his sight and bearing, yet he went on still with his workes that he had in hand, and neuer discontinued one hour. But being sent for by the king, and demanded, How he durst so confidently abide without the walls of the city in that dangerous time? he answered, That he knew full well that *Demetrius* warred against the *Rhodians*, and had no quarrell to good Arts and Sciences. The king then (glad in his heart that it lay now in his hand to saue those things, which he had spared before, and whereof he had so good respect) bestowed a very strong guard about *Protagenes* for his better safety & security: and as great an enemy as he was to the *Rhodians*, yet he vsed otherwhiles to visit *Protagenes* of his owne accord in proper person, because he would not eftsoones call him out of his shop from worke: and setting aside the maine point and occasion of lying before B *Rhodes*, which was the winning thereof, the thing that hee so much desired; euen amid the assaults, skirmishes, and battels, hee would finde time to come to *Protagenes*, and took great pleasure to see his worke. By occasion of this siege and hostilitie, arose this tale moreover of one table of his making, That all the whiles he painted it, the dagger (forfooth) was set to his heart, and a sword ready to cut his throat: and it was the picture of a *Satyre* playing vpon a paire of bag-pipes, which he called * *Anapaomenos*: by which name, as well as by the thing it selfe, hee would seem to signifie, that he took but little thought and care during those dangerous troubles. Moreover, he made the picture of lady *Cydippe*, and of * *Tlepolemus*: he painted also *Philiscus* a writer of Tragoedies, sitting close at his study meditating and musing. Also, there be of his making, a wrestler or champion, *Antigonus* the king, and the * mother of *Aristotle* the Philoso- C pher, who also was in hand with *Protagenes*, perswading him to busie himselfe in painting all the noble acts, victories, and whole life of king *Alexander* the Great, for euermlasting memoriall and perpetuities: but the vehement affection and inclination of his minde stood another way, and a certaine itching desire to search into the secrets of the art, tickled him, and rather drew him to these kinds of curious workes whereof I haue already spoken. Yet in the later end of his daies, he painted *K. Alexander* himselfe, and god *Pan*. Ouer and besides this flat painting, he gaue him- selfe greatly to the practise of founderie, and to cast certaine images of brasle, according as I haue already said.

* One at rest, or reposing himselfe. Some reade, *Tripolemus*.

* *Philiscus*.

At the very same time liued *Asclepiodorus*, whom for his singular skill in obseruing symetries and iust proportions, *Apelles* himselfe was wont to admire. This Painter pourtraied for *Mnason* D the foresaid king of the *Elateans*, the 12 principall gods, and receiued for euery one of them 300 pound of siluer. The said *Mnason* gaue vnto *Theomastus* for painting certaine Princes or Worthies, one hundred pounds apiece.

In this rank is to be ranged *Nicomachus*, son and apprentice both to *Aristodemus*. This *Nichomachus* pourtraied the rauishing of *Proserpine* by *Dis* or *Pluto*: which picture standeth in a table within the Chappell of *Minerva* in the Capitoll, about the little cell or shrine of *Iuuentus*. In the same Capitoll, another table there is likewise of his making, which *Plancus* (Lord Generall of an army for the time being) had there dedicated and set vp: the same doth represent *Victorie* catching vp a triumphant chariot drawn with four horses aloft into heauen. He was the first that pourtraied prince *Vlixes* in a picture, with a * cap vpon his head. He painted also *Apollo* and *Di-* E *ana*: *Cybele* likewise the mother of the gods, sitting vpon a Lyon: of his workmanship is the table, representing the religious priestesses of *Bacchus* in their habite, together with the wanton *Satyres* creeping and making toward them. Semblably, the monstrous mermaid *Scylla*, which at this day is to be seen at *Rome* within the temple of *Peace*. A ready workman he was, & you shall not heare of a painter that had a quicker hand than he, at his worke: for prooffe whereof, this voice goeth of him, That hauing undertaken for a certain sum of money to *Aristraus* the tyrant of *Sicyone*, to paint a monument or tombe which he caused to be made for *Telestes* the Poet, and to finish it by such a day appointed and set downe in the couenants of the bargain, he made no great hast to go about it, but came some few daies before the expiation of the prescript term for to begin the same worke: whereat the tyrant was wroth, and menaced to punish him for ex- ample: howbeit, he quit himselfe so well, and followed his worke with such wonderfull celeritie, that in few daies space he brought it to an end: and yet the art and workmanship therof was admirable. Vnder him were brought vp as apprentices, his brother *Aristides*, his owne son *Aristo-* F *cles*, and *Philoxenus* the Eretrian.

* In token of nobility, as *Virgil* noteth in his *Hieroglyphicke*, &c.

This *Philoxenus* made one painted table for *Cassander* the king, containing the battel between Alexander

Alexander the Great and *K. Darins*, which for exquisite art commeth not behind any other whatsoever. One picture there is of his doing, wherein he would seeme to depaint lascivious wantonnesse, which he pourtraied by 3 drunken *Sylenes* making merry and banquetting together. He gaue himselfe also to the speedy workmanship of his master before him, and for that purpose inuented other compendious means of greater breuitie to make riddance and quicke dispatch with his pencill.

With these may be sorted *Nicophanes* also, a proper, feat, and fine workman, whose manner was to take out all pictures and paint them new againe, thereby as it were to immortalize the memory of things: a running hand hee had of his owne, and besides, was by nature hasty and furious: howbeit, for skill and cunning there were but few comparable vnto him. In all his workes hee aimed at loftinesse and grauity: so that a man may attribute the stately port that is in this Art, H vnto him and no other.

As touching *Perseus* apprentice to *Apelles*, & who wrote a book to him of the very art) he came far short both of his master & also of *Zeuxis*. As for *Aristides* the Theban, who also liued in this age, he brought vp vnder him his two sons, *Niceros* and *Aristippus*. This *Aristippus* pourtraied a Satyre crowned with a chaplet, and carrying a goblet or drinking cup: he taught *Antionides* and *Euphranor* his cunning; of whom I will write anon: for meet it is to annex vnto the rest, such as haue bin famous with the pencill in smaller workes and lesse pictures; among whom I may reckon *Pyreicus*, who for art and skill had not many that went before him; and verily of this man, I wot not well, whether he debased himselfe and bare a low sale, of purpose, or no? for surely his mind was wholly set vpon painting of simple and base things: howbeit, in that humble & lowly carriage of himselfe, hee attained to a name of glory in the highest degree; his delight was to paint shops, of barbers, shoemakers, cobblers, taylers; and semsters: hee had a good hand in pourtraying of poore asses, with the viduals that they bring to market, & such homely stuffe: where by he got himselfe a by-name, and was called *Rhyarographus*. Howbeit, such rude and simple toies as these were so artificially wrought, that they pleased & contented the beholders, no thing so much. Many chapmen he had for these trifling pieces, and a greater price they yeelded vnto him, than the fairest and largest tables of many others. Whereas contrariwise, *Serapion* vied to make such great and goodly pictures, that (as *M. Varro* writeth) they were able to take vp & fill all the stals, bulks, and shops, jutting forth into the street vnder the old market place *Roftra*; this *Serapion* had an excellent grace in pourtraying tents, booths, stages, and theatres; but to paint a man or woman, he knew not which way to begin. On the other side, *Dionysius* was good at nothing els, and therefore he was commonly called *Anthropographus*. Moreover, *Callicles* also occupied himselfe in smal workes; and *Calaces* set his mind especially vpon little tables and pictures which were to set out comedies and interludes; but *Antiphilus* practised both the one and the other; for he pictured the noble ladie *Hesione*, *K. Alexander the Great*, and *Philip* the king his father, with the goddesse *Minerva*: which tables hang in the Philosophers schoole or walking place within the stately galleries of *Ostiaua*, where the learned clerks and gentlemen fauorers of learning, were wont to meet and conuerse. Within the galleries also of *Philippus*, there are to be seen, the picture of prince *Bacchus*, the pourtrait of *Alexander* in his childhood, and of *Hyppolitus* the yong gentleman, affrighted and astonied at the sight of a monstrous bull let loose and ready to encounter him. Likewise in the gallerie of *Pompey*, the counterfeits of *Cadmus* and *Europa*; all pictures of *Antiphilus* his making. Of his handy-workes, there is a fool with his bel, cockscorn, bable, and in other ridiculous habit, going vnder the name of *Gryllus*, deuised for the nones to make sport and pastime; wherupon all such foolish pictures be called *Grylly*. Himselfe was born in *Egypt*, howbeit he learned all his cunning of *Cresidemus*. In this bed-roll of painters, I should not do well to passe ouer in silence, the workman that painted the temple of *Iuno*, at *Ardea*, especially seeing that he was enfranchised free burgeois of that city, and honored besides with an Epigram or Tetrastichon, remaining yet to be read in the mids of his pictures in these foure Hexameter verses following;

*Dignis digna loca picturis condecorauit,
Regina Iunonis supremi conjugis templum
Marcus Ludius Elorus Etolia oriundus;
Quem nunc, & post semper ob artem hanc Ardea laudat.*

This

A This stately Church of *Iuno* Queen, with pictures richly dight,
Whom wife to mighty *Iupiter*, and sister, men do call;
Commends the hand of *Murke Ludie*, *Elorus* also high,
Etolian born: whom *Ardea* doth praise, and euer shall.

These verses are written in antique Latine letters. By occasion of whose name, I must not de- fraud another *Ludius* of his due praise and commendation, who liued in the time of *Augustus* *Cesar* Emperor of happy memory: for this *Ludius* was he who first deuised to beautifie the wals of an house with the pleasauntest painting that is in all varietie, to wit, with the resemblance of manors, farms, & houses of pleasure in the country, hauens, vinets, floure-work in knors, groues, woods, forrests, hills, fish pooles, conduits, and drains, riuers, riuersets, with their banks, and what- B focuer a man would wish for to see: wherein also he would represent sundry other shews of people, some walking and going to and fro on foot, others sailing & rowing vp and down the stream vpon the riuier, or els riding by land to their farms, either mounted vpon their mules and asses, or els in wagons and coaches: there a man should see folk in this place fishing and angling, in that place lauking and fouling: some hunting here, the hare, the fox, or deere both red and fal- low; others busie there in haruest or vintage. In this manner of painting a man should behold of his workmanship faire houses standing vpon marishes, vnto which all the ways that lead be ticklish and full of bogs, where you should see the paths so slipperie, that women as they goe are afraid to set one foot afore another; some at euery step ready to slide, others bending forwards with their heads as though they caried some burdens vpon their neck and shoulders, and all for C feare lest, their feet failing vnder them, they should catch a fall; and a thousand more deuises and pretty conceits as these full of pleasure and delight. The same *Ludius* deuised wals without dores, and abroad in the open aire to paint Cities standing by the sea side. All which kinde of painting pleaseth the eie very well, and is besides of little or no cost. Howbeit, neither hee nor any other in this kinde (howsoeuer otherwise respected) grew euer to be famous and of great name, that felicitie they only attained vnto, who vsed to paint in tables: and therefore in this regard, venerable antiquitie we haue in greater admiration; for painters in old time loued not to garnish wals for to pleasure the master only of the house, ne yet to bedeck houses in that maner which canot stir out of the place, nor shift and saue themselves when fire commeth, as painted D tables may, that are to be remoued with ease. *Protagenes*, as excellent a painter as he was, contented himselfe to liue within a little garden in a small cottage, and I warrant you no part thereof was painted. *Apelles* himselfe might well haue the wals of his house rough cast or finely plaiter, but neuer a patch thereof had any painting: they took no pleasure, nay they had no lust at all to paint vpon the whole wals, and to work vpon them from one end to another; al their skill and cunning attended vpon the publique seruice of states and cities: and a painter was not for this or that place only, but imploied for the benefit indifferently of all countries and nations.

But to returne againe to our particular painters: there flourished at Rome a little before *Augustus* *Cesars* days, one *Arellius* a renowned painter, but that he had one notable foul fault that marred all and discredited his art; giuen he was exceedingly to wenching, and sure hee would be to E haue one woman or other all times in chafe: which was the reason hee loued alife to be painting of goddeses, which were euer drawn by the pattern of his sweet-hearts whom hee courted. A man might know by his pictures, how many queans he kept, and which were the mistresses or rather goddeses whom he serued. Of late daies wee had among vs here at Rome one *Amulius* a Painter; he caried with him in his countenance and habit grauitie and severity; howbeit hee loued to make gay and gallant pictures, neither scorned he to paint the most trifling toies & meanest things that were. The picture of *Minerva* was of his making, which seemes to haue her eie full directly vpon you, looke which way soeuer you will vpon her. Hee wrought but some few houres of the day, and then would he seem very graue and antient, for you should neuer find him out of his gown and long robe, but very formall, though he were clofe set at work & euen lockt as it were to his frame. The golden house or palace of *Nero* caught vp all the workes hee made, where they remained as it were in prison, and neuer came abroad; which is the reason that none of his pictures els be extant. After him succeeded *Cornelius Pinus*, and *Aelius Priscus*, two Painters of good reputation, who painted the temples of *Honour* and *Verue* for *Vespasianus Augustus* the Emperor, when he caused them to be re-edified: but of the twaine, *Priscus* in his workmanship came neerer to the painters of antient time.

Aaa 3

CHAP.

¶ The manner how to make Birds silent, and to leane their chattering and singing. Who first deuised with fire and pencill to enamel and paint the arched rouses and embowed feelings of houses. The admirable price of pictures inserted here and there among other matters.

Since I haue proceeded so far in the discourse of Painters and their art, I must not forget to set down a pretty jest, which hath bin reported by many as touching *Lepidus*: It hapned during the time of his Triumvirat, that in a certain place where he was, the magistrates attending him to his lodging enuironed as it were with woods on euery side: the next morrow *Lepidus* took them vp for it, and in bitter tearmes and minatorie words chid them, for that they had laid him where he could not sleepe a wink all night long, for the noise and singing that the birds made about him. They being thus checked and rebuked, deuised against the next night to paint in a piece of parchment of great length a long Dragon or serpent, wherewith they compassed the place where *Lepidus* should take his repose; the sight of which serpent thus painted terrified the birds, that they had no mind to sing, but were altogether silent. By which experiment at that time, it was known afterwards, that birds by this means might be stilled.

Encaustice.

As touching the feat of setting colours with wax, and * enamelling with fire, who first began & deuised the same, it is not known. Some are of opinion, that the inuention thereof came from *Aristides*; and that *Praxiteles* practised the same, & brought to an absolute perfection. But surely there were pictures wrought by fire a good while before *Aristides* daies; and namely by *Polygnotus*, *Nicanor*, and *Arceilaus* of Paros. *Lyfippus* also in his painted tables that he made at *Aegina* vsed to entitle them with this inscription, *Antiquae inuentionis*. *Lyfippus* painted this with fire: which verily he would neuer haue done, if the art of painting with fire (called Encaustice) had not bin before deuised. Moreover, *Pamphilus*, master to *Apelles*, is reported not onely to haue himselfe practised this painting with vernish, and to inamel by the means of fire, but also to haue taught it vnto *Pausias* the Sicyonian, who was the first that excelled in this kinde, and caried away the name from all others in his time. This *Pausias* was the son of *Brietes*, and apprentice also to his father in the beginning: he vsed also the plaine pensil, wherewith he wrought vpon the walls at *Thepiræ*; which hauing been in times past painted by *Polygnotus*, were now to be refreshed and painted new again by his hand: howbeit in comparison of the former worke he was thought to come a great way short of *Polygnotus*; and the reason was, because he dealt in that kind of work which was not indeed his proper profession. He it was that brought vp first the deuice of painting vaulted rouses; for neuer was it the manner to adorne and garnish embowed feeling over head with colours, before his time. His delight naturally was to be painting little tables, and therein he loued to portray little boies. Other painters his concurrents, and no well-willers of his, gaue it out, that he made choice of this kind of work, because such painting went but slowly away, and required no quicke and nimble hand. Whereupon *Pausias*, to disproue his aduersaries, and withall to get himselfe a name, as well for celeritie and expedition, as for his art and skill otherwise in these small pieces, began and finished in a table the picture of a boy, within one day, and thereupon it was called *Hemeresios*. In his youthfull daies he fell in fancie with a woman in the same towne where he dwelt, named *Glycera*: a fine wit she had of her owne, and specially in making chaplets and guirlands of floures, she was full of inuention. *Pausias* by his acquaintance with her, and struing to imitate with his pensill her handiworke, and to expresse that varietie of floures which she gathered and couched together full artificially in her Coronnets, enriched his owne pictures also with a number of colours, and brought the art to wonderfull perfection in that point. In the end he painted *Glycera* also his loue, sitting, with a Chaplet of floures her hand: and certes this is the most excellent peece of worke that euer went out of his shop: this table with the picture was thereupon called by some, *Stephanoplocos*, i. [A woman] plaiting and twisting a guarland: by others, *Stephanopolis*. Selling guarlands: for that this *Glycera* got a poor liuing by making chaplets, and had no other good means to maintain her selfe. The counterfeite taken from this table and made by it (which kind of pattern the Greekes call *Apographon*) *L. Lucullus* bought of *Dionysius* a painter of Athens, and it cost him * 78 talents of siluer. Furthermore, this *Pausias* made faire and great pictures also; and

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A namely, one of his making which doth represent a solemne sacrifice of oxen, is to be seen at this day within the stately galleries of *Pompeius*: and verily, this maner of painting, the solemnity of a sacrifice he first inuented: but no man euer after could attaine to his dexteritie in that kinde: and notwithstanding many gaue the attempt, and seemed to imitate him, yet they came all short of him: aboute al, he had a singular gift to work by perspective, for when he was minded to paint a boeuf or ox, to shew the full length, he would not portray him, as he long or short, but afronte; by which means the beast is best represented, not only how long, but also how large and big he is euery way. Again, whereas all other painters, whensoever they would raise their work, & make any thing seeme eminent and high, vse to colour the same white and bright, and the better to make their perspective, do shadow or deep the same with black: this man in lieu thereof, would paint the ox all of a black colour, and cause the body as it were of the shadow to arise out of it selfe. And verily so excellent he was in this perspective, that a man would say, his euen, plaine, and flat picture were embossed and raised work, yea and imagin where fractures were, that al was found and entire. This man liued also at *Sicyone*, and verily for a long time this city was reputed the native cuntry that bred painters, and the onely place stored with excellent pictures. But during that time wherein *Scourus* was *Ædile* at *Rome*, all the rich tables which were in the publick places of that city, whether in the market steads, temples, or common halls, were seised vpon and brought to *Rome*, for to satisfie great sums of money wherein the *Sicyonians* stood indebted.

After *Pausias*, there arose one *Euphranor* the *Isthmian*, whom flourished about the 104 Olym-pias, far surpassing all other painters of his time. This *Euphranor* is hee whom I haue named among the famous imageurs and founders. Of his workmanship there be Colosses of bras, statues of marble stone, yea and faire drinking cups chased and engrauen. Of an excellent capacity he was, and apt to learn any thing, studious withall, and painfull aboute all others, and whatsoeuer he gaue his mind vnto, therein he excelled: and in one word, a general man he was like him, selfe still, that is to say, his craftsman in all, and as good in one thing as another. This is hee who seems to haue expressed first the port and maiestie that is in princes and great states, and to haue obserued symmetry and proportion: & yet he was not without his imperfection, for commonly as he made the bulk of the body too slender, so the joints and heads were somewhat with the biggest, howbeit he wrote books touching symmetry and proportion, as also of colours. Among other works of his, there are reckoned these, to wit, the portraiture of a battell or skirmish of horsemen, the twelve chiefe gods and goddeses, also the liuely picture of *Theseus*, of whom he was wont to say, That the *Theseus* of *Parafus* painting was fed with roses, but this *Theseus* of his with good flesh. There be excellent tables of his making at *Ephesus*, to wit, *Plyxes* feigning himselfe mad, and in that fit coupling an ox and a horse in one and the same yoke: also diuers personages in their clothes and mantles after the Greekish fashon, musing and in a deep study, likewise a captain putting vp his sword into his scabbard.

At the same time liued *Cydias*, he who in a table represented the * Argonauts, for which *Hor-tensius* the Orator was content to pay 144000 Sesterces. This picture he thrined in an Oratorie or chappell built of purpose for it, in a house of pleasure that he had at *Thusculum*.

E As for *Antidotus*, apprentice he was to *Euphranor*: of his handiwork there is a picture at Athens resembling one with a shield ready to enter into combat or fight, also a wrestler and a plaier vpon the fife or hautbois, which is a piece of work highly commended, and few comparable vnto it: more curious and precise he was in the secrets of the art, than obseruant of symmetry & proportion; being otherwise giuen to vse sad and dusky colours. The greatest name that he had, was for bringing vp *Nicias* the Athenian, who of all others painted women most excellently. For lights and shadowes in perspective he was excellent: also a passing great care and regard he had so to raise his worke, as that it seemed to be embossed and higher than the boord of his table: the pictures of *Nemea*, which out of *Asia* were transported to *Rome* by *Syllanus*, and hung vp in the Senat house, as I haue shewed heretofore, of prince *Bacchus*, within the temple of *Concord*, of *Hyacinthus*, which *Augustus Caesar* vpon a speciall liking to it brought with him to *Rome*, after hee had forced and sacked *Alexandria*: (in which regard *Tiberius Caesar* his successor, seeing what affection *Augustus Caesar* had vnto it in his life time, dedicated it in the Temple of the said *Augustus*) and lastly of the goddesse *Diana*, were all proofes of his skill and workmanship. Moreover, at *Ephesus* the Sepulchre of *Megabyzus* one of the Priests of the Or-

* i. Diuers valiant knights, who accompanied *Antidotus* in his voyage to *Colchos* for the golden fleece.

* 78 talents of siluer. * two talents of siluer.

der of *Diana* of Ephesus was of his painting: like as at Athens, the necromancie of the Poet *Homer*. This picture *Nicias* held at so high a price, that he would not let it go vnto *K. Attalus* for 60 talents, but chose rather to bestow it freely vpon his own native country, being otherwise a man for his own priuat state very wealthy. Besides these before rehearsed, he made others of a larger size, among which are reckoned *Calyppo*, *Io*, and the lady *Andromeda*. The excellent picture also of *K. Alexander*, which is in the gallery of *Pompeius*, together with *Calyppo* painted sitting, came out of his shop. The perfect pourtraying of fourfooted beasts is ascribed vnto him; and in truth, a singular grace he had and felicitie in painting dogs. This is that *Nicias* of whom *Praxiteles* gaue so good testimonie: for being asked vpon a time, what pieces he esteemed best of all those that himselfe had cut in marble? he answered, Euen those wherein *Nicias* hath had a hand: so much did he attribute vnto his *vernish and polishing. Another *Nicias* there was, who liued in the 112 Olympias; but whether this man were he or no, it is not certainly knowne; howbeit some there be that would haue him to be the same. Certes, *Athenian* of Marona was taken for as good a workman euery way as *Nicias*, and in some respects better: he learned the art of *Glaucion* the Corinthian. In choice of his colours he stood not so much vpon gallantnesse, but vsed those that were with the saddest; howbeit those dark and shadowed works of his shewed more pleasant and delectable than his masters: wherby appeared his profound knowledge and deep skill, in the very laying and couching of his colours. The picture of *Philarchus* he drew, which is in the Temple of *Ceres Eleusine*. The frequent assembly also of the dames of Athens, which they call *Polygynæcon*, was of his pourtraying: likewise he represented *Achilles* in his youth, hidden vnder the habit of a yong damosell, and how the crafty foxe *Vlysses* discouered and found him out, notwithstanding he was so disguised. But one table about the rest woon him the greatest credit, and that was, wherein he painted an horsekeeper training and nurturing his palfrey. Certes, but that he died in his youth, there had not been a painter in all the world comparable vnto him.

As touching *Heraclides* the Macedonian, he also may run in the range of famous Painters: at the beginning he employed himselfe in painting ships: after that King *Perseus* was taken prisoner, he left his native country and went to Athens, where liued at that time *Metrodorus*, a Painter and Philosopher both, a man of great name and authoritie as well in the one profession as the other: and therefore when *L. Paulus* after the defeature of the said *Perseus* sent vnto the Athenians, and requested them to send vnto him an excellent Philosopher to teach and instruct his children, together with a singular painter to set out his triumph with curious pictures, the Athenians made choice of *Metrodorus* onely, and commended him alone vnto *Lucius Paulus*, for the best approoued and most consummate to serue his turne and satisfie both his desires: which by good prooue and experience *Paulus* found true, and gaue iudgement of him accordingly.

Timomachus the Byzantine flourished in the dayes of *Cæsar* Dictatour, for whom hee painted *Ajax* and *Medea*: which pictures when he bought of him for 80 talents, hee caused to be hung vp in the temple of *Venus * Genetrix*. Now when I speake of a talent, you must vnderstand the Attick talent, which *M. Varro* doth value at 6000 deniers Roman. There goeth as great praise likewise and commendation of other pieces that passed from vnder the hands of *Timomachus*, to wit, the pictures of *Orestes*, of *Iphigenia* in Tauris, and of *Lecythion*, who taught youths dancing, vaulting, and other feats of actiuitie: he pourtraied also in a table, a goodly race, descent, and kindred of gentlemen; two persons besides in their clokes or mantles, after the Greekish fashion, ready to make a speech vnto the people, the one set, the other standing vpon his feet: but it seemed that art fauored and graced him most in painting *Minerva's* shield, where he portraied *Gorgon* or *Medusa's* head most liuely.

Aristeas was the son of *Paufias*, and vnder his father he learned the myserie of painting, who is counted one of the greatest painters that euer was. Of his workmanship are the tables containing the pictures of *Epaminondas*, *Pericles*, *Medea*, *Vertue*, and *Thesens*. Hee also drew with his pensil in colours, the common people of Athens, and a solemne sacrifice of Oxen.

There was also one *Meehopanes*, apprentife likewise vnto the same *Paufias*, who is highly commended by some for his curious and exquisite workmanship: but such it is, as none but cunning artists can conceiue, for otherwise I assure you his colours are vnplesant, and hee loued to lay on too much of one thing, and that was Sil.

A As for *Socrates* the painter, his pictures were liked very well of all that saw them, and in truth, they deserued no lesse: for of his doing are these and such like, to wit, *Esculapius*, with his daughters, *Hygia*, *Ascle*, *Panacea*, and (1) *Iaso*: and an idle lazy lubber, knowne by a deuised name *Ocnos*, whom he pourtraied twitting a cord of Spart, and euer as he did it, an affe behind him gnawed it asunder. Thus much may serue concerning the principall painters that haue been knowne to excell in both kinds, to wit, with the penstill, and with fire: it remaineth now that I should discourse of those who were next vnto the principall, and so reputed.

In this second course of painters I must range *Aristocles*, who beautified with his pictures the temple of *Apollo* in Delphos: as for *Antiphilus*, he is as much praised for painting a boy blowing hard at the coles, in which table, it is a pretie sight to see how all the house (which was faire enough besides) shineth by the fire that he makes, as also what a mouth the boy makes: likewise for the picture of a company of Spinsters, so liuely, that one would imagin he saw euery woman making hast to spin off her distaffe, strining aue who shal haue don her task first. He deuised also to portray *Ptoloma* hunting, & this they call (2) *Aposcopon*, for which he is much commended: but principally for a braue Satyr of his workmanship, clad in a Panthers skin. *Aristophon* woone much credit by painting *Ancus* wounded to death by a wild bore, & his wife *Althypate* standing hard by, who seemeth to lament for his sake, and (as it were) to feele part of his paine: he made also one faire table, enriched with a number of personages, to wit, *K. Priamus*, faire *Helena*, dame *Credulite*, *Vluxes*, *Deiphobus*, and *Dolori*. *Androbios* got himself a great name by a picture, representing one (3) *Scyllus* [a cunning diuer] cutting in two the anker cables of the Persian fleet, riding at sea. *Arimon* likewise was renowned for the counterfeit of lady *Danae*, found floating in the sea by (4) rousers or men of war, who seemed to wonder at her beauty, and to behold her with much contentment: also for picturing queene *Statonice*: *Hercules* and *Deianira* his wife: but the most excellent pieces of his workmanship, be those which are to be seene in the galleries of *Ostia*, among other of her stately buildings; to wit, *Hercules* ascending vp into heauen from the mountaine *Oeta* within the region of *Doris*, where he changed this mortall life, and by the generall consent of all the gods, was receiued into their sociery: the whole history also of *Laomedon*, as touching his fallhood to *Hercules* and *Neptune*. *Alcimachus* the painter was renowned for the picture of hardy *Dioxippus*, who (5) carried away the prize in all feats of actiuitie, at the solemne games of Olympia, and neuer sweat nor touched (6) dust for it; which easie victory the Greekes call *Aconiti*. As for *Canus*, he was excellent at painting Coronets & Garlands: also at drawing coats of arms in scutcheions, of gentlemen and noble persons, with the stile of their titles & dignities. *Ctesiphon*, an apprentice to *Apelles*, became very famous for one picture about the rest, although it were but a wanton one and offensive to chaste eies; wherein forsooth hee depainted *Iulian*, attired in a caule or coife about his head like a woman, groning and crying out also (as women do in trauell of childe birth) among the goddesses for their helping hand, who plaid the midwiues about him, vntil he was deliuered of god *Bacchus*, and brought to bed. *Cleon* was much spoken of, for the picture which hee made of *K. Admetus*: *Ctesidamus* for pourtraying the winning of *Oechalia* by *Hercules*. And for drawing the picture of lady *Laodamia*, the wife of *Protesilaus*. *Cleides* was notorious for one picture which he made in despight of queene *Stratonice*, wife to *K. Antiochus*, and to be reuenged of her for a disgrace that he had receiued at her hands: for being in the court, and perceiuing that the queen did him no honour at all, nor gaue him any countenance, he made no more ado, but painted her in her colours, tumbling and wallowing along full vnseemly with an odde base fisherman, whom as the voice went, she was inamored vpon; and when he had done, set it vp in the very haue of Ephesus, recovered a barke presently, and away he went vnder sale as fast as wind and tide would carry him. When the queene heard of it, she made but a jaest and mocke of it; neither would shee suffer the picture to be taken away, in regard of the wonderfull workmanship, which expressed her and him so like and liuely. *Craterus* was a Comcedian and plaier in Enterludes, howbeit, a fine Painter, as may appeare by his handiwork at Athens, within the publicke place *Pompeium*. *Eutychides* pourtraied a charriot drawne with two horses, and *Vittorie* to guid and driue the same. *Eudoxus* had the name for his pictures which are seen at stage-plaies, to beautifie the place: who also was a good imageur and cast many faire pieces in brasse. *Iphis* was well thought of for *Neptune* and *Vittorie* of his painting: and *Abion* was no lesse esteemed for the pictures resembling *Amity* and *Concord*; as also for the pourtraitures of the gods. *Leontiscus* pictured *Aratus* the Generall of the Achæans, returning

* Circum-
lition: others
read circumdu-
ctio, i. the
the first
draught or
pouring.

* This Saint
Julius Cæsar
honored most
for that hee
would seem to
bee descended
from Iulus or
Ascanius, son
of Aeneas, and
nephew to Ve-
nus by Anchi-
ses.

(1) I am not of
Dædalion, who
takes Iaso here
for the valiant
knight Iaso.
For the termi-
nation of the
word is meere
terminus as to
Iaso, Sappho, &
such like: oc-
sides, who sees
not, that Iaso
is respectue
to Phylak, for
that Iaso in
Greek signifi-
eth curing or
healing, and it
is so well
with the names
of her other
sisters, which
are likewise
significant.
(2) i. (telling
his shot at the
Deere or wild
beast) s. Dale.
enampis doth
interpret it: or
eis according
to Scapher (hol-
ding his hand
ouer his ies
to spie his
game, & take
his mark the
better.
(3) or i. yllias,
according to
Heracl.
(4) i. redonibus
otherwise i. i-
catoribus. i. fi-
shermen
(5) for he was
the challenger
& none would
come forth a-
gainst him.
(6) for at wrest-
ling especially,
dust in their
handis to take
hold the better
of one ano-
thers bodies,
which were
glub with oile.

turning with victory, and triumphing with his trophy. He painted also a minstrel wench playing vpon a Psaltery, and seeming to sing to it, which was thought to be a daintie piece of worke. As for *Leon*, he painted *Sappho* the Poetresse. And *Nicaarchus* was much bruited abroad, for a picture, shewing *Venus* accompanied with the Graces and the pretty *Cupids*. And of his workmanship is *Hercules*, sad and penitente; penitente also and repentant, for that which he had done in his furious madnesse. *Nealos* made one picture of *Venus* most curiously: for passing witty hee was, full of inuention, and exquisit in his art. When he painted the nauall battell betweene the Egyptians and the Persians, which was fought vpon the riuer Nilus, the water whereof is rough and like the sea; because he would haue it knowne, that the fight was vpon the said riuer, he deuised another by worke to expresse the same, which all the Art of painting otherwise could not performe: for he painted an Asse vpon the banke, drinking at the riuer, and a Crocodile lying in wait to catch him: whereby any man might soone know it was the riuer Nilus, and no other water. *Oenias* the painter made one picture about the rest, which he called *Syngenicus*. *Philiscus* became renowned by a painters shop of his painting, where he deuised a prentice boy blowing the coles to kindle a fire. *Phalerion* pourtraied *Scylla*, transformed into a monstrous Meermaid. the coles to kindle a fire. *Phalerion* pourtraied *Scylla*, transformed into a monstrous Meermaid. *Simonides* got credit by the picture of *Agatharrhus*, who woon the best game at running: and of the goddesse of Memory, named *Mnemosyne*. *Simus* took pleasure in painting a yong boy lying at the goddesse of Memory, named *Mnemosyne*. *Simus* took pleasure in painting a yong boy lying at the sleep in a waulke-mill or Fullers worke-house: another sacrificing vnto *Minerva* at the feast *Quinquatrus*: and of the same mans doing, there is an excellent picture of *Nemesis*, representing Iustice and Reuenge. *Theodorus* drew one smetting his nose: and the same painter represented in a table, how *Orestes* murdered his owne mother *Clytemnestra*, and *Agysthus* the Adulterer that kept her. The warre of Troy hee depainted in many severall tables: and these hang in the galleries of *Philip* at Rome. Of his handy worke is lady *Cassandra* the Prophetesse, which is to be seen in the Chappell of *Concord*. Also, *Leontium* the courtifane belonging to *Epicurus* and his followers, was of his painting, like as king *Demetrius* musing and standing in a deepe studie. As for *Theon* the painter, hee described with his pensill the madnesse of *Orestes*, and pourtrayed *Tamyras* the Harper or Musitian. *Tauriscus* made one table, representing a man flinging a coit: and another resembling queene *Clytemnestra*. He pictured also a little *Pan*, whom he called *Panniscus*, in manner of an Anticke: *Polynices* also making claime to his kingdome, and marching in warlike manner to recover the possession thereof againe: and last of all, signieur *Capaneus*, who lost his life in scaling the walls of Thebes. And here commeth to my minde one notable example as touching *Erigonus*, which I cannot passe with silence: This *Erigonus*, seruant sometime to *Nealos* the Painter, and employed onely in grinding colours, profited so much by seeing his master worke, that he became a Painter himselfe, and left behinde him an excellent workman of his owne teaching, *Pausias* brother to *Agineta* the Imageur. But one thing more there is, of rare admiration and worthie to be remembred, That the last peeces of excellent Painters, and namely such tables as bee left vnperfect, are commonly better esteemed than those that bee fully finished: as wee may see by the Raine-bow or Iris which *Aristides* was entered into, the two brethren *Castor* and *Pollux*, begonne by *Nicomachus*; the Picture of *Medea*, killing the children that shee had by *Iason*, which *Timomachus* was in hand with; and the *Venus*, that as I sayd before, *Apelles* liued not to make an end of: for in these and such like imperfect tables, a man may (as it were) see what traicts and lineaments remaine to bee done, as also the verie designes and cogitations of the Artificers: and as these beginnings are attractive allurements to moue vs for to commend those hands that began such Draughts: so the conceit that they be now dead and missing, is no small grieue vnto vs, when wee behold them so raw and fore-let. But to come againe vnto our Painters: there be more yet behinde, and those of verie good regard in their time, howbeit, I will runne them ouer sleightly, and as it were passing and glauncing by them, namely, *Aristonides*, *Anaxander*, *Aristobulus* the Syrian, *Arcefilas* the sonne of *Tisicrates*, *Corybas* Apprentice to *Nicomachus*, *Carmanides* to *Euphranor*, *Dionysolus* the Colophonian, *Diogenes* who followed the Court of King *Demetrius*, *Euthymedes*, *Heodorus* the Macedonian, *Mydon* of Solæ brought vp vnder *Pyromachus* the Imageur, *Mnasithenus* the sonne of *Abron*, *Polemon* of Alexandria, *Theodorus* of Samos, and *Stedius*, and *Nessus* the sonne of *Abion*, *Nicostratus* and *Xenon* of Sicyone, who learned his Craft of *Nealos*.

Moreo-

A Moreouer, women there were also, excellent * Paintresses, to wit, *Timarete*, the daughter of *Nicon*, who made that excellent pourtraiture of *Diana* at Ephesus, a most antique picture: *Irene* the daughter of *Gratinus* the painter, who learned vnder her father, & drew the picture of a yong damofell, which is at Eleusine: *Calyssa*, of whose workmanship there is the picture of an old man, and of *Theodorus* the jgular: *Aleissthene* painted a dauncer: and *Aristarete*, both daughter and apprentice to *Nearchus*, made prooffe how well she had profited, by the picture of *Asculapius*. And *M. Varro* saith, That when he was a yong man, there was at Rome one *Lala*, a Cyzecene borne, who passed her whole life in virginity, and she was skilful both in painting with the pensill, and also in enamelling with hot Steele in yuorie: her delight was principally in drawing women, and yet there is a Neapolitane of her pourtraying in a faire long table: last of all, these B took out her owne counterfeite at a mirroir or looking glasse. This one thing is reported of her, that no painter had a quicker hand or went faster away with his worke than she: and look what pictures soeuer came out of her hands, they were so artificially done, that they did out-sell a great deal the works of *Sapphus* and *Dionysius* (the most famous painters in that age) notwithstanding their pictures and tables were so faire, as that they take vp whole cabinets; and wel was he (before that her pictures came abroad) who could be furnished out of their two shops. There was yet one paintresse more, to wit, *Olympias*: howbeit I heare no great matter of her, but this onely, that she taught *Autobulus* the art of painting.

To come now to painting by the means of fire: I find this agreed vpon by all, that practised it was in old time but two waies only, that is to say, with wax, and in yuorie with a little Steele C or punching yron, vntill such time as they fell to painting ships alfo with wax and fire: and in this third sort the manner is to vse great pensils or brushes dipt in wax molten ouer the fire: and this kind of painting ships is so fast and sure, that neither sun will resolue, nor salt water eat and fret, ne yet wind and weather pierce and chinke it.

Moreouer, in Egypt they haue a deuise to staine cloths after a strange and wonderful maner: They take white clothes, as sailes or curtaines when they haue bin worne, which they besmeare not with colours but with drugs that are apt to drinke and take colour: when they haue so don, there is no apparence in them at all of any dye or tincture. These clothes they cast into a lead or cauldron of some colour that is seething and scalding hot: where, after they haue remained a pretty while, they take them forth againe, all stained and painted in sundry colours. An admirable thing, that there being in the said cauldron but only one kind of tincture, yet out of it the cloth should be stained with this and that colour, and the foresaid boiling liquor change so as it doth, according to the quality & nature of the drugs which were laied vpon the white at first. And verily, these stains or colours are set so sure, as they can neuer be washed off afterwards: thus the scalding liquor, which no doubt if it had diuers tinctures and colours in it, would haue confounded them all into one; now out of one doth dispense and digest them accordingly, and in boiling the drugs of the clothes, setteth the colour and staineth surely. And verily, this good moreouer haue the clothes by this scalding, that they be alwaies more firme and durable, than if they had not come into the boiling cauldron.

CHAP. XII.

¶ The first deuisers of the art of Potterie, and in working in cley. Of Images made of earth. Of earthen vessels, and their value in old time.

NOW that I haue discoursed of painting enough, if not too much, it were good to annexe and ioyné thereto the craft of Potterie, and working out of cley. And to begin with the original and inuention of making the image or likeness of any thing in cley, it is said, that *Dibutades*, a Sicyonian borne, and a Potter, was the first that deuised at Corinth to form an image in the same clay whereof he made his pots, by the occasion and means of a daughter which hee had: who being in loue with a certain yong man, whensoever he was to take a long iourney far from home, vsed ordinarily to mark vpon the wal the shadow of her louers face by candle light and to pourfill the same afterwards deeper, that so she might inioy his visage yet in his absence. This her father perceiuing, followed those traicts, and by clapping cley therupon, perceiued that it took a print, and made a sensible forme of a face: which when hee saw, hee put it into the furnace to bake among other vessels, & when it was hardened, shewed it abroad. And it is said, that this

been in request among riotous gluttons and wastfull spendthrifts, listen what *Fenestella* saith as touching this point, the greatest exceeding (quoth he) and gaudiest fare at a feast, was serued vp in three platters, and was called *Tripatinum*: the one was of Lampreys, the second of Pikes, the third of the fish *Myxon*: whereby it may appeare, that euen in those daies men began at Rome to grow out of order, and to giue themselves to riot and superfluity: yet were not they so bad, but we may prefer them euen before the Philosophers of Greece: for it is written, that in the tale of *Aristotiles* goods, which his heirs made after his decease, there were sold 60 platters, which were wont ordinarily to go about the house. As for that one platter of *Asp* the plaier in tragœdies, which cost six hundred thousand sesterces, I doubt not but their stomackes rise thereat when they reade thereof in my treatise as touching birds. But this is nothing (I assure you) to that charger of *Vitellius*, who whiles he was Emperor caused one to be made and finished that cost a * million of sesterces, for the * making wherof there was a furnace built of purpose in the field; the which I rather note, because they should see the monstrous excessse in these daies, that vessels of earth should be more costly than of Cassidonie. Alluding to this monstrous platter, *Murianus* in his second Consulship (when he ripped vp in a publicke speech, the whole life of *Vitellius*, now dead) vpbraided the very memoriall of him in these very terms, calling his excessse that way, *Patinarum paludes*, i. platters as broad as pools. And verily (saith he) that platter of *Vitellius*, came nothing behind another, which *Cassius Senerus* reproched *Asprenas* withall, whom he accused bitterly, and said, that the poison of that one platter had killed an 130 persons who had tasted thereof.

* Deies sester-
cium, according to *Bude-
us*; but if you
read according
to *Notomanus*,
ducenties, it is
twenty times
as much more.
* This platter
he called, the
charger of *Mi-
seria*, and he
got himselfe
sherby a name
to be called
Patinarum. See
Sueton.

Furthermore, there are certaine townes that are in good account by reason onely of this ves-
sell made therein, and namely *Rhegium* and *Cumæ*.
The priests of *Cybele* the mother of the gods, who are called *Galli*, vse to gueld themselves with a sheard of Samian earth; and they be of opinion, that if it be done with any thing els, they shall die thereof, if we may beleue *M. Calius*, who whetted that tongue of his (which shortly after was in that sort to be cut out) against *Vitellius*; which turned to his great reproch and infamie; for that himselfe euen then railed vpon *Vitellius* in so bad termes, and lost his tongue for his labour.

But to conclude, what is it, that Art and the wit of man hath not deuised? for there is a means found to make a strong kind of mortar or cement by the broken sheards of potters vessell, if the same be ground into powder and tempered with lime; and the ordering of it in this manner, k causeth it to be more firme and last the longer, and such they call *Signina*. And hereby also men haue found out certain durable pauements of that kind.

CHAP. XIII.

¶ The varietie of sundry kinds of earth: of the dust or sand of *Puteoli*: and of other sorts of earth which will harden as a stone.

Over & besides the cement aboue named, there be other percells that the earth it self doth afford, fit to be laid in pauing worke: for who can sufficiently wonder at this, namely, L That the worst part of it (which thereupon is called dust and sand, as it were the very excrement thereof) should be of that nature vpon the side of the hills of *Puteoli*, as being opposite against the waues of the sea, and continually drenched & drowned therewith, should become a stone so compact and vnited together as it were into a rock, that it scorneth all the violence of the surging billows, which are not able to vndermine and pierce the same, but hardeneth euery day more than other; euen as if it were tempered with the strong cement of *Cumes*. Of the same property is the earth within the country about *Cyzicum*: onely this is the difference, that not the dust or sand there, but the earth it selfe cut out into what parcels you will, in case it be drenched in the sea water a certaine time, is taken forth againe a very hard stone. The same (by re-
port) happeneth about the citie *Cassandria*: as also about *Gnidus* in a fountaine of fre sh water, M wherein if earth do lye, within the space of eight moneths it will turne to be a stone. Certes, all the way as a man goeth from *Oropus* as farre as to *Aulis*, what ground soeuer is beaten vpon by the water, changeth into rockes and stones. There is found also in *Nilus* a certaine sand, whereof the finest part differeth not much from that of *Puteoli* before said: not in regard that

A that it is so strong as to breake the force of the sea-water & to beat back the waues, but to sub-
due and crush the bodies of our yong gentlemen, and therefore serueth well in the publicke
place of wrestling for those that be giuen to such exercises: and for this purpose verily was it
brought from thence by sea to *Patrobius*, a slaue lately enfranchised by *Nero* the Emperor. I reade
also, that *Leonatus*, *Cratus*, and *Meleager*, who were great captains vnder *Alexander* the Great, and
followed his court, were wont to haue this sand carried with them, with other baggage belong-
ing to the camp. But I mean not to write any more of this argument, no more verily than of the
vse of earth in those places where our youth annoint their bodies against they should wrestle;
wherein our youths addit themselves so much to the exercise of the body, that they haue spoil-
ed themselves otherwise, and lost the vigor of the mind.

CHAP. XIII.

¶ Of mud walls: of bricke walls, and the order and manner of making them.

W Hat shall we say? See we not in *Africke* and *Spaine* both, certain walls of earth, which
they call * *Formacei*, of the forme and frame that is made of planks and boords of each
side, between which a man may say they are rather infarced & stuffed vp, than otherwise
laid and reared orderly; but I assure you, the earth thus infarced, continueth a world of yeres and
perisheth not, checking the violence of raine, winde and fire, no mortar and cement so stiffe and
strong. There are yet to be seene in diuers parts of *Spaine*, the watch-towers of *Anniball*, the
high turrets and sconces also reared vpon the tops of hills, made all of earth: and hereof we haue
our turfes, which naturally are so proper not only for the rampiers and fortifications of a camp,
but also for wharfs, banks, and buttresses, to breake the violence and inundation of riuers. As
for the manner of making walls, by dawbing windings and hurdles with mud and clay, also of
rearing them otherwhiles with vnbacked bricke, who is so ignorant that he knoweth it not? how-
beit, for to make good bricke, they ought not to be made of any soile that he knoweth it not? how-
grauell, much lesse then of that which standeth much vpon grit & stones, but of a greyish marle
or whitish chalkie clay, or at leastwise a reddish earth: but in case wee be forced to vse that
which is giuen to be sandy, yet we must chuse that kind of sand which is tough and strong. The
best season to make these bricke or tyles, is in the spring time; for in the mids of Summer they
will cleaue and be full of chinkes; but if you would haue good bricke for building, they ought
to be two yeares old at the least. Now the batter or lome that goeth to the making of them,
ought to be well steeped and soked in water, before it be fashioned into bricke or tyle. Bricke
are made of three sizes: the ordinarie bricke that we vse, is called *Didoron*, which carrieth in
length one foot and a halfe, and in breadth a foot: a second sort is named *Tetradoron*, i. three
foot long: and the third, *Pentadoron*, of three foot and nine inches in length: for the Greeks in
old time, called the span or space of the hand from the thumbe to the little fingers end stretch-
ed out, *Doron*; which is the reason that gifts and rewards be called in their language, *Dora*, for
that they were presented by the hand. You see therefore, how according to the length that they
carrie, either of foure or fise spans, they haue their denomination of *Tetradora*, or *Pentadora*;
for the breadth is one and the same in them all, to wit, one foot ouer. Now there beeing this dif-
ference in the size, in Greece the manner is to imploy the smaller sort in their priuat buildings,
but the bigger serueth for greater publicke workes. At *Pitana* in Asia, and in *Massia* and *Ca-
lentum*, cities of low *Spaine*, the bricke that be made, after they are once dried, will not sinke in
the water, but float aloft; for of a spongeous and hollow earth they be made, resembling the na-
ture of the pumith stone, which is very good for this purpose, when it may be wrought. The
Greeks haue alwaies preferred the walls of bricke, before any others, vnlesse it be in those places
where they had flint at hand to build withall: for surely such bricke wals, if they be made plump
vpright & wrought by line and leuell, so as they neither hang nor batter, be euerlasting; & ther-
fore such bricke serue for wals of cities and publick workes; their roial pallaces likewise be built
therewith. After this sort was that part of the wall at Athens laid and reared, which regards the
mount *Hymettus*: so they built also at *Patra*, the temples of *Iupiter* & *Hercules*, although all the
columns, pillars, and architraues round about them, were of ashler stone: thus was the pallace
of *K. Attalus* built at *Tralleis*; likewise that of *K. Crassus* at *Sardis*, which afterward was conuerred

* Some reade
formacei, ar-
ched walls.

to their Senat-houſe; named Geruſia:likewiſe the ſumptuous and ſtately houſe of king Maſo-
lus at Halicarnaffus:which goodly ædifices continue at this day. Wee read in the Chronicles,
that *Murana* and *Varro* when they were the high Ædiles at Rome, cauſed the outmoſt coat
which was ouercaſt of the brick-walls of Lacedæmon, to be cut out whole and entire, and to bee
ſet and enclouſed within certaine frames or caſes of wood, and ſo to be tranſlated from thence to
Rome, for to adorne and beautifie the publicke hall for elections of Magiſtrates, called Comi-
tium; and all for the excellent painting vpon that parget. The workmanſhip therein although
it were excellent and wonderfull in it ſelfe, yet being thus remoued and brought ſo far ſafe, it
was eſteemed more admirable. Moreouer, here within Italy the walls of Aretine and Meuania
be made all of bricke: many at Rome they dare not build their houſes with this kind of bricke,
becauſe a wall bearing in thickeſſe but one foot and an halfe, wil not ſuſtain aboute one ſingle H
ſtory; for the order of the city permitted not the common walls and thoſe which were outmoſt,
to be thicker than a foot and an halfe: neither wil the partition walls within abide that thickeſſe,
but are made after another fort.

*For by reaſon
that Rome was
ſo populous,
they made
many loſſes o-
uer head, ſo
that the build-
ing was rai-
ſed to 60 and
70 foot in vp-
right walls &
theſe ſerued as
tenements, &
were called
Conacule, and
one paire of
ſtaires leading
into the ſtreets,
ſerued them
all wheras the
lord and ma-
ſter of the
houſe kept be-
neath with his
houſhold, and
was not trou-
bled with
theſe tenants
or in-mates.

CHAP. XV.

¶ Of Brimſtone and Alum, with their ſeueral kinds: alſo
their medicinable properties.

HAuing ſpoken ſufficiently of Bricks, it remaineth that I ſhould proceed to other kinds of
earth: wherein the nature of ſulphur or brimſtone is moſt wonderfull, being able as it is to
tame and conſume the moſt things that be in the world: it is ingendred within the Iſlands
Æolia, which lie between Italy and Sicily; thoſe I meane which (as I haue ſaid before) doe al-
waies burne by reaſon thereof. Howbeit, the beſt ſulphur is that which commeth from the Iſle
Melos. There is found thereof likewiſe in Italy, within the territory about Naples and Capua,
and namely in the hills called Leucogæ: that which is digged out of the mines, is fined and
brought to perfection by fire. Of brimſtone there be foure kinds, to wit, Sulphur viſ or Quicke-
brimſtone, which the Greeks call Apyron, becauſe it neuer came into the fire: the ſame is found
ſolid of it ſelfe, by whole pieces and in maſſe, which their Phyſicians doe uſe, and none but it,
for all the other kindes conſiſt of a certaine liquid ſubſtance, and being boiled in oile are made
vp and conſected to their conſiſtence: whereas the ſulphur viſ is digged out of the mine ſuch
as we ſee, that is to ſay, transparent, cleere, and greeniſh. The ſecond kind is named Gleba, good
onely for Tuckers and Fullers. The third ſort alſo yeeldeth but one uſe and no more, and that is,
for tincture of wooll, by reaſon that the ſmoke and perfume thereof wil bring it to be white and
ſoft; and this brimſtone they call Egula. As for the fourth kinde, it ſerueth moſt of all for mat-
ches and wicks.

As touching the nature of Brimſtone, ſo forcible it is, that if it be caſt into the fire, the verie
ſmell and ſteeme thereof will driue thoſe in the place into a fit of the falling ſickeſſe, if they
be ſubject thereunto. As for *Anaxilaus*, he would commonly make ſport withall at a feaſt, and
ſet all the gueſts into a merriment: for his manner was to ſet it a burning within a cup of new
earth ouer a chafing diſh of coales, and to carry it about the table where they were at ſupper: L
and in very truth the reuerberation of the flame would make all that were neere it to looke pale
and wan after a moſt fearefull manner, like as if there were as many griſly ghoſts or dead mens
faces. And to come more neere to the properties that it hath reſpectiue vnto Phyſicke, it hea-
leth mightily, and is a maturatiue: it doth reſolue withall and diſcuſſe any gathering of impo-
ſtumes; in which regard it entereth ordinarily into ſuch plaſters that bee diſcuſſiue and emol-
litiue. A cataplaſme made with it, incorporate with greaſe or ſewer, and ſo applyed vnto the
loynes and regions of the Kidnies, doth wonderfully aſſuage the paine and griefe in thoſe pla-
ces: being tempered with turpentine, it riddeth away the ſoule tetter called Lichenes that a-
riſe in the face, yea and cleanſeth the leproſie. The Greekes haue a pretty name for it and call
it Harpaſticon, for the ſpeedy remouing and ſnatching it from the place where it is applyed;
for eſtfoones it ought to be taken away. The ſame reduced into a lochoch or liquid Eleſtuarie,
is good to be licked and let downe ſoftly towards the lungs, in caſe of ſhortneſſe and difficul-
tie of winde: in which ſort it ſerueth for them that ſpit and reach out of the breſt by cough-
ing, filthie matter: and ſoueraigne it is for thoſe that be ſtung with ſcorpions. Take ſulphur viſ

A mix it with ſal-nitre, grind the ſame together with vinegre, it maketh a ſingular good liniment
for to ſcoure the ſoule morpew: let the ſame be tempered and prepared with vinegre of Sanda-
racha, it killeth the nits that breed in the eie-lids. Moreouer, brimſtone is imploied ceremoni-
ouſly in hallowing of houſes; for many are of opinion, that the perfume and burning thereof,
will keep out all enchantments, yea, and driue away ſoule fiends and euill ſpirits that doe haunt
a place. The ſtrength of Sulphur is euidently perceiued & felt in the ſprings of hot waters, that
boile from a vein of it: neither is there in all the world, a thing that ſooner catcheth fire; whereby
it is apparant, that it doth participat much of that element. Thunderbolts & lightnings in like
manner do ſent ſtrongly of brimſtone: the very ſlaſhes and leames thereof ſtand much vpon the
nature of ſulphur, and yeeld the like light. Thus much ſhall ſuffice as touching the nature of
B ſulphur.

The nature of Bitumen approacheth neere vnto brimſtone: where it is to be noted in the firſt
place, that the Bitumen whereof I ſpeake, is in ſome places in manner of a muddy ſlime; in o-
thers, very earth or mineral. The ſlimy bitumen ariſeth (as I haue ſaid before) out of a lake in
Iurie; as for the mineral bitumen, it is found in Syria, about a maritime town vpon the ſea-coaſt
called Sidon: but both the one and the other are of a compact and maſſie ſubſtance, growing to-
gether ſaſt and vnite. And yet there is a kind of Bitumen liquid, and namely that of Zacynthus,
and the Bitumen which is brought from Babylon, where verily it is white naturally as it grow-
eth. The Bitumen alſo which commeth from Apollonia is liquid: and all theſe the Greeks doe
comprehend vnder one name Piſſaſphalton, a word deriued of Pitch and Bitumen. There is a
C fatry kind of Bitumen likewiſe reſembling an vnctuous or oleous liquor, within the territorie
of Agragantum in Sicilie, ariſing out of a fountaine, and it ſtoteſt aloft: The inhabitants of the
countrie vſe to ſcum and ſleet it off by the meanes of certaine chats or catkins which grow vpon
many reeds and canes, for quickly will it hang and cleaue to the downe of ſuch. Great vſe
they haue of this Bitumen, for it ſerueth their turnes to maintain lamp-light, in ſteed of oile: &
therewith alſo they kill the ſarcins, ſcabs, and mange in their jades and laboring garrons. Some
writers there be who reckon Naphtha (whereof I haue written in my ſecond booke) to be a kinde
of Bitumen; but ſo ardent it is, and holdeth ſo much of the fire, that wee know not which way to
make any vſe thereof. Concerning the marks of good Bitumen, the beſt is knowne by the gloſſe
that it carrieth, if it ſhine exceeding much: the ſame alſo is ponderous and weighty: whereas the
D lighter ſort is but indifferent heauy, and argueth ſome ſophiſtication with pitch. In operation
it hath the qualities of brimſtone; aſtringent it is, and yet reſolutiue: it draweth together, and
ſoldereth withall. A perfume thereof while it burneth, chaſeth away ſerpents. The Babylonian
Bitumen is thought to be very effectual for the cataraſts, pearles, and ſlimes that ouerſpred the
eies: ſoueraigne likewiſe for the leproie, and filthy tetter of the face called Lichenes, and the
itch in any part of the body: it ſerueth in a liniment for the gout: and there is no kind thereof,
but it cauſeth the haire of the eie-lids, which grow vntowardly and fall into the eies, for to turn
vp againe. If the teeth be well rubbed with bitumen and ſal-nitre together, it doth eaſe and aſ-
ſuage their paine: and being giuen in wine, it helpeth an old cough, and the ſhortneſſe of wind.
In caſe alſo of the diſſenterie, it is taken in that manner, for it ſtaicth a bloody flux: but if it
bee drunke with vinegre, it doth diſcuſſe and diſſolue * cluttered bloud which is within the
E body, and expelleth the ſame downward by ſeege: it doth likewiſe aſſuage the paine of the
loynes or ſmall of the backe, and generally mitigateth any griefe of the joints, if it bee layed
too in manner of a cataplaſme with Barley meale. There is a ſpeciall plaſtre or cataplaſme
made of Bitumen, which carrieth the name thereof; it ſtancheth bloud, it bindeth and draweth
together the edges of a wound, alſo it knitteth and vniteth again ſinews which be cut in twain.
There is an ordinary medicine alſo for the quartane ague, made in this wiſe: Take of Bitumen
one dramme, of Mints the like weight, of Myrre the quantitie of one Obolus, mix and incor-
porat all theſe together: a perfume or ſmoke thereof will bewray the falling ſickeſſe. The ve-
ry ſmell of Bitumen alſo diſcuſſeth the fits of the mother when it riſeth and ſtoppeth the wo-
mans breath: A ſuffumigation thereof, doth likewiſe reduce the matrice and tiwill into the
right place, if they bee ſlipped and fallen downe too low, and ready to hang forth of the
bodie: beeing drunke with Wine and Caſtoreum, it bringeth the ordinary courſe of the
monethly termes in women. It ſerueth alſo for diuerſe and ſundrie other vſes than in Phy-
ſicke: For if any braſen Pots, Chaufers, pannes or kettles, or ſuch like veſſels, bee enhuiled
there-

*Hæmiponit
is an ordinary
medicine, to
giue Mumiæ
(which is Piſ-
ſaſphalton) vnto
thoſe that are
ſaine from on
high and bee
inwardly brui-
ſed.

therwith, it hardeneth them against the violence of fire. I haue said already, that they were wont in old time to vernish their images with bitumen: it hath bene vsed in mortar also in stead of lime, and with that kind of cement were the walls of Babylon laid, and the stones sodered together. Iron-smiths also haue much vse of bitumen, and namely, in sanguining or colouring their ironworke; and nailers especially about their naile heads; many other waies likewise it serueth their tume.

As touching Alum, which we take to be a certain salt substance or liquor issuing out of the earth, there is no lesse vse therof than of bitumen, and the emploiment is not much vnlike. Of alum there be many kinds: in the Island Cypresse there is found alum which they call White, and another named Blacke; and albeit the distinction in the colour be but small, yet it is occupied to farre different vses; for the cleare alum which they name the white, is proper for to copied to four wooll with any bright tincture; contrariwise, the blacke serueth for sad, darke, and browne colours. The foresaid black alum is occupied much by goldsmiths, to purge and purifie their gold; and yet all these alumes the one as well as the other, be engendred of water & slimie mud, that is to say, of a certaine sweat that the earth naturally doth yeeld: it is suffered to run and gather together into a place, during winter; and in the heat of summer, it fermenteth and taketh the perfection: that which commeth soonest to concoction and ripeness, the same is alwaies the whitest and purest. As touching the mines of alum, they grow naturally in Spaine, Ægypt, Armenia, Macedonia, Pontus and Affricke, which be all countries of the continent: in the Islands likewise it is found, namely in Sardinia, Melos, Lipara, and Strongyle. The best simply is that which commeth out of Ægypt, and in the next place is that accounted of Melos. In sum, alum may be reduced into two principal kinds; for either it is pure and cleare, or els thick and grosse: as for the former kind, it may be knowne whether it be good and naturall, if it be bright like water, & white as milk, not offensive to their hands that rub it, & yet participating in some sort of a fiery heat; this they call Phormion; but in case it is sophisticated, you may soon find it by the juice of a pomegranat, for that which is true and the right kind, is no sooner mixed therewith, but it waxeth black. The second sort is of a pale color, and besides naturally rugged in the hand, and lightly it will stain like gall nuts, which is the reason that the Greeks call it Paraphoron. The vertues of the cleare alum, be astringent, hardning, and fretting; if it be tempered with hony, it healeth the cankers or sores in the mouth: wheals and itch it likewise cures in any part of the body: but this inunction must be vsed in a baينه; and regard ought to be had of it in the proportion, namely, that there be two third parts of hony to one of alum. The ranke smell of the arme-holes it doth allay, and represseth sweat and the stinke therof: it is taken in pills, for the obstructions and schirrosities of the spleene; and in that sort, it drieth away an itch & sendeth forth corrupt bloud by vrine: made into an vnguent with Sal-nitre and Nigella Romana, it healeth the bleach or scabs. Of alum that is thick, hard, and massiue, there is one kind which the Greeks call * Schistos, and the nature thereof is to cleaue along into certaine filiments or threads like haire, of a greenish colour; which is the reason that some haue giuen it rather the name of Trichitis: howfoeuer it be named, it commeth of a certaine marquisit stone, wherupon also they call it Chalcitis; so as it may be counted a very sweat of the said stone, gathered together or congealed into a fume. This kind of alum is exiccative; howbeit, not so good as the other to repress any offensive humors in the body: but surely it is singular for the ears, either infused, or applied as a liniment: it helps also the sores of the mouth, if a man let it melt together with the spittle or moisture of the mouth: for eyesalues likewise it serues fitly among other ingredients; and is very appropriat for the accidents befalling to the secret parts of either sex, as well men as women: but before it be vsed, it would be boiled vpon a pan ouer the fire, till it giue ouer to melt. There is another sort of alum, that is weaker in operation, which the Greeks call Strongyle: and this likewise is found of two sorts; the one is hollow and light in manner of mushrooms, easie to be melted in any kind of liquor; and this is altogether rejected as good for nothing: the other is hollow also and light in manner of a pumish stone, full of holes too, but resembling the pipes rather of sponges; the same is round in forme, and enclining to a white colour; a certaine vntuositie or fattiness it carrieth with it, apt to breake and crumble, and yet without sand, neither will it colour and staine the fingers blacke in the handling: this must be calcined by it selfe vpon cleare burning coales, vntill such time as it be reduced into ashes. But would you know the best and principall alum of all the sorts that are? it is that (no doubt) which

* Some take this for Alum de plume: others, for the stone Amian-
tine.

A which (as I haue said before) is brought out of the Island Melos, and therefore called Melinum. Certes, there is not an Alum more astringent, nor more proper to harden: none more firm and thicke than it. It doth subtiliar the roughnes of the eyes: and being calcined, it is the better for to repress the fluxion of humors into the eyes: and in the same sort prepared, it killeth the itch in any part of the body: generally, wherfoeuer it is applied outwardly, it stauncheth bloud: being vsed in a liniment with vinegre vnto any place where the haire hath been plucked vp, it causeth that which commeth again to be but soft and in maner of a downe. There is no kind of it, but the same is exceeding astringent, wherupon it took the name in * Greek. In regard of which stypticitie, they are all very good for the accidents of the eyes. Alum incorporat with some grease or fat, is singular to repress the flux of bloud: very proper also for the red gum incident to children: and in some sort staideth such vlcers as tend to putrifaction, yea, it drieth vp the breaking forth of wheales and pushes. With the juice of the Pomgranat, it is good for the infirmities of the eares; in which sort it doth amend the ruggednesse of the nailes, the hardnesse and nodocitie of cicatrices or skars, the excrecence and turning vp of the flesh about the naile roots, and the kibes of the heeles. With vinegre, or calcined with the like weight of gall nuts, it is excellent for cankers and inflammation of such vlcers as be corrosiue. Tempered with the iuice of Beets or Coleworts, it cleanseth the leprosie. Incorporat with two parts of salt, it healeth those sores which are giuen to eat and spread farther: and mingled with water it riddeth away nits, lice, and such vermine breeding in the head; in which manner it healeth burnes and scalds. But with pitch and the floure of Erules, it scoures away dandruffe and scurfie in any part of the body. In a clystire, Alum is soueraigne for the bloudie flux. It serueth likewise for the uvula in the mouth, and the inflammation of the Amygdales. In one word, for all those purposes which I haue said, other sorts of Alum are good for, we must alwaies thinke, that the Alum brought from Melos, is the best and most effectual. As touching other vses besides Physicke, wherein it is employed necessarily, and namely in dressing of skins and colouring wooll, of what reckoning it is, I haue shewed already. It remaineth now to treat of all other kinds of earth respectiue, as they serue in the vse of Physicke.

CHAP. XVI.

D ¶ Of the diuerse sorts of earth, to wit, of Samia, Eretria, Chia, Selinusia, Pnigitis, and Ampelis, together with their medicinable properties.

FROM the Isle Samos there be brought two kinds of earth: whereof the one is called by the Greekes Syropicon, the other Aster. As for the former, the commendation of it, is to be fresh, light, and cleauing to the tongue: The other, is white and of a more compact constitution: but both the one and the other, before they be vsed, ought to be calcined and washed. Some there be who preferre the former: but both be very good for those that spit bloud. They enter into emplastrs, which are deuised and made for to exiccat: and they are mingled also with eie-salues.

E Touching the earth Eretria distinguished it is likewise by two kindes, for some there is of it white, other of ash colour: and this for Physick is held to be the better. It is known to be good, if it be soft in hand, and, if vpon a piece of brasse it draw a line of purple colour. What power it hath, and how it is to be vsed in Physicke, I haue shewed already in my discourse of painters colours. But this is a general rule in all kinds of earth (for I will put it off no longer) that are to be washed, first to let them lie well steeped in water, then ought the same to be dried in the Sun; which done, it ought once againe to be braied in water, and let to rest vntill they be settled, that they may be digested and reduced into trochiskes. But for the burning and calcining of these earths, it ought to be done in certaine pots, and estoones followed and plied with shaking and stirring.

Among the sorts of earth that be medicinable, there is reckoned that which commeth from Chios, & the same is white, hauing the same effects that the earth of Samos: but our dames vse it most for to embellish & beautifie the skin. To which purpose, the earth of Selenus likewise is employed: White this earth is as milke, and of all others, will soonest resolute in water, which if it be tempered with milke, serues to whiten and refresh the pargetting and painting of wals.

The earth called * Pnigitis, is very like vnto Eretria beforenamed, only it is found in greater clots.

* Some reade Pnigitis.

clots or pieces, & otherwise is glutinous. The same effects it hath that Cimolia, howbeit, some-
what weaker in operation.

There is an earth called Ampelitis, which resembleth Bitumen as neer as may be. The triall of that which is good indeed, is, if in oile it be gentle to be wrought as wax; and if when it is tor-
rified, it continue still of a blacke colour. It entreth into medicines and compositions, which
are made to mollifie and discusse; but principally it serueth to beautifie the eie-browes, and to
colour the haire of the head blacke.

CHAP. XVII.

¶ Sundry sorts of chaulkes for to scoure clothes, and namely the Tuckers earth
Cimolia, Sarda, and Vmbria. Of the common chaulke:
and of Tripolium.

OF Chaulks there be many kinds: of which, Cimolia doth afford two sorts, and both per-
tinent to Physick; the one is white, the other inclineth to the colour of Roset. Both the
one and the other is of power to discusse tumors, and to stay distillations, if they be vsed
with vineger. They do keep downe biles and emunctories and swellings behind the eares: the
foule tertars also, and other offensive pimples and pushes they repress, applied in the forme of
a liniment: incorporat therewith salt-petre, salnitre, and put vineger thereto, it is an excellent
medicine to allay the swellings of the feet; with this charge, that this cure be done in the Sun,
and that after six houres, the medicine be washed off with salt water. Put thereto the cerot Cy-
prinum, it is singular good for the swelling of the genitoirs. This Fullers earth Cimolia is of a
cooling nature, and being vsed in the forme of a liniment, it staieth immoderat sweats: the same
taken inwardly with wine in the baine or hot-house, restraineth the breaking forth of pimples.
The best of this kind, is that which commeth out of Thessalie. It is to be found also in Lycia a-
bout Bubon. There is ouer and besides, another vse of this Cimolia or Tuckers cley, to wit, in
scouring clothes. As for the chaulke Sarda, so called because it is brought out of Sardinia, it is
employed only about white clothes, for if they be moteley or pied coloured, it is of no vse. Of al
kinds of Cimolia it is the cheapest, and of safest account: yet that of Vmbria is of more price,
and that which they call Saxum in Latine, and is our ordinary white chaulke: this property it
hath, that with lying in water it groweth; this is commonly bought therefore by weight, where-
as the other is sold by measure. As for the foresaid earth of Vmbria, it serueth only for to polish
and giue a glosse to clothes: for why should I scorne or thinke much to handle this matter al-
so? seeing there is the expresse law or act Metella, prouided for Fullers, the which C. Flaminius
and Lu. Emilius, when they were Censors, proposed vnto the people for to be enacted; so care-
full were our predecessors, to take order for all things. To come then to the mysterie of Fullers
craft: First they wash and scour a piece of cloth with the earth of Sardinia, then they perfume
it with the smoake of brimstone, which done, they fall anone to burling of it with Cimolia; pro-
vided alwaies that it be the right and haue the natue colour, for if it be sophisticat, it is soone
knowne by this, that it waxeth blacke, and wil chaune and cleaue, if it come after sulphur: and if
it be the true Cimolia, it doth refresh and giue a cheerefull hew to precious and rich colors, yea
it setteth a certain glosse and lustre vpon them, if they were made dusky & sad by the smoake
of sulphur. But in case the clothes be white, then the common chaulke is better to be vsed pre-
sently after the brimstone: for hurtfull it is to other colors. In Greece, they vse in stead of Ci-
moliam, a certaine plastre which they haue from Tympe. Yet is there another kind of chalke or
whire cley, named Argentaria, for that it giueth a glistering siluer color to clothes. Howbeit,
one sort more there is of chalk, which of all others is most base, and least esteemed; this is that
chalke, wherewith our auncestours in old time ordained to whiten the cirque, in token of victo-
ry: wherewith also they vse to marke the feet of those slaues which were brought ouer from be-
yond sea, to be bought and sold in the markets: such an one somtime was that Publius, the deu-
iser of riming and wanton jestures vpon a stage: such another was his cousin germaine, Manilius
Antiochus, the Astrologer; yea, and Taberius Erotes the excellent Grammarian: whom all three,
our great grandfathers saw in that manner brought ouer in one and the same ship.

CHAP

CHAP. XVIII.

¶ Who they were in Rome, and of whom enfranchised, that of slaues rise to be
mightie, and of exceeding wealth.

BUT what meane I to stand vpon those who had learning to commend and bring them into
some state of credit and honour? Haue not the same forefathers of ours seene in the like
plight standing within a cage, with a marke of chaulke vpon their feet, and a locke about
their heeles, Chrysogonus the slaue to Sylla, Amphion to Qu. Catulus, Hero to Lu. Lucullus, Demetrius
to Pompey, Auge the bondmaid to Demetrius (though she was thought to be the base daughter of
Pompey,) Hipparchus the slaue of Antonius, Menas and Menecrates of Sex. Pompeius, and an infinite
sort of others, whom I cannot reckon vpon; and yet they all being by their masters enfranchised,
became wonderfull rich by the bloudshed and goods of Romane citizens, in that licentious
time of proscriptions. Well, this was the marke of slaues set out by companies in the market to
be sold: and this is the opprobrious and reprochful note, to twit those by, that in their fortunes
are growne insolent. And yet we in our daies haue knowne the same persons to climbe vnto the
place of highest honour and authority, in so much, as we haue seene with our owne eies the Se-
nat (by commandement from Agrippina the Emperesse, wife to Claudius Caesar) to decree vnto en-
franchised slaues, the robes of Pretours, with the badges and ornaments to that dignity belong-
ing; yea, and such to bee sent againe as it were with the axes and knitches of rods decked with
Lawrell, into those countries to gouerne, from whence they came at first poore slaues with their
feet chalked and marked for the market.

CHAP. XIX.

¶ Of the earth of Galata, and Clupea: of the Balearie earth,
and Ebusitana.

OVER and aboue those before rehearsed, there be other sorts of earth, hauing a property by
themselves, which I haue named heretofore, but in this place I am to set downe their na-
ture and vertues also. There is a kind of earth comming out of the Isle Galata, and about
Clupea in Affricke, which killeth scorpions: like as the Balearike and Ebusitane earth, is the
death of other serpents.



THE



THE XXXVI. BOOKE OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIUS SECVNDVS.

The Proem.

CHAP. I.

¶ The natures and properties of Stones: The excessive expence in columnes and buildings of Marble.

IT remains now to write of the nature of stones, that is to say, the principal point of all enormous abuses, and the very height of wastful superfluities, yea though we should keep silence, and say nothing either of precious stones and Amber, or of Chryttall and Cassidonie. For all things els which we haue handled heretofore euen to this Booke, may seem in some sort to haue been made for man; but as for mountaines, Nature had framed them for her owne selfe; partly to strengthne (as it were) certaine ioints within the veines and bowels of the earth; partly to raine the violence of great riuers, & to break the force of surging waues and inundations of the sea; and in one word, by that substance and matter whereof they stand, which of all others is most hard, to restraine and keep within bounds that unruly element of the water. And yet notwithstanding, for our wanton pleasures and nothing els, we cut and hew, we load and carry away those huge hills and inaccessible rockes, which otherwise to passe only ouer, was thought a wonder. Our Ancestors in times past reputed it a miracle, and in manner prodigious, that first *Annibal*, and afterwards the *Cimbrians*, surmounted the Alps: but now, euen the same mountaines wee pierce through with picke-axe and mattocke, for to get out thereof a thousand sorts of marble; wee cleaue the capes and promontories: we lay them open for the sea, to let it in; downe we goe with their heads, as if wee would lay the whole world euen, and make all leuell. The mightie mountaines set as limits to bound the frontiers of diuers countries, and to separate one Nation from another, those wee transport and carrie from their native seat: ships wee build of purpose for to fraught with marble: the cliffes and tops of high hills they carrie too and fro, amid the waues and billowes of the sea, and neuer feare the danger of that most fell and cruell element: wherein verily wee surpasse the madnesse and vanitie of those, who search as high as the clouds for a cup to drink our water cold; and hollow the rocks that in manner touch the heauen, and all to drink out of yce. Now let euery man thinke with himselfe what excessive prices of these stones hee shall heare anone, and what monstrous pieces and masses hee seeth drawne and carried both by land and sea; let him consider withall, how much more faire and happy a life many a man should haue without all this, and how many cannot chuse but die for it, whensoever they go about to doe, or if I should speake more truely, to suffer this enterprize: also, for what vse else, or pleasure rather, but one, that they might lie in beds and chambers of stones that forsooth are spotted, as if they neuer regarded how the darknesse of the night bereaueth the one halfe of each mans life of these delights and ioies. When I ponder and weigh these things in my mind, I must needs think great shame, & impute a great fault to our forefathers that liued long since, & blush in their behalfe. Lawes were enacted, and prohibitions published by the Censors, and those remaining vpon record,

¶ The bibatur
glacie, for they
held Chryttall
to be a kinde
of yce.

A cord, forbidding expressly, That neither the kernelly part of a Bores neck, nor dormice, & other smaller matters than these to be spoken of, should be serued vp to the boord at great feasts: but as touching the restraint of bringing in marble, or of sailing into forraine parts for the same, there was no act or statute ordained.

CHAP. II.

¶ Who was the first that shewed Marble stones in Columnes, or any publicke workes at Rome.

BVt some man haply might reply againe vpon me, and say: what need was there of any such ordinance, considering there was no marble in those daies brought in from strange countries? Vnto whom I answer, That it is a meere vnruth, for euen our progenitors, of whom I speake, saw well enough how in that yere when *M. Scavrus* was *Edile*, there were not fewer than 360 pillars of marble transported to Rome, for the front and stage of a Theater, which was to continue a small while, and scarcely to be vsed one moneth to an end: and yet no law there was to checke and controule him for it. But it may be inferred againe, the Magistrates winked hereat, because he did all this for a publicke pleasure to the whole citie, during the plaies exhibited by him in his *Edileship*: marrie that is it that I would haue, What reason I pray you had they so to doe? By what means more doe abuses and inormities creepe into a citie or state, than by a publicke president giuen? for I assure you it was nothing else but such examples at the first that brought those other things, I meane, yvorie, gold, jewels, and precious stones, to be vsed by priuat persons, so commonly as they be, in their houses, plate, and ornaments. And what haue we left and reserued at all for the very gods to haue, since that we lay so much vpon our selues? but say that in those daies they did tolerat this excesse in *Scavrus*, because of the pastimes he did exhibit to the whole city; What, were they silent also and made no words, when the said *Scavrus* caused the biggest of all these columnes (yea those that were fortie foot high within twain, and the same of *Lucullan* black marble) to be erected and placed in the court before his owne house in mount *Palatine*? And least any man should say, that this is done in secret and huckster mucker, know he, That when these pillars were to be carried vp into the mount *Palatine* where his house stood, the *Bailife* that had the charge of the publick sinkes vaulted vnder the ground, dealt with *Scavrus* for good securitie, yea, and demanded cautions and sureties for satisfying of all harmes and dammages that might be occasioned by their carriage, so huge and haueie they were. Considering then this bad example, so prejudiciall to all good manners, and so hurtfull to posterity, had it not bin better for the city to haue cut off these superfluities by wholesome laws and edicts, than thus to permit such huge and proud pillars to be carried vnto a priuat house vp into the *Palatine* mount, euen vnder the nose of the gods, whose images were but of earth, and hard by their temples that had for their couers and louers no better than such as were made of potters clay?

CHAP. III.

¶ The first man who had at Rome for his owne vse, pillars of Marble brought from forraine Lands.

NEither can it be alledged for excuse of this tolleration in *Scavrus*, that hee tooke the vantage and spied his time when the city of Rome was not ware of any such matter toward, as hauing not been acquainted beforetime with the like, and therefore he stale vpon them with these superfluous pompes, as doubting nothing lesse than such new deuises, and therefore hauing no time to prevent and stay them: for long before this, *L. Crassus* that great Orator, who was the first that enriched his house (within the same *Palatium*) with pillars of ourlandish marble, although they were but of the Quarry in *Hymettus* hill, and neither more in number than six, nor carying in length about 12 foot apiece, was reprobued and reproched for this pride and vanity by *M. Brutus*, who among other hot words and biting terms that passed interchangeably between them, taunted him by the name of *Venus Palatina*. Certes, considering how all good orders and customs otherwise were trodden vnder foot, we are to presume thus of our pcedecessors, That when they saw other injunctions and prohibitions as touching diuers abuses crept in, take

temple are commended, as few like vnto them for workmanship: like as the other images which G be aduanced vp to the very top of the lantern of the foresaid temple, are thought to be excellent pieces; howbeit, for that they stand so high and cannot well be discerned, lesse speech there is of them. As touching that *Hercules*, in the honour of whom the Carthaginians were won euery yere to sacrifice the flesh of mankind, it is an image not regarded; for he hath no place in any temple or chappell, neither is he erected vpon pillar, no nor so much as vpon a base, but standeth vpon the bare ground, just ouer-against the entrie to those galleries in Rome, called *Ad Nationes: howbeit, the workmanship of this *Hercules* is not to be despised. There stood also beneath, the nine Muses called *Thestiades* vnder the temple of *Felicity*, and as *Varro* saith, one *Iunius Pisticulus* (by place a gentleman of Rome) was enamored vpon one of them, so beautifull they were made: and yet to this day, *Pasticules* cannot look enough thereupon, but hath the same in great admiration: who also wrote five books, comprising all the famous and principall pieces of worke that are to be found in the world. This *Pasticules* was borne in the marches and coasts of Italy called *Græcia*, and together with the townes of that tract, was made a *Romane* free denizen, being himselfe also a good cutter in stone, hee made that image of *Iupiter* in *Yvory* which standeth in the chappell of *Metellus*, in the way which leaderh into [*Mars*] field. It happened vpon a time, that being about the Arsenall, where certaine wild beasts were, newly brought out of *Affricke*, hee looked in at a grate to behold a lyon and to take out the counterfeite of him; but as hee was ingrauing in stone according to the patterne, behold, out of another cage a panther brake loose, to no small danger of that most curious and painfull workman: it is said, that hee made many works; but in particular which were of his doing, it is not precisely set down. Moreover, *M. Varro* doth highly magnifie *Arcefilaus*, of whose handy worke hee saith that hee had a lionesse in marble, and certaine winged *Cupids* playing with her: of which, some seemed to hold her fast bound, others forced her to drinke out of a horne others againe would seeme to shooe her with their sockes; and all this prettie anticke worke was of one entire stone. The same *Varro* writeth, that *Copenius* made the images of the fouretee Nations, which are about the galleries or theatre of *Pompeius*. I finde also by my reading, that *Canachus* (whom I commended for a good founder or imageur in brasse, in my catalogue of such artisans) wrought in marble likewise and cut many faire statues: neither is it meet, that *Sauos* and *Batrachus* should be forgotten, who wrought the chappells that are within the close or cloister belonging to the galleries of *Octavia*, notwithstanding they were themselves *Lacedæmonians* borne. Some also are of opinion, K that they were exceeding rich men, and that of their owne purfes they defraied the charges of building those chappells, hoping to haue had the honour to be immortalized with the inscriptions in the forefront thereof: which being denied them, yet in another place and after another sort, they made meanes to eternize their name; for they deuised in the foot or base of every pillar (as it appeareth yet at this day) to cut the forme of a * frog and a lizard, to represent thereby their owne names. Moreover, I cannot conceale from you one pretty thing to be obserued, and which we all know to be true, That in one chappell of *Iupiter*, all the pictures therein, as also all the ceremoniall seruice, thereto belonging, are respectiue altogether to the fœminine sex: the which happening at first by meere chance, continued afterwards: for when the temple of *Iuno* was finished, the porters who had the carriage of the images ordained there to stand, mistooke their markes and carried thither those which were appointed for the chappell of *Iupiter*; and contrariwise those for *Iuno*, into the chappell of *Iupiter*; which beeing once done, was not altered againe, but taken for a presage, and religiously euer after kept, as if the very gods themselves had so ordered and appointed it, and made a counterchange: which is the reason also, that in the foresaid chappell of *Iuno*, there is that kinde of seruice which was meant for *Iupiter*.

To conclude, there haue been certaine workemen that haue growne to great name, by cutting and grauing in small pieces of marble; and namely, *Myrmecides* deuised to inchase in marble, a charriot and foure horses, and a man to driue the same, in so smal a roome, that a poor flie might couer all with her little wings. As for *Callicrates*, he cut in stone the similitude and proportion of pismires in so narrow a compasse, that a man cannot easily discern the feet and other parts of the body.

CHAP.

A

CHAP. VI.

¶ When first began Marble stones to be used in building of priuat houses. Who began at Rome to parget and couer walls with thin leaues of Marble. In what ages each kinde of Marble came into use and request. Who inuented cutting of Marble into thin plates: the deuise and manner thereof. Of sand proper for building.

THus far forth haue I discoursed of the cutters and ingrauers of marble, and of those excellent artificers, who haue bin most renowned. In which treatise I remember wel, that the diapred and spotted marble all this while was of no regard: for all the antique pieces which I haue rehearsed, were made of the marble of *Thasos*, of the Islands *Cyclades*, as also of *Lesbos*; and yet this inclineth to a blackish or blewish colour somewhat more than the rest. As for marble spotted in sundry colours, as also of the ordering, workmanship and vse of any kinds of marble in building, *Menander*, who in his time was most curious of all others in discussing all such superfluitie, dealt first therein, but seldome medled he withall. Howbeit, true it is, that at length pillars of marble were taken vp to be vsed in temples, not vpon any pride, brauerie, or magnificence (for as yet they knew not what such things meant) but for that it was thought, that they could not be erected nor beare vpon any thing stronger: and in that manner was begun the temple at *Athens* of *Iupiter Olympias*, out of which, *Sylla* brought those columnes which serued C for his house and pallace in the Capitoll. Howbeit, euen in *Homers* time a difference there was made betwene ordinary stone and marble: for this Poet saith plainly, that *Paris* caught a rap vpon the mouth with a marble stone: and yet whensoever he extolled and fetterh out in the highest degree the most stately pallaces of kings and princes, he neuer makes mention of any other matter to adorne them withall, but of *Brasse*, *Gold*, *Electrum*, *Siluer*, and *Yvory*, and not one word of Marble. But, as I take it, the first time that these marbles of sundry spots and colors were discovered, was in the quarries of the Islanders of *Chios*, by occasion that they digged for stone to fortifie their city with walls, whereupon *M. Cicero* plaies merily vpon them with a pleasant conceit; for when they made shew to all that came, and among the rest to him, what walls they had built of marble, and seemed to take great pride in their sumptuous and magnificent building; What ado is here (quoth *Cicero*) I would haue maruelled much more at your wall, and thought you had done a greater deed, if you had built it out of the quarry of *Tyburnum*. Certes, D if marble had bin of any name and credit in old time, painters had not bin so highly honored as they were, nay, had there bin (thinke ye) any reckoning made of them at all?

As touching the manner of slitting marble into thin plates, therewith to couer and seel as it were the outsidess of walls, I wot not well whether the inuention came from *Caria*, or no. The palace of *Mausolus* K, of *Caria*, built at *Halicarnassus*, is the antientest building that I can find in any record, garnished, set out and enriched with marble of *Proconnesus*, notwithstanding all the wals were reared of brick. This prince changed his life in the second yere of the 100 *Olympias* which fel out to be the 302 yere after the foundation of the city of *Rome*. As for our Romans, E *Cornelius Nepos* writeth, that *Mamurra*, borne at *Formia*, a gentleman of *Rome*, and sometime a Prouost ouer the Pioners, Masons, Smiths, and Carpenters vnder *Cæsar* in *France*, was the first who couered all the walls throughout his house which he had vpon mount *Coelius*, with leaues of marble. Now when I speak of *Mamurra*, you must not be offended, and think that I ascribe the inuention hereof to a mean person; for I tell you, this is that *Mamurra*, whom the Poet *Catullus* my countryman of *Verona*, so tainted and reuiled in his verses; this is the man, whose house before said, testifieth better by prooffe and effect, than *Catullus* could by his Poeticke expresse, That he had laid vpon it and gathered into it all the riches of *Gallia Comata*: which was as much to say as all *France*, saue only *Prouance*, *Languedoc*, *Sauoy*, and *Dauphine*. And well it might be so, for *Cornelius Nepos* before named addeth moreover and saith, that he was the first man, who F caused the pillars of his house to be of marble, & had not one of other matter, neither were the sleight and slender, but solid & masse, euen hewn out of the quarries either of *Carysus* or *Luna*. But after him, in proesse of time, *M. Lepidus* who was ioined companion in the Consulship to *Catullus*, was the first man known to lay the sils, lintels, & checks of his dores thorowout his hous with *Numidian* marble; being Consul in the 666 yere, reckoning from the foundation of *Rome*: but

*So named, by occasion of the statues of 14 nations there erected, as appeareth a little after.

*For in Greek *Batrachos* is a frog, and *Sauos* a lizard.

but well shent and rebuked he was for his labor. And verily, this was the first Numidian marble G as far as I can find by any mention or token at all, brought ouer to Rome; not to serue in pillars only and pannels in the seeling of walls, as *Mamurra* imploied his Carystian marble, but in * middle workes, and in the basest of all, namely, in dore sils, lentils, and jambes. After this, *Lepidus* some foure yeares, succeeded *Consull. L. Lucullus*, who, as it should seeme by that which fell out, gaue the name to Lucullan marble, for that he was so much delighted therien: he brought it first to Rome, and had a speciall fancy thereto, notwithstanding it were black otherwise: whereas all other men esteemed better of other coloured marble, or els spotted. This marble growes in an Island lying within the riuer Nilus, and no marbles (as many kinds as there be) took name of him that loued them, but it alone. But among these men that were given to build with marble, *M. Scourus* was the first man, as I take it, that for the stage and forefront of his Theatre, made the wals of marble: but whether the same were of slit and sawne marble, or laid with good found square ashler or no (as the temple of *Iupiter Tonans* in the Capitoll hill, is at this day built) I am not able to say for certaine: for as yet I do not reade or find by any sign, that Italy knew how to slit marble into leaues. But surely, whosocuer deuised that inuention, to saw marble stone, and to slit it into leaues for to serue the turne of riotous and waittful persons, had a perillous head of his own, and a shrewd. But would you know the cast of slitting marble? It is done with a kind of sand, and yet a man would think that it were the saw alone that doth the deed; for when there is an entry once made by a very smal line or trace, they strew the said sand aloft al the length thereof: then they set the saw to it, and by drawing it to and fro, the sand vnder the teeth thereof, maketh way downwards still, & so the stone, as hard as it is, they cut through in a trice: now for this purpose the Æthyopian sand hath no fellow: and to this passe forsooth we are come, that we cannot haue marble to serue our turns, vnlesse we send as far as into Ethyopia. may, we must bee provided of sand to slit our marble with, out of India; from whence in times past, during the antient discipline of Rome, it was thought too much and a shamefull thing, to fetch rich pearles. And yet this Indian sand is commended in a second degree; but the Æthyopian is the foster and better simply; for that sand curteth smooth and cleane as it goeth, and leaues no race at all in the work; the Indian maketh not so euen and neat plates, howbeit, they that polish marble, fit themselves with this sand when it is burnt and calcined, for if they rub their leaues and plates therewith, it will make them slick & fair; for otherwise, if it be not calcined to a fine powder, of it self it is churlish and rugged, which is the fault likewise of the sand that commeth from Naxos and Coptis, which commonly is called the Egyptian sand; for these sands verily were vsed in old time to the cutting of marbles. Afterwards they met with a sand as good as the best, and went no farther than to a certain bay or creek in the Adriatick sea or Venice gulf, which being left bare when the tide is gone, they may at a low water easily discern to haue bin cast vp by the floud. And now adaies our sawyers of marble, make no more ado, but take the first sand they come by, (it makes no matter out of what riuer it be) this serues their turne well enough, and thus they abuse and deceiue the world, although few chapmen there bee that know what losse there is by their marble leaues sawne in that sort: howbeit, such grosse sand as that, first makes a wider slit in the main stone, and by consequence spendeth and consumeth more of the marble; again, there is more work and labour about the polishing thereof, the saw and sand before said leaueth the faces of the stone so rugged and vneuen: and by this meanes the plates become sleight and thin before they can be imploied. To conclude, the sand from Thebais in high Egypt, is very good to polish withall: like as the grit that commeth of grauelly stones or pumish ground, serueth very well for the said purpose.

CHAP. VII.

¶ Of Whetstones and Grindstones, comming out of Naxos and Armenia. Of diuers kindes of Marble.

FOR polishing of statues and images made of Marble; for cutting, filing, and trimming of precious stones, Naxium serued a long time, and was commended before any other stone: for by this word Naxium I vnderstand the whet-stones and grinde-stones that come out of the Island Cyprus. but afterwards, those which were brought from Armenia, woon the name from them, and were esteemed better.

As

A As for the sundry sorts of Marble and their colours, to discourse of them in generall, were needlesse, they are so well and easily knowne: and to reckon them all in particular, were endlesse, they be in number to many and infinit: for what corner of the world is there, where you shal not find one marble or other different from the rest? And yet in my Cosmography, I haue already written of the best and most excellent kinds of marble, as I had occasion to speak of the nations and countries where they be found. Howbeit, this would be noted, that all sorts of marble bee not found in quarries and rocks, that stand vpon veines thereof: for much you shal meet with, lying ebbe in the ground, and the same scattering by pieces here and there. But the green marble that commeth from Lacedæmon, is esteemed most precious, and to be more gay and pleasant than all other. As touching the marbles called Augustum and Tiberium, they were found in B Egypt first after that sort lying loose and scattered, during the time that *Augustus* and *Tiberius* were Emperors of Rome, of whom they took their name. And albeit these marbles bee flecked and spotted, yet they differ from the Serpentine marble called Ophites; for that the speckles in Ophites, do resemble those in a serpents skin, whereupon it took that name: whereas the other two be distinguished with spots after a diuers sort: for Augustum hath veines curled, after the manner of waues, running round as it were like whirle pooles; and Tiberium spreadeth rather a broad in strakes, winding yet and turning after the order of whitish haire. Neither be there any pillars found of the foresaid Serpentine marble, vnlesse they be very small. And of this marble there be two kinds: the white, which is gentle and soft: the blacke, which is churlish and hard. Both of them are said to ease the head-ache, and to cure the sting of serpents, if they be but carried about one in pieces, either hanging at the neck, or otherwise tied to any part. Some there be who prescribe the whiter kind to be applied accordingly for the phrensie and lethargy: howbeit against serpents, there be who commend especially about the rest, that which of the colour of ashes they commonly call * Tephria. As touching the marble of Memphis or great Caire in Egypt, named thereupon Memphites, it is of the nature of these * precious stones, rather than of quarries. The vse herof is to be ground into powder, & with vinegar to be reduced into a liniment, for to be applied to those parts that are to be cauterized or cut: for it so astonieth and benummeth the member, that it feeleth no pain, either by the searing iron or the Chyrurgians lancet. The Porphyrite marble, which also comes out of Egypt, is of a red colour: of which kinde, look which hath white spots or streaks running among, is called thereupon Leucostictos: And D quarries there be in Egypt, standing wholly vpon this marble, which yeeld so sufficient, cut and hew therout as big and as huge pieces as you will. *Triarius Pollio*, Procurator general vnder *Claudius Caesar*, in the prouince of Egypt, brought for the Emperor certain statues of this Porphyry, out of Egypt: which new deuise of his was not very well liked and accepted, for no man tooke example by him afterwards to do the semblable. The Egyptians also found in Æthyopia another kind of Marble, which they call Basaltes, resembling yron as well in colour as hardnes: and thereupon it took the name. The greatest piece of this marble that euer was found, *Vespasian Augustus* the Emperor dedicated in his temple of Peace, and it was a statue resembling the riuer Nile, with 16 little children playing about it, whereby is signified the number of cubits, to which height the said riuer riseth when it is at the highest. It is said also, that within the temple of *Serapis* in Thebes, a city of high Egypt, there is another statue not vnlike to this marble Basaltes, and many think it was made for *Memnon*, & by report, euery day at the Sun-rising, so soon as the raies or beames do beat thereupon, it seemeth to cracke or cleaue. As for * Onyx, our antient writers were of opinion, That it was found in those daies vpon the mountains of Arabia, and no where els: yet *Sudines* saith, that it is gotten in Germany. *Cornelius Nepos* affirmeth, That there was at first great wonder made at the drinking cups of this stone: and afterwards, at the feet of tables and beds, of chaires and stools likewise thereof: howbeit, afterwards (quoth he) *L. Lentulus Spinter* shewed at Rome wine vessels, as big as good barrels, such as came out of the Isle Chios with wine: but within fve yere after by his saying, hee saw pillars also, and those 32 foot long, all of Onyx or Chalcedonie. But in proceffe of time this stone altered and varied much: F for *Cornelius Balbus* brought foure small pillars thereof, and shewed them in his Theatre for a strange and miraculous sight. And in my time I haue seen of them about thirty, much fairer and bigger, which went to the making of a Summer parlour for pleasure, that *Callistus*, one of the enfranchised slaues of *Claudius Caesar* (a man wel known for his exceeding riches and power) built for his owne selfe.

Here Pliny remembreth himselfe, and makes a third kind of Ophites as *Discor*, did before him, *Diop*, saith it is no bigger than a little pebble or grauel stone

For rather Onyx, chiesse Cassidonic

CHAP

CHAP. VIII.

¶ Of the stone called *Alabastrites*: likewise, of *Lygdinus* and *Alabandicus*.

THis Onyx stone, or Onychitis aforesaid, some name *Alabastrites*; whereof they vse for to make hollow boxes & pots to receiue sweet perfumes and ointments, because it is thought that they will keepe and preserue them excellently well, without corruption. The same being burnt and calcined, is very good for diuers plasters. This *Cassidony* or *Alabastr* is found about Thebes in Egypt, and Damascus in Syria: and this *Alabastr* is whiter than the rest: Howbeit, the best and principall simply is that which cometh out of Carmania: next to it in goodnesse is that of India: and then the *Alabastr* of Syria and Asia. The least esteemed of all other, is brought out of Cappadocia, and no beauty or lustre it hath at all. In sum, come it from what country it will, those pieces which stand most of a yellowish colour, like hony, spotted also in the head and nothing transparent, goe for the best. And generally throughout, look where you meet with any in colour white, or resembling horne, is rejected for naught, like as whatfoeuer of it is like glasse.

As touching the stones *Lygdinus*, found in the mountaine *Taurus*, many are of opinion, that they be well neare as good as the former, for to keepe odoriferous ointments: and those for bignesse and capacity, exceed not bowls and good broad platters: passing faire and white they be: and in times past were wont to be brought only out of Arabia. Moreover, there be two kinds I besides of Marble, well esteemed both, and in great price, notwithstanding standing in nature they be very contrary: the one is called *Coraliticus*, found in Asia, you shal not light vpon any about two cubites long: in whitenesse they come passing neare vnto yvorie, and otherwise also they haue a certaine resemblance vnto it. The other called *Alabandicus*, after the name of the country that yeeldeth it, is contrariwise blacke: howbeit, there is of it to be found growing in *Miletus*, but not altogether so blacke, for it inclineth or declineth rather to a purple colour. This stone of *Miletus* will resolute in the fire, and commonly they vse to melt it for drinking cups, in manner of glasses. To come now to the Thebaicke marble, marked it is with certain drops here and there of a golden colour: and naturally it is found growing in that part of *Africke*, which consisteth vpon the *Aegyptians*, and lyeth vnder their iurisdiction. A peculiar propertie it hath by *K* a secret in Nature, respectiue vnto the eies, to serue for to grinde collyries with, that is to say, those pouders which are appropriat to the diseases of that part. But about *Syene*, in the province of Thebaies, there is a marble (thereupon called *Syrenites*) which sometime they named *Pyrrhopæcilos*: the kings of Egypt in times past (as it were vpon a strife and contention, one to exceed another) made of this stone certaine long beames, which they called *Obelisks*, and consecrated them vnto the Sun, whom they honoured as a god: And indeed, some resemblance they carry of Sun-beames, when they are made to the forme of *Obelisks*, and the very Egyptian name implieth so much. The first that euer began to erect these *Obelisks*, was *Mitres*, king of Egypt, who held his royall seat and court in *Heliopolis*, the citie of the Sunne; where hee was admonished in a dreame by a vision, so to doe: and thus much may appear by the inscription of certaine letters engrauen vpon the said *Obeliske*: for those Characters, figures, and formes that wee doe see incised in them, be the verie * letters that the Egyptians vse themselves. After him, other princes also set vp more of these *Obelisks* in the aboue named citie: and namely king *Sochis* for his part, foure in number, those carrying in length eight and fortie cubits apiece. And *Ramises* (in whose reigne Troy was woon by the Greekes) erected an *Obeliske* fortie cubits long, in the said city: but being departed from thence (for that he took pleasure in another city, where sometimes stood the royal pallace of king *Meneus*) he pitched on end another *Obeliske*, which carried in length * a hundred foot wanting one, and on every side foure cubits square.

¶ *Undecim*, by the Gr. word, is all An. lo. p. 11. v. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000.

CHAP.

CHAP. IX.

¶ Of three *Obelisks*. The first of Thebes in high Egypt: the second of great Alexandria in Egypt: and the third which standeth at Rome in the large Cirque or Shew-place.

IT is said, that *Ramises* abouenamed kept 20000 men at work about this *Obeliske*. The King himselfe in person, when it should be reared on end, fearing lest the engines deuised to raise it, and hold the head thereof betwixt heauen and earth, in the rearing should faile and not be able to beare that monstrous weight, because hee would lay the heauier charge vpon the artificers that were about this enterprife, vpon their vtmost perill, caused his own son to be bound to the top thereof; imagining withall, that the care of the engineers who vnderooke the weighing vp this *Obeliske*, ouer the young prince, for feare of hurting him, would induce them also to be the more heedfull to preserue the stone. Certes, this *Obeliske* was a piece of work so admirable, that when *Cambyses* had woon the city where it stood, by assault, and put all within to fire and sword, and burnt all before him, as far as to the very foundation & vnderpinning of the *Obeliske*, commanded expressly to quench the fire: and so in a kind of reuerence yet vnto a masse and pile of stone, spared it, who had no regard at all of the city besides. Other *Obelisks* there be twaine, the one erected by *K. Smarres*, the other by *Egyphtus*, both without characters, and the same are 48 cubits in height apiece. At Alexandria, *K. Ptolomeus* surnamed *Philadelphus*, set vp another *Obeliske* 80 cubits high, the which king *Metabris* had caused to be hewed out of the quarry, plaine without any work; but much more difficultie there was in carying it from the quarry, & setting it vpright, than there had bin labor in the hewing: some write, that *Satyrus* a great architect & engineer, conueied it to Alexandria by means of flat bottoms or sleds. But *Calixenus* saith, that one *Phanix* did the deed, who caused a trench to be cut from the riuer Nilus, and to be carried with water as far as to the place where the *Obeliske* lay along: then he deuised two broad barges, prepared & well fraught with smal squares of the same stone, a foot euery way, to the double poise or weight of the *Obeliske* it selfe in proportion, by reason whereof the vessels hauing their full load, might come vnder the *Obeliske* iust as it lay hollow ouerthwart the head of the fosse, with either end resting vpon the banks: which done, he began to discharge the vessels vnderneath, & to throw out the stones werewith they were laden, by meanes whereof, as they were lightened, they rose vp higher and higher to the very *Obeliske*, and receiued the charge ordained for them. He writes moreover, that there were six other like to it hewed out of the same mountain, & the workmen who cut and squared them had fifty talents for a reward. But the foresaid *Obeliske* was afterwards by the abouenamed king, erected in the haven of *Arfinoe*, in testimonie of loue to *Arfinoe* his wife and sister both. But for that it did hurt to the ship-docke there, one *Maximus* a gouernor of Egypt vnder the Romans, remoued it from thence into the market place of the said city, cutting off the top of it, intending to put a filiall thereupon gilded, which afterwards was forelet and forgotten. Two *Obelisks* more there were in the haven of Alexandria neere to the temple of *Caesar*, which were hewed out of the rocke by *Mesphes* king of Egypt, being 42 cubits high. But about all other difficultie, it passeth, what a do there was to transport them by sea to Rome: and verily, the ships prepared of purpose therefore were passing faire and wonderfull to see to. As for one of the said ships which brought the former *Obeliske*, *Augustus Caesar* the Emperor of famous memorie, had dedicated it vnto the harbor or haven of *Puteoli*, there to remain for euer as a miracle to behold, but it fortunately was consumed with fire: the other, wherein *C. Caesar* had transported the second *Obeliske* into the riuer, after it had bin kept safe for certaine yeares together, to be seen (for that it was the most admirable Carrick that euer had bin known to float vpon the sea) *Claudius Caesar* late Emperour of Rome caused it to be brought to Ostia, where for the safetie and securitie of the haven he sunk it, and thereupon, as a sure foundation, he raised certaine piles or bastions like turrets or sconces, with the sand of *Puteoli*: which being done, a new care and trouble there was to bring the *Obeliske* vp the riuer *Tiberis* to Rome. Which being effected, it appeared well by that experiment, that vpon the riuer *Tiberis* a vessel draweth as much water full as Nilus. As touching the said *Obeliske* which *Augustus Caesar* late Emperor erected in the great shew-place or cirque at Rome, it was first cut out of the rock by

* *Scampt*.

* Whom some
take to be *A-*
mafis.

* *Senneseferus* King of Egypt, in the time of whose reign *Pythagoras* sojourned in Egypt; & the same contains 125 foot nine inches, besides the foot or base of the said stone. As for the other, standing in *Mars* field, being 9 foot lower than it, hewed and squared it was by commandement from *Sesostris* K. of Egypt. In the characters ingrauen in both of them a man may see all the philosophy and religion of the Egyptians, for they contain the interpretation of nature.

CHAP. X.

¶ Of that Obelisk at Rome which standeth in *Mars* field, and serueth for a *Gnomon*.

AND as for that Obelisk which standeth in *Mars* field, *Augustus Caesar* deuised a wonderfull means that it should serue to mark out the noon tide, with the length of day and night, according to the shadowes that the Sun doth yeeld by it: for hee placed vnderneath at the foot of the said Obelisk, according to the bignes and length thereof, a pauement of broad stone, wherein a man might know the sixt houre or mid-day at Rome, when the shadow was equall to the Obelisk; and how by little and little, according to certain rules (which are lines of brasse inlaid within the said stone) the daies do increase or decrease. A thing no doubt worth the knowledge, and an inuention proceeding from a pregnant wit. *Manlius* a renowned Mathematician & Astronomer, put vnto the top of the said Obelisk a gilded ball, in such sort, that all the shadow which it gaue fell vpon the Obeliske, and this cast other shadowes more or lesse, different from the head or top of the Obeliske aforesaid. The reason whereof (they say) was vnderstood from the sundry shadowes that a mans head yeelds. But surely for these thirty yeares past, or thereabout, the vse of this quadrant aforesaid hath not been found true: and what the reason of it should be I know not; whether the course of the Sun in it self be not the same that hertofore, or be altered by some disposition of the heauens; or whether the whole earth be somewhat removed from the true centre in the midst of the world (which I heare say is found to be so in other places) or that it proceed by occasion of the earthquakes which haue shaken the city of Rome, and so haply wrested the *Gnomon* from the old place: or lastly, whether by reason of many inundations of *Tyber*, this huge and weighty Obelisk hath settled and sunk down lower (and yet it is said, the foundation was laid as deep vnder ground as the obelisk it selfe is aboue ground.)

CHAP. XI.

¶ Of the third Obelisk in the *Vaticane*.

THERE is a third Obelisk at Rome, standing within the cirque or shew-place of the two Emperors *C. Caligula* and *Nero*: and this is the only Obeliske known to haue bin broken in the rearing. This was hewn and erected in Egypt by *Nuncoreus* the son of *Sesostris*: which *Nuncoreus* caused another to be set vp of 100 cubits high, and consecrated it vnto the Sun, after hee had recovered his sight vpon blindness, being so aduertised by the Oracle, which remaines at this day.

CHAP. XII.

¶ Of the Egyptian Pyramides, and of *Sphinx*.

HAVING thus discoursed of the Obelisks, it were good to say somewhat of the Pyramids also in Egypt; a thing I assure you that bewraith the foolish vain-glory of the Kings in that countrey, who abounding with wealth, knew not what to doe with their money, but spent it in such idle and needlesse vanities. And verily most writers doe report, That the principall motiues which induced them to build these Pyramids, was partly to keepe the Common people from idleness, partly also because they would not haue much treasure lying by them, lest either their heirs apparant, or other ambitious persons who aspired to be highest, should take occasion thereby to play false and practise treasons. Certes a man may obserue the great follies of those princes herein, That they began many of these Pyramids, and left them unfinished

A may appeare by the tokens remaining thereof. One of them there is within the territory vnder the jurisdiction of *Arsinoe*; two within the prouince that lieth to the gouernment of *Memphis*, not far from the Labyrinth, whereof also I purpose to speake: there are other twaine likewise in the place where sometimes was the lake *Moeris*, which was nothing else but a mighty huge fort intrenched by mans hand in manner of a more or poole; but the Egyptians (among many other memorable and wonderfull works wrought by their princes) speake much of these two * *Pyramides*, the mighty spires and steeples whereof (by their saying) do arise out of the very water. As for the other three which are so famous throughout the world (as indeed they are notable marks to be kenned a far off by sailers, and directions for their course) these are scituate in the marches of *Affricke* vpon a craggy and barren mountaine, betwene the city *Memphis* and a cer-

B taine Island ordiuison of *Nilus* (which as I haue said before) was called *Delta*, within foure miles of *Nilus* and six from *Memphis*, where there standeth a village hard vnto it named *Bustis*, wherein there be certaine fellows that ordinarily vse to clime vp to the top of them. Over against the sayd *Pyramides* there is a monstrous rocke called *Sphinx*, much more admirable than the *Pyramides*, and forsooth the peasants that inhabit the countrey esteemed it no lesse than some diuine power and god of the fields and Forrests: within it, the opinion goeth, that the body of *K. Amasis* was intombed; & they would bear vs in hand, that the rock was brought thither, all and whole as it is; but surely it is a mere crag growing naturally out of the ground; howbeit wrought also with mans hand, polished and very smooth and slippery. The compasse of this rocks head (resembling thus a monster) taken about the front, or as it were the forehead,

C containeth one hundred and two foot, the length or heighth 143 foot; the heighth from the belly to the top of the crowne in the head, ariseth to 62 foot. But of all these *Pyramides*, the biggest doth consist of the stone hewed out of the Arabicke quarries: it is said, that in the building of it there were 366000 men kept at worke twentie yeares together; and all three were in building three score and eighteene yeares and foure moneths. The writers who haue made mention of these *Pyramides*, were *Herodotus*, *Euhemerus*, *Darius* the Samian, *Arifagoras*, *Dionysius*, *Artemidorus*, *Alexander Polyhistor*, *Butorides*, *Anisthenes*, *Demetrius*, *Democritus*, and *Apion*: but (as many as haue written hereof) yet a man cannot know certainly and say, This *Pyramid* was built by this king: a most iust punishment, that the name and authors of so monstrous vanity, should be buried in perpetuall obliuion: but some of these Historiographers haue reported, that there were

D a thousand and eight hundred talents laid out only for radish, garlick, and onions, during the building of these *Pyramides*. The largest of them taketh vp eight acres of ground at the foot, foure square it is made, and euery face or side thereof equall, containing from angle to angle eight hundred fourescore and three foot, and at the top five and twenty: the second made likewise foure cornered, is on euery side euen, and comprehendeth from corner to corner seven hundred thirty and seven foot: the third is lesse than the former two, but far more beautifull to behold, built of *Ethiopian* stones; it carrieth at the foot in each face betwene foure angles, three hundred three score and three foot. And yet of all these huge monuments, there remaine no tokens of any houses built, no apparence of frames and engins requisite for such monstrous buildings; a man shall find all about them far and neare, faire sand and small red grauell, much like

E vnto *Lentill* seed, such as is to be found in the most part of *Affricke*. A man seeing all so cleane and euen, would wonder at them how they came thither; but the greatest difficultie moouing question and maruell, is this, What meanes were vsed to carry so high as well such mightie masses of hewen squared stone, as the filling, rubbish, and mortar that went thereto; for some are of opinion, that there were deuised mounts of salt and nitre heaped vp together higher and higher as the worke arose and was brought vp; which being finished, were demolished, and so washed away by the inundation of the riuer *Nilus*: others thinke, that there were bridges reared with bricks made of clay, which after the worke was brought to an end, were distributed abroad and imploied in building of priuat houses; for they hold, that *Nilus* could neuer reach thither, lying as it doth so low vnder them when it is at the highest, for to wash away the heaps and mounts aboue said. Within the greatest *Pyramid* there is a pit 86 cubits deep, and thither (some thinke) the riuer was let in. As touching the heighth of these *Pyramides* & such like, how the measure should be taken, *Thales Milesius* deuised the meanes, namely, by taking just length of a shadow when it is meet and euen with the bodie that casteth it. These were the wonderfull *Pyramides* of Egypt, whereof the world speaketh so much. But to conclude this argument,

Ddd

That

* *Herodotus* saith, they were 250 foot high aboue the water, and as many deepe vnder

That no man should need to marvell any more of these huge workes that kings haue built, let G him know thus much, that one of them, the least (I must needs say) but the fairest and most commended for workmanship, was built at the cost and charges of one *Rhodope*, a very strumpet: this *Rhodope* was a bondslawe together with *Asiopo* a Philosopher in his kind, and writer of morall fables, with whom she serued vnder one master in the same house: the greater wonder it is therefore and more miraculous than all I haue said before, that euer she should bee able to get such wealth by playing the harlot.ouer and about the Pyramides abovesaid, a great name there is of a tower built by one of the kings of Egypt within the Island Pharos, and it keepeth & commands the hauen of Alexandria, which tower (they say) cost 800 talents the building. And here because I would omit nothing worth the writing, I cannot but note the singular magnanimity of *K. Ptolome*, who permitted *Softratus* of Gnidos (the master workman and architect) to graue H his owne name in this building. The vse of this watch-tower, is to shew light as a lanthorne, and giue direction in the night season to ships, for to enter the hauen, & where they shall auoid bars and shelues, like to which there be many beacons burning to the same purpose, and namely, at Puteoli and Rauenna. This is the danger onely, lest when many lights in this lanterne meet together, they should be taken for a star in the skie; for that a far off such lights appeare to sailers in manner of a star. This engineer or master workman before said, was the first man that is reported to haue made the pendant gallery and walking place at Gnidos.

CHAP. XIII.

¶ Of the Labyrinths in Egypt, Lemnos, and Italy.

Since wee haue finished our Obelisks and Pyramides, let vs enter also into the Labyrinths, which we may truly say, are the most monstrous workes that euer were deuised by the head of man: neither are they incredible & fabulous, as peraduenture it may be supposed; for one of them remaineth to be seen at this day within the iurisdiction of Heracleopolis, the first that euer was made, to wit, three thousand and six hundred yeares ago, by a king named *Petefuccas*, or as some thinke *Tithoes*: and yet *Herodotus* saith, it was the whole worke of many KK. one after another, and that *Psammerichus* was the last that put his hand to it and made an end thereof: the reason that moued these princes to make this Labyrinth, is not resolued by writers, but diuerse causes are by them alledged: *Demoteles* saith, that this Labyrinth was the roiall pallace and seat of king *Motherudes*: *Lycias* affirmeth it to be the sepulchre of *K. Maris*: the greater part are of opinion, that it was an ædifice dedicated expressly and consecrated vnto the Sun, which in my conceit commeth nearest to the truth. Certes, there is no doubt made that *Dadalus* tooke from hence the pattern and platforme of his Labyrinth which he made in Crete; but surely he expressed not above the hundreth part thereof, chusing onely that corner of the Labyrinth which containeth a number of waies and passages, meeting and incountring one another, winding and turning in and out euery way, after so intricat manner and so inexplicable, that when a man is once in, he cannot possibly get out againe: neither must wee thinke that these turnings and returnings were after the manner of mazes which are drawne vpon the pavement and plain floore of a field, such as we commonly see serue to make sport and pastime among boies, that is to say, L which within a little compasse and round border comprehend many miles; but here were many dores contriued, which might trouble and confound the memorie, for seeing such variety of entrees, allies, and waies, some crossed & encountred, others flanked on either hand, a man wandred still and knew not whether he went forward or backward, nor in truth where he was. And this Labyrinth in Crete is counted the second to that of Egypt: the third is in the Isle Lemnos: the fourth in Italy: made they were all of polished stone, and besides vaulted ouer head with arches. As for the Labyrinth in Egypt, the entree thereof (whereat I much maruell) was made with columns of stone, and all the rest stuffed so substantially and after such a wonderfull maner crouched and laid by art of Maſonrie, that impossible it was they should in many hundred yeres be disjointed and dissolued, notwithstanding that the inhabitants of Heracleopolis did what they could to the contrary; who for a spight that they bare vnto the whole worke, annoied and impeached it wonderfully. To describe the site and plot thereof, to vnfold the architecture of the whole, and to rehearse euery particular thereof, it is not possible; for diuided the building is into sixteene regions or quarters, according to the sixteene seuerall governments in Egypt (which they

A they call *Nomos*) and within the same are contained certain vast & stately pallaces which bear the names of the said iuridictions, and be answerable to them: besides, within the same precinct are the temples of all the Egyptian gods: ouer and about, fifteen little chappels or shrines, euerie one enclosing a *Nemesis*, to which goddesse they be all dedicated: to say nothing of many Pyramides forty ells in height apiece, and euery of them hauing six walls at the foot, in such sort, that before a man can come to the Labyrinth indeed which is so intricat & inexplicable, & wherein (as I said before) he shall be sure to lose himselfe, he may make account to bewearie & tyred out: for yet he is to passe ouer certain lofts, galleries, & garrets, all of them so high that he must clime staires of ninety steps apiece ere he can land at them; within the which, a number of columns and statues there be, all of porphyrit or red marble, a world of images and statues B representing as well gods as men, besides an infinit sort of other pieces pourtraied in monstrous and ougly shapes, and there erected. What should I speake of other rooms and lodgings which are framed and situat in such manner, that no sooner are the dores and gates opened which lead vnto them, but a man shall heare fearfull cracks of terrible thunder: furthermore, the passages from place to place are for the most part so conueighed, that they be as dark as pitch, so as there is no going through them without fire light: and still be we short of the Labyrinth, for without the main wall thereof, there be two other mighty vpright wals or wings, such as in building they call *Prætor*; & when you are passed them, you meet with more shrouds vnder the ground, in manner of caues and countermines vaulted ouer head, and as dark as dungeons. Moreouer, it is said, that about 600 yeares before the time of *K. Alexander* the Great, one *Circamnos* (an eunuch or C groome of *K. Nestis* chamber) made some small reparations here about this Labyrinth, & neuer any but hee would go about such a piece of work. It is reported also, that while the main arches and vaults were in rearing (and those were made all of foure square ashler stone) the place shone all about and gaue light with the beams and plancher made of the Egyptian *Acacia* ladden in oile. And thus much may serue sufficiently for the Labyrinths of Egypt and Candy.

The Labyrinth in Lemnos was much like to them, only in this respect more admirable, for that it had a hundred and forty columns of marble more than the other, all wrought round by turners craft, but with such dexterity, that a very child was able to weld the wheele that turned them, the pins and poles wherby they hung were so artificially poysed. The master deuisers and architects of this Labyrinth, were *Zmilus*, *Rbolus*, and a third vnto them, one *Theodorus* who was D borne in the same Island. Of this, there remaine some reliques to be seene at this day; whereas a man shall not find one smal remnant either of the Italian or Candian Labyrinths: for meet it is that I should write somewhat also of our Labyrinth here in Italy, which *Porſena* K. of Tuscane caused to be made for his own sepulchre; and the rather, because you may know that forein KK. were not so vain in expences, but our princes in Italy surpassed them in vanity: but for that there go so many tales and fables of it which are incredible, I think it good in the description thereof to vse the very words of my author *M. Varro*: King *Porſena* (quoth he) was interred vnder the citie Clusinum in Tuscane, in which very place he left a sumptuous monument or tombe built all of square stone; thirty foot it carried in bredth on euery side, and fifty in height; within the base or foot whereof (which likewise was fouresquare) he made a Labyrinth, so intricat, that if a E man were entred into it without a bottom or clue of thread in his hand, and leaving the one end thereof fastned to the entry or dore, it was impossible that euer he should find the way out again. Vpon this quadrant there stood fixe Pyramides or steeples, foure at the foure corners, and one in the mids, which at the foot or foundation caried 75 foot euery way in bredth, & were brought vp to the height of 150: these grew sharpe spired toward the top, but in the very head so contriued, that they met all in one great roundle of brasse which wrought from one to the other, & couered them all in manner of a cap, and the same rising vp in the mids with a crest most stately; from this couer there hung round about at little chains, a number of bells or cimbals, which being shaken with the wind, made a jangling noise that might be heard a great way off, much like to that ring of bells which was deuised in times past ouer the temple of *Iupiter* at Dodona: I & yet are we not come to an end of this building mounted aloft in the aire, for this couer ouer head serued but for a foundation of 4 other Pyramides, and euery one of them arose a hundred foot high about the other worke, vpon the tops whereof there was yet one terrace more to sustaine fixe Pyramides, and those shot vp to such a monstrous height, that *Varro* was ashamed to report it: but if we may giue credit to the tales that go currant in Tuscane, it was equall to the

* Which was 250 foot 250 that the whole was 500 foot.

whole * building vnderneath. O the outrageous madnesse of a foolish prince, seeking thus in a vaine glorious mind to be immortalized by a superfluous expence which could bring no good at all to any creature, but contrariwise weakened the state of the kingdome! And when all was done, the artificer that enterprised and finished the worke, went away with the greater part of the praise and glory.

CHAP. XIII.

¶ Of a garden made vpon Terraces. Of a citie standing all vpon vaults and arches from the ground. And of the temple of Diana in Ephesus.

WE reade moreover of gardens made in the aire; nay it is recorded, that a whole city (and namely Thebes in Egypt) was built so hollow, that the Egyptian KK. were wont to lead whole armies of men vnder the houses of the said city, and in such sort as none of the inhabitants could beware thereof, yea and sodainly appeare from vnder the ground: a maruelous matter I assure you, but much more wonderfull in case the riuer Nilus also ran thorow the mids of the said towne. But surely of this opinion I am, that if this be true, *Homer* no doubt would haue written of it, considering he hath spoken so much in the praise and commendation of this city, and especially of the * hundred gates that it had. But to speake of a stately and magnificent work indeed, the temple of *Diana* in Ephesus is admirable, which at the common charges of all the princes in Asia was * two hundred and twenty yeres a building. First and foremost, they chose a marsh ground to set it vpon, because it might not be subiect to the danger of earthquakes, or feare the chinkes and opening of the ground: againe, to the end that so mighty and huge building of stone worke should stand vpon a sure and firme foundation (notwithstanding the nature of the soile giuen to be slipperie and vnsteadfast) they laid the first couch and course of the ground worke with charcole well rammed in manner of a pauement, & vpon it a bed of wool-packs: this temple carried in length throughout, four hundred twenty and siue foot, in breadth two hundred and twenty: in it were a hundred and seuen and twenty pillars, made by so many KK. and euery one of them threescore foot high; of which, six and thirtie were curiously wrought and engrauen, whereof one was the handiwork of *Scopas*; *Chersiphron* the famous architect was the chiefe deuiser or master of the workes, and who vndertooke the * rearing thereof: the greatest wonder belonging thereto was this, How those huge chapters of pillars, together with their frizes and architraues, being brought vp and raised so high, should be fitted to the sockets of their shafts: but as it is said, he compassed this enterprife and brought it to effect, by the meanes of certaine bags or sacks filled with sand; for of these he made a soft bed as it were raised about the heads of the pillars, vpon which bed rested the chapters, and euer as he emptied the nethermost, the foresaid chapters settled downward by little and little, and so at his pleasure he might place them where they should stand: but the greatest difficultie in this kind of worke, was about the very frontispiece and maine linte-tree which lay ouer the jambes or cheekes of the great dore of the said temple; for so huge and mighty it was, that hee could not weld it to lay & bestow the same as it ought, for when he had done what he could, it was not to his mind, nor couched and settled in the right place: whereupon the workman *Chersiphron* was much perplexed in his mind, and so wearie of his life, that he purposed to make himself away: but as he lay in bed in the night season, and fell asleep all wearie vpon these dumps and desperat cogitations, the goddesse *Diana* (in whose honor this temple was framed, and now at the point to be reared) appeared sensibly vnto him in person, willing him to be of good cheare and resolute to liue still, assuring him that she her self had laid the said stone of the frontispiece, and couched it accordingly: which appeared true indeed the morrow morning, for it seemed that the very weight thereof had caused it to settle iust into the place, and made a joint as *Chersiphron* would haue wished it. As touching all the other singularities belonging to this temple, and namely the gorgeous ornament that set it out, they would require many volumes to decipher and particularize vpon them; and when all is done, little or nothing pertinent they are to the illustration of Natures worke, which is the principall marke I aime at.

CHAP.

CHAP. XV.

¶ Of the proud temple in Cyzicum. The fugitive stone. The echo which resoundeth seven times to one cry. Of a great building without pin or naile of yron. The sumptuous and admirable adifices in Rome.

HERE is at this day a temple standing at Cyzicum, wherein the mason had bestowed threds of gold in all the joints vnder euery stone throughout, and those were all faire polished: within this temple, prince *Cyzicus* (who caused it to be built) minded to dedicat the image of *Iupiter* in yvorie, and of *Apollo* in marble, setting a crowne vpon his head. Certes, these joints thus enterlaced with most fine and dainty threads, gaue a wonderfull grace and beautie to the whole Church, by sending and breathing (as it were) from them certaine raies, which by reuerberation cause all the images therein to haue a glittering lustre: in such sort, that ouer and aboue the deuise and wittie inuention of the workman, the very matter also (although it be close couched and hidden betwene each stone) commendeth the price and riches of the worke.

Within the said towne there is a stone called the Fugitive and Runaway: The braue knights of Greece called Argonauts, who accompanied prince *Iason* in his voyage for the golden fleece, after they had vsed it for an anchor, left it there: but for that this stone was ready many times to run away and be gone out of their Prytaneum (for so they call their publick hall) they foudred it fast with lead. In the same city neer vnto that gate which is called Thracia, there stand seuen turrets, which doe multiply a voice, and send backe many againe for one: this miraculous rebounding of the voice, the Greekes haue a pretty name for, and call it Echo. True it is, that this repercuSSION and redoubling of the voice, proceedeth otherwhiles from the nature of the place, and most of all in vallies lying betwene hills; but at Cyzicum it cometh by fortune, and no such reason can be giuen thereof. At Olympia the like is wrought by art, for there is a gallerie there made of purpose, which after a wonderfull manner deliuereth the same voice which it receiueth, seven times backe, whereupon they call it Heptaphonon. Moreover, in Cyzicum there is a faire and large building, which (because they keep courts and sit in counsell there) is named Buleuterion: the same is built in such sort, as there goeth not one pin or naile to all the carpentry thereof: and the stories are so laid, that a man may take away the beams and rifiers without any prop or shoure to support them, yea and bestow them againe fast enough without laces to bind them. After which manner, the wooden bridge at Rome was so framed ouer the riuer Tyberis; and a matter of religion and conscience was made thereof, to maintaine it so, in remembrance of the difficultie in taking it apieces and breaking it downe, at what time as *Horatius Cocles* made the place good against the power of *K. Porfena*.

And now since the coherence of matters hath brought me to Rome, methinks I should not doe amisse to proceed vnto the miraculous buildings of this our city, to shew the docilitie of our people, and what prooffe there is of their progresse in all things, during the space of nine hundred yeres; that it may appeare how not only in magnanimitie and prowess they haue conquered the world, but in magnificence also of stately and sumptuous buildings surmounted all nations of the earth: and as a man shall find this singularity and excellencie of theirs in the particular survey of euery one of their stately and wonderfull adifices as they haue bin reared from time to time, so if he put them all together and take a generall view of them at once, he shall conceiue no otherwise of their greatnesse, than of another world assembled (as it were) to make shew in one place: for if I should reckon among great workes (as needs I must) the grand cirque or shew-place built by *Caesar* Dictator, which took vp of ground three stadia or furlongs in length, and one in breadth, containing also in adifices and rooms foure acres of iugera, wherein were bestowed to sit at ease and behold the sight with pleasure, two hundred and threescore thousand persons: what tearme shall I giue, but of Stately and magnificent buildings, either vnto the royall pallace of *Paulus* *Emilius*, enriched with goodly pillars of Sinadian marble out of Phrygia, most admirable to behold; or to the sumptuous Forum of *Augustus* *Caesar* late Emperour, or yet the temple of Peace built by the Emperour *Vespasianus* *Augustus*, now liuing, the goodliest and fairest buildings that euer were: what should I speake of the temple * *Pantheon*, made by *Agrippa* to the honor of *Iupiter* Reuenger? as also how before this time, *Valerius* of *Ofria* the architect or engineer, made a rouse over the great Theatre at Rome against the time that

D d d 3

Libo

* The round church of No-
ster dame, now
at Rome.

L. Libo exhibited his solemnitie of games and plaies to the people? Wonder we at the dispences **G** that *K.K.* were at about their Pyramides: and wonder we not rather that *Julius Caesar* Diētator disbursed for the purchase of that plot of ground only and no more wherein he built his Forum, a hundred millions of sesterces? And if there be any here that take pleasure to hoord up money, and be loth to part with a penny, and loue not to be at charges and lay forth ought, wil they not make a wonder when they heare that *P. Clodius* (whom *Milo* slew) paid for the house wherein he dwelt, fourteene millions and eight hundred thousand sesterces? surely if they donot, I do; and take it to be as foolish an expence and as wonderfull, as that of the *K.K.* in *Ægypt* about named: likewise when I consider the debts that *Milo* himselfe ought, and which amounted to seuentie millions of sesterces, I count it one of the most prodigious enormities that a mans corrupt mind can bring forth. But old men maruelled euen in those daies at the mighty thick rampiers that *K. Tarquinius Priscus* caused to be made, the huge foundations also of the Capitoll that he laid, the vaulted sinks also and draughts (to speake of a piece of worke the greatest of all others) which he deuised, by vndermining and cutting through the seuen hills whereupon Rome is seated, and making the city hanging as it were in the aire between heauen and earth, like vnto Thebes in *Ægypt*, whereof erewhile I made mention; so as a man might passe ouer the streets & houses with bores. But how would they be astonied now, to see how *M. Agrippa* in his *Ædileship*, after he had been Consull, caused seuen riuers to meet together vnder the city in one main channell, and to run with such a swift streame and current, that they take all afore them whatsoeuer is in the way, and carry it downe into Tyber: and being otherwhiles encreased with sodaine shoures & land-floods, they shake the pauing vnder them, they flank the sides of the wals about them: sometimes also they receiue the Tyber water into them when he riseth extraordinarily, so as a man shall perceiue the streame of two contrary waters affront and charge one another with great force and violence within vnder the ground: And yet for all this, these water-workes afore said yeeld not a jot, but abide firme & fast, without any sensible decay occasioned therby, Moreouer, these streames carrie downe eftsoons huge and heauie pieces of stones within them, mighty loads are drawne ouer them continually, yet these arched conduits neither settle and stoupe vnder the one, nor be once shaken with the other, down many an house falls of it selfe, and the ruins beat against these vaults: to say nothing of those that tumble vpon them with the violent force of skarefires, ne yet of the terrible earthquakes which shake the whole earth about them: yet for all these injuries, they haue continued since *Tarquinius Priscus*, almost eight hundred yeres inextinguishable. And here by the way I will not conceale from you a memorable example which is come into my mind by occasion of this discourse, and the rather, for that euen the best & most renowned Chroniclers who haue taken vpon them to pen our Romane history, haue passed it ouer in silence: When this *K. Tarquinius* surnamed *Priscus*, caused their vaults vnder the ground to be made, and forced the common people to labour hard therat with their own hands, it happened that many a good Roman citizen being now ouer-toiled in this kind of work (which whether it were more dangerous or tedious, was hard to say) chose rather to kill themselves for to be rid of their irksome and painfull life; in such sort, that daily there were people missing, and their bodies found after they were perished. This king therefore, to preuent farther mischief, and to prouide that his works begun might be brought to an end, deuised a remedy which neuer was inuented before, nor practised afterwards, and that was this, That the bodies of as many as were thus found dead, should be hung vpon jebets, exposed not onely to the view of all their fellow citizens to be despised as cursed creatures, but also to the wild and rauinous fowles of the aire to be torne and deuoured. The Romans (as they are the only nation vnder heauen impatient of any dishonor) seeing this obiekt presented before their eies, were mightily abashed, and as this mind of theirs had gained them victory many a time in desperat battels, so at this present also it guided & directed them: and being (as they were) dismayed at this disgrace, they made account no lesse to be ashamed of such an ignominie after death, than they now blushed thereat in their life. But to return again vnto these sinks and water-workes of ours vnder the ground: *K. Tarquinius* afore-named, caused them to be made so large and of such capacitie, that a good wain load of hay might passe within them. But al that euer I haue said already is nothing or at leastwise very little, in comparison of one wonderful thing which I am content to set down before I come to our new and moderne buildings: In that yeare when *M. Lepidus* and *Q. Catulus* were Consuls at Rome (according as I find all the best writers to agree) there was not a fairer

* H.S. millier.

* At Rome.

A and more sumptuous house in all Rome, than that wherein *Lepidus* himselfe dwelt: but verily before five and thirty yeres were come and gone, there were a hundred houses and more, brauer than it by many degrees. Now, if a man list by this reckoning to make an estimat of the infinite masse of marble, as well in pillars as square Ashler, the rich and curious pictures, besides other sumptuous furniture, meet indeed for a king, which must of necessitie be employed in a hundred such houses, as might not onely compare with that most beautifull and gorgeous house of *Lepidus*, but also exceed the same; as also the infinit number of other houses afterwards euen vntil this day, which haue gone beyond those hundred in sumptuosities: VVhat would he say, and to what an vnmeasurable proportion will all this arise? Certes, it cannot be denied, but fire (which burneth many a stately pallace) doth say well to the plucking down of mans pride, & punishing such wastfull superfluities; and yet these & such like examples, will not reforme the abuses that reign in the world: neither wil this lesson enter into our heads, That there is ought vnder heauen more fraile, mortall, and transitory, than man himselfe. But what do I stand vpon those glorious edifices, when two pallaces only haue surpassed them all in costlines and magnificence. Twice in our time we haue seen the whole pourprise of Rome to be taken vp, for to make the pallaces of two Emperours, *C. Caligula*, and *Nero*: and as for that of *Nero* (because there might bee nothing wanting of superfluitie in the highest degree) he caused it to be all guilded, and called it was, The golden pallace. For why? those noble Romans who were the founders of this our Empire, dwelt (no doubt) in such glorious and stately houses; those I mean who went from the very plough taile, or out of their country cabins (where they were found at repast by the fire side) C to manage the wars, to atcheeue braue feats of armes, to conquer mighty nations, and to return with victory triumphant into the citie; such, I say, as had not so much free land in the whole world as would serue for one of the cellars of these prodigals. And here I cannot but think with my selfe, how little in proportion to the magnificent buildings of these daies were those plots of grounds which in old time the whole state gaue vnto those inuincible captains by publick degree for to build them houses vpon, and how many of such places would go to one of these in our time, and yet this was the greatest honour that they could deuise to bestow vpon those valiant and hardy knights, as it may appeare by **L. Valerius Publicola*, the first consull that euer was at Rome, and had companion with him in that gouernment *L. Brutus*, who had no other reward in recompence of his good seruice to the Commonweale, and so many demerits; as also by his D brother who in the same Consulship defeated the Samnites twice: where it is worth the noting that in the patent this branch went withall, That they were allowed to open the gates of their houses outward, so as the doores might be cast to the street side: this was in those daies the most glorious and honourable shew that such mens houses made, euen those who had triumphed ouer the enemy. Howbeit, as sumptuous in this kind, as either *C. Caligula* or *Nero* was, yet shal they not enjoy the glory of this fame, though you put them two and two together: for I wil shew, that al this pride & exceffe of theirs in building their pallaces (princes though they were & mighty monarchs) came behind the priuat works of *M. Scantius*: Whose example in his *Ædileship* was of so ill consequence, as I wot not whether euer there were any thing that ouerthrew so much all good manners and orderly ciuility: in such sort, as hard it is to say, whether *Sylla* did more damage E to the state, in hauing a son in law so rich & mighty, than by the proseription of so many thousand Romane citizens. And in truth, this *Scantius* when he was *Ædile*, caused a wonderfull piece of worke to be made, and exceeding all that euer had been knowne wrought by mans hand, not only those that haue been erected for a moneth or such a thing, but euen those that haue bin destined for perpetuities; and a theatre it was: the stage had three lofts one above another, wherein were there hundred and threescore columnes of marble; (a strange and admirable sight in that citie, which in times past could not endure six small pillars of marble, hewed out of the quarry in mount Hymettus, in the house of a most honourable personage, without a great reproch and rebuke giuen to him for it;) the base or nethermost part of the stage, was all of marble; the middle of glasse (an excessive superfluitie, neuer heard of before or after;) as for the vppermost, the F boards, planks, and floores were guilded; the columnes beneath, were (as I haue said before) fortie foot high, wanting twaine; and between these columnes (as I haue shewed before) there stood of statues and Images in brasse to the number of three thousand. The theatre it selfe was able to receiue fourescore thousand persons to sit well, and at ease. Whereas the compasse of *Pompeies* Amphitheatre (notwithstanding the city of Rome so much enlarged, and more peopled in his time)

* Publius, out of Livie.

* For Sylla married the mother of Scantius

* L.C. 47.

time) was deuised for to contain no greater number than fortie thousand seats at large. As touching the other furniture of this Theatre of *Scaurus* in rich hangings, which were cloth of gold: painted tables, the most exquisite that could be found: plaiers apparrell and other stufte meet for to adorne the stage, there was such abundance thereof, that there being caried back to his house of pleasure at Tusculum the surplussage therof, ouer and aboue the daintiest part, wherof he had daily vse at Rome, his seruants and slaues there, vpon indignation for this wast and monstrous superfluitie of their master, set the said country house on fire, and burnt as much as came to a hundred millions of sesterces. Certes, when I consider and behold the monstrous humours of these prodigall spirits, my mind is drawn away stil from the progresse of mine intended iourny, and forced I am to digresse out of my way, and to annex vnto this vanity of *Scaurus* as great follie of another, nor in masonry and marble, but in carpentry and timber: and *C. Curio* it was, he who in the ciuile warres betwene *Cesar* and *Pompey*, lost his life in the quarrell of *Cesar*. This gentleman, desirous to shew pleasure vnto the people of Rome at the funeral of his father deceased, as the manner then was, and seeing that he could not outgo *Scaurus* in rich and sumptuous furniture (for where should he haue had such a father in law again as *Sylla*? Where could he haue found the like mother to dame *Metella*, who had her share in all forfeitures and confiscations of the goods of outlawed citizens? and where was it possible for him to meet with such another father as *M. Scaurus*, the principall person of the whole city so long together, who parted stakes with *Marinus* in pilling and polling of the prouinces, and was the very receptacle & gulf which receiued and swallowed all their spoiles and pillage?) and *Scaurus* himselfe verily, if he might haue had all the goods in the world, could not haue done as he did before, nor make I like Theatre, againe, by reason that his house at Tusculum was burnt, where the costly and rich furniture, the goodliest rare ornaments which he had gotten together from all parts of the world were consumed to ashes: by which fire yet this good hee got and prerogative aboue all other, That no man euer after him was able to match that sumptuositie of his Theatre. This gentleman (I say) *Curio*, al things considered, was put to his shifts, & deuised to surpass *Scaurus* in wit, since hee could not come neere him in wealth. And what might his inuention be? Certes, it is worth the knowledge, if there were no more but this, that we may haue ioy of our own conceits and fashions, and call our selues worthily, as our manner is, **Majores*, that is to say, superiour euery way to all others. To come then to *C. Curio*, & his cunning deuise, he caused two Theatres to be framed of timber, and those exceeding big, howbeit so, as they might be turned about as a man would haue them, approach neere one to the other, or be removed farther asunder as one would desire, & all by the means of one hooke apiece that they hung by, which bare the weight of the whole frame, the counterpoise was so euen, & all the whole therefore sure and firme. Now he ordered the matter thus, that to behold the feuerall stage plaies and shews in the forenoone before dinner, they shall be set back to back, to the end that the stages should not trouble one another: and when the people had taken their pleasure that way, he turned the Theatres about in a trice against the afternoone, that they affronted one another: and toward the latter end of the day, and namely, when the fencers and sword-plaiers were to come in place, he brought both the Theatres nearer together (and yet euery man sat stil & kept his place, according to his rank and order) in so much, as by the meeting of the horns and corners of them both together in compass, he made a faire round Amphitheatre of it: and there in the midst betweene, he exhibited indeed vnto them all jointly, a sight and spectacle of sword-fencers fighting at sharpe, whom he had hired for that purpose: but in truth, a man may say more truly, that he caried the whole people of Rome round about at his pleasure, bound sure enough for stirring or remoouing. Now let vs come to the point, and consider a little better of this thing. What should a man wonder at most therein, the deuise or the deuise it selfe? The workman of this fabrick, or the master that set him on worke? Whether of the twaine is more admirable, either the venturous head of him that deuised it, or the bold heart of him that vndertook it: to command such a thing to be done, or to obey and yeeld to goe in hand with it? But when we haue said all that we can, the follie of the blind & bold people of Rome went beyond all: who trusted such a ticklish frame, & durst sit there, in a seat so moueable. Loe where a man might haue seen the body of that people, which is commander and ruler of the whole earth, the conquerour of the world, the disposer of kingdoms and realmes at their pleasure, the deuise of countries and nations at their wil, the giuer of lawes to forreinstates, the vicegerent of the immortall gods vnder heauen, and representing their

* The Romans delighted much in this word *Majores*, as may appear by their *Mores Majorum*, &c.

A their image vnto all mankind: hanging in the air within a frame at the mercy of one only hook, rejoicing and ready to clap hands at their owne danger. What a cheape market of mens liues was here toward! What was the losse at Cannæ to this hazard, that they should complaine so much as they do of Cannæ? How neere vnto a mischiefe were they, which might haue happened hereby in the turning of a hand? Certes, when there is newes come of a city swallowed vp by a wide chinke and opening of the earth, all men generally in a publicke commiseration doe grieue thereat, and there is not one but his heart doth earne, and yet, behold the vniuersall state and people of Rome, as if they were put into a couple of barks, supported between heauen and earth, and sitting at the deuotion only of two pins or hooke. And what spectacle do they behold, a number of fencers trying it out with vnrebat swords? nay ywis, but euen themselves rather entered into a most desperat fight, and at the point to break their necks euery mothers son, if the scabbard failed neuer so little, & the frame went out of joint: Now surely by this prooff, *Curio* had gotten a good hand ouer the people of Rome, & no Tribunes of the Commons with all their Orations could do more: from that time forward he might make account to be so gracious, as to lead all the tribes after him in any suits, and haue them hanging in the air at his pleasure. What a mighty man with them might he be (thinke you) preaching vnto them from the Rostra? What would not he dare to propose, hauing audience in that publick place before them who could perswade them thus, as he did, to sit vpon such turning and ticklish Theatres. And in truth, if we wil consider this pageant vpright, we must needs confesse & may be bold to say, that *Curio* had all the people of Rome to perform a braue skirmish and combat indeed to honor and solemnize the funerals of his father before his tombe. And yet here is not all: for he was at his change and variety of magnificent shewes: and when he perceiued once that the hooke of his frames were stretched ynough and began to be out of order, hee kept them still close together round in forme of a perfect Amphitheatre, and the very last day of his funeral solemnities, vpon two stages just in the midst, he represented wrestlers and other champions to performe their deuoir, and then all on a suddaine causing the said stages to be disjointed and hailed one from another a contrary way, he brought forth the same day the fencers and sword players who had wooen the prize, and with that shew made an end of all. See what *Curio* was able to do! And yet was he neither king nor *Cesar*: he was not so much as a generall or commander of an army; nay, he was not named for any great rich man: as whose principall state depended vpon this, That when the great men of the city, *Cesar* and *Pompey*, were skuffling together by the eares, he knew well how to fish in a troubled water. But to leaue *Curio* & such as he was, with their foolish and idle expences, let vs come to the miraculous workes that *Q. Marcius Rex* performed, and that to some good purpose: which if we consider & esteeme aright, passe all the other before rehearsed. This gentleman when he was Pretor, hauing commandement & commission both from the Senat, to repaire the conduits to the waters of Appia, Anio, and Tepula, which serued Rome, did not that only, but also conueighed a new water into the city, which of his owne name he called Martia: and notwithstanding that he was to pierce certaine mountains, & make trenches quite through them vnder the ground, for to bring the water thither from the Spring, yet he persoumed all within the time of his Pretourship. As for *Agrippa*, whiles he was *Ædile*, besides the conduits from all other fountains which he scoured, repaired, and caused to keep their currant: he brought another of his own to the city, which is known by the name of *Virgo*: he made seuen hundred pooles for receipt of waters: a hundred and fise conduits, yelding water at rockes and spoutes, besides a hundred and thirtie conduit heads in the fields, and the most of them built strongly with vaults, and adorned right stately. Moreover, vpon these workes of his he erected statues & images, to the number of three hundred, partly of brasse and partly of marble, besides foure hundred pillars of marble, and all within the compass of one yeare. And if wee may beleue his owne speech, discoursing of the acts done by him during his *Ædileship*, hee addeth moreover and saith, That the plaies and games which he exhibited that yeare, for to doe the people pleasure, continued threecore daies together, wanting one: that hee caused a hundred threecore and ten baines or stouues to be made within the city, wherein people of all sorts and degrees might bathe and sweat of free cost, and not pay a denier: the which remain at this day, and haue brought with them an infinit number of others. But of all the conduits that euer were before this time, that which was last begun by *C. Caligula Cesar*, and finished by *Claudius Cesar* his successeur, passeth for sumptuousnesse: for they commanded the waters from the two foun-

taines,

* *Seferidm* *teu*
militer, how b
ic *Budeus* reads
quingentes,
quingies,
quingies, and
that is not
much more
than the six
part: & yet by
his computati
on ariseth to a
million three
hundred eigh
ty five thou
sand and five
hundred French
crownes,
* *Nro.*

tains, Curtius & Caruleus, whose heads were 40 miles off: and these they carried before them with such a force and to such an height, that they mounted up to the top of the highest hills of Rome, and served them that dwelt thereupon. This work cost three hundred millions of festerces. Certes, if a man would well and truly consider the abundance of water that is brought thereby, and how many places it serves, as well publicke as priuat, in baines, stews, and fishpools, for kitchins and other houses of office, for pipes and little riuers to water gardens, as well about the citie, as in manors and houses of pleasure in the fields neere the city, ouer and besides, what a mighty way these waters be brought, the number of arches that of necessitie must be built of purpose for to conueigh them; the mountaines that be pierced and mined through to giue way together, with the vallies that are raised and made euen and leuell with other ground: he will confesse, that there was neuer any desseine in the whole world enterprised and effected, more admirable than this. In the ranke of these most memorabell workes of man, I may well raunge the mountaine that was digged through by the same *Claudius Caesar*, for to void away the water out of the lough or meere Fucinus, although this work was left vnfinished for hatred of his *successour: which I assure you cost an incredible and inenarrable sum of mony, besides the infinit toil and labour of a multitude of workemen and labourers so many yeres together, as well to force the water which came vpon the pioners from vnder the ground with deuise of engines and windles vp to the top of the hill, whereas it stood vpon meere earth, as to cut and hew through hard reggs and rockes of flint: and all this by candlelight within the earth, in such sort that vnlesse a man had bin there to haue scene the manner of it, vnpossible it is either to conceiue in mind or expresse with tongue the difficultie of the enterprise. As for the peere and haue at Ostia (because I would make an end once of these matters) I will not say a word thereof, nor of the waies and passages cut through the mountaines, ne yet of the mighty piles and damns to exclude the Tuscane sea, for the Lucrine lake, with so many rampiers and bridges made of such infinit cost. Howbeit, among many other miraculous things in Egypt, one thing more I will relate out of mine author *Papyrius Fabianus*, a great learned Naturalist, namely, That marble doth grow daily in the quarries, and in very truth, the farmers of those quarries, and such as ordinarily do labour and dig out stone, doo asseure no lesse; who vpon their experience doe assure vs, that looke what holes and caues be made in those rockes and mountaines, the same will gather againe and fill vp in time: which if it be true, good hope there is, that so long as marbles do liue, excesse in building will neuer die.

CHAP. XVI.

¶ *The sundry kinds of the Load-stone, and the medicines thereto depending.*

NOW that I am to passe from marbles to the singular & admirable natures of other stones; who doubts but the Magnet or Loadstone will present it self in the first place? for is there any thing more wonderfull, and wherein Nature hath more trauelled to shew her power, than in it? True it is, that to rockes and stones she had giuen *voice (as I haue already shewed) whereby they are able to answer a man, nay, they are ready to gainsay and multiply words vpon him. But is that all? what is there to our seeming more dull than the stiffe and hard stone? And yet behold, Nature hath bestowed vpon it, sence, yea & hands also, with the vse thereof. What can we deuise more stubborne and rebellious in the own kind, than the hard yron, yet it yeelds, and will abide to be ordered: for loe, it is willing to be drawne by the load stone: a marvellous matter that this mettall, which tameth and conquereth all things els, should run toward I wot not what, and the nearer that it approacheth, standeth still as if it were arrested, and suffereth it selfe to be held therewith, nay, it claspeth and clungeth to it, and will not away. And hereupon it is, that some call the load-stone * *Sideritis*, others *Heracleos*. As for the name *Magnes* that it hath, itooke it (as *Nicander* saith) of the first inuentor and deuiser thereof, who found it (by his saying) vpon the mountaine *Ida* (for now it is to be had in all other countries, like as in *Spaine* also;) and (by report) a neat-heard he was: who, as he kept his beasts vpon the foresaid mountaine, might perceiue as he went vp and downe, both the hob-nailes which were in his shooes, and also the yron picke or graine of his staffe, to sticke vnto the said stone. Moreover, *Sotacius* ascribeth and setteth downe fise sundry kinds of the load-stone: the first which commeth out of *Ethyopia*; the second, from that *Magnesia* which confineth vpon *Macedonie*, and namely,

A namely, on the right hand, as you go from thence toward the lake *Boebeis*, the third is found in *Echium*, a town of *Boeotia*, the fourth about *Alexandria*, in the region of *Troas*, and the fift in *Magnesia*, a country in *Asia Minor*. The principall difference obserued in these stones, consists in the sex (for some be male, others female;) the next lieth in the colour. As for those which are brought out of *Macedonie* and *Magnesia*, they be partly red, and partly blacke. The *Boeotian* loadstone standeth more vpon red than black: contrariwise, that of *Troas* is black, and of the female sex, in which regard it is not of that vertue that others be. But the worst of all comes from *Magnesia* in *Natolia*, and the same is white: neither doth it draw yron as the rest, but resembles the pumish stone. In sum, this is found by experience, That the blower any of these loadstones be, the better they are and more powerful. And the *Ethyopian* is simply the best, in so much, as it is worth the weight in siluer: found it is in *Zimiri*, for so they call the sandy region of *Ethyopia*, which country yeeldeth also the sanguine load-stone, called *Hematites*, which both in color resembleth blood, and also if it be bruised, yeeldeth a bloody humour, yea and otherwhiles that which is like to saffron. As for the property of drawing yron, this blood-stone *Hematites* is nothing like to the loadstone indeed. But if you would know and try the true *Ethyopian Magnet*, it is of power to draw to it any of the other sorts of loadstones. This is a generall vertue in them all, more or lesse, according to that portion of strength which Nature hath indued them withal. That they are very good to put into those medicines which are prepared for the eies: but principally they do repress the vehement flux of humors that fall into them: beeing calcined and beaten into powder, they do heale any burne or scald. To conclude, there is another mountaine C in the same *Ethyopia*, and not far from the said *Zimiri*, which breedeth the stone *Theamedes* that will abide no yron, but rejecteth and driueth the same from it. But of both these natures, as well the one as the other, I haue written oftentimes already.

CHAP. XVII.

¶ *Of certaine stones which will quickly consume the bodies that be laid therein. Of others againe that preserue them a long time. Of the stone called Assius, and the medicinable properties thereof.*

WIThin the Isle *Scyros* there is a stone (by report) which so long as it is whole & sound will swim and fote vpon the water, breake the same into small pieces, it will sink. Near vnto *Assos*, a city in *Troas*, there is found in the quarries a certaine stone called *Sarcophagus*, which runneth in a dire & veine, and is apt to be clouen and so cut out of the rocke by flakes. The reason of that name is this, because that within the space of forty daies it is knowne for certaine to consume the bodies of the dead which are bestowed therein, skin, flesh, and bone, all saue the teeth. And *Mutianus* mine author affirmeth, that looke what mirrors, *currycombs, cloth, or shooes soeuer be cast into the said coffins with the dead, they will turn all into stone. Of this nature there be stones in *Lycia*, and in the East countries, which if they be hung or applied to liuing bodies also, will eat and fret them away. Yet the stone called *Chernites*, resembling E yvorie, is more mild and gentle: for keepe it will and preserue dead bodies without consuming them at all, & in a sepulchre or coffin of this stone, the body of *K. Darius* (they say) was bestowed Touching the stone called *Porus*, like it is vnto the marble of *Paros* for white colour and hardness, howbeit nothing so weighty. *Theophrastus* writeth, That there be found in *Egypt* certain cleare and transparent stones, and those he saith bee like vnto the *Serpentine marble Ophites*: haply such there were in his time, for now are there none of them to be found; but as they are gone, so there be new come in their place. As for the stone *Assius*, in tast it is saltish, but singular good to allay the paine of the gout, if the feet onely be put into a trough or hollow vessell made of that stone. Moreover, all griefes, pains, and infirmities of the legs, will be healed in such quarries: whereas in all mettall mines, the legs take harm. Furthermore, this stone yeeldeth in the top F of the quarrie a certain light substance, apt to be reduced into a soft powder, which they call the floure of the said stone, and is as effectuall as the stone it selfe in some cases. Like it is for all the world to a red pumish stone. If it be mixt with *Cyprian* brasse or copper, it cures the accidents of womens breasts; but being incorporat with pitch or rosin, it discusseth the kings euill, and any biles or bitches. The same reduced into a lioch to be licked down leasurly, serueth well in a phthy-

* *Strigilis*. He meaneth those that be used in baines to scritch off the scurf, and filthinesse of our bodies.

* *i. The eccho.*

* *ashest* in Greek is yron.

phthysicke: and tempered with hony, it healeth vp old vlcers and skinneth them cleane: and yet this property it hath, to eat away any excrescence of proud flesh. The same is good for the bitings of wild and venomous beasts. Such morimals or sores as scorne ordinary cures & be full of suppuration, it drieth. Finally, there is an excellent cataplasme made with it and beane flour put together, for the gout.

CHAP. XVIII.

¶ Of Yvorie minerall, digged out of the ground. Of stones that are of a bony nature, and such, as their veines represent Date-trees within: and of other kinds of stone.

Theophrastus and Mutianus aboue named, are verily persuaded, That there be some stones which ingender others. And as for Theophrastus, he affirmeth, That there is a minerall Yvorie found within the ground, as well black as white: also, that there be bones growing within the earth, yea, and stones of a bony substance. About Munda, a city in Spaine, where Caesar dictator defeated Pompey, there are found stones resembling Date-trees, breake them as often as you will. There be also certaine black stones, whereof there is as great account made as of marbles: like as the stone also of the cape Tanara. And such black stones (Varro saith) be more firm and hard which come out of Africa, than those of Italy; and contrariwise, that there be white stones harder to be wrought by the Turner, than the marble of Paros: the said Varro affirmeth, that the flint of Luna may be slit with the saw, whereas that of Tusculum will cracke and flie in pieces in the fire; also, That the darke and dusky Sabine stone, if it be sprinkled with oil, will burne of a light fire: moreover, That about Volfinij there haue been found quernes or hand mill-stones framed ready for worke, yea, and some we haue seen to turne about and grind of their owne accord; but such haue bin taken for prodigies. And since I am fallen vpon the mention of such mill-stones, there is not a country in the world affoordeth better of that kinde than Italy doth: neither do such grow in the rocke, and are hewed forth, but be entire stones of themselves apart: and yet in some provinces there are none of them to be had at all. And in this kind there be of a more free and softer grit, which being smoothed and polished with a slicke stone, may seem a far off as if they were Serpentine marble; and verily, there is not a stone wil indure better, or lie longer in building. For thus you must thinke, that all stones bee not of one and the same nature to abide rain and weather, heat of Summer and cold in Winter alike; for some be more durable than others, like as we find in sundry kinds of timber. Finally, there be stones also, which may not away with the raies of the Moon: which in continuance of time wil gather rust, yea, and with oile will change their white colour.

CHAP. XIX.

¶ Of Curalium or Pyrites, i. the Marcasin: and the medicinable vertues thereof. Of the stone Ostracite, and the Amiant: together with the properties seruing in Physicke: also, of the stone Melitites, and the vertues thereof. Likewise of the Geat, and the effects that it worketh in Physick, Of Spunges. Lastly, of the Phrygian stone, and the Nature of it.

The mill-stone Curalium, some call Pyrites, because it seemeth to haue great store of fire in it: howbeit, there is another fire stone going vnder the name of Pyrites or Marcasin, that resembleth brasse ore in the mine. And they say, that of it there is found great plenty in the Isle Cypros, and in those mines which are about Acarnania, where a man shal meet with one in colour like silver, and another like gold. These stones be calcined many & sundry waies: some boile them two or three times in hony, so long, vntill all the liquor be consumed: others burne them first in fire of coales, then they calcine them with hony, and afterwards wash them, after the maner of brasse. These stones thus prepared, are good in Physick, namely, to heat, to dry, to discusse, to subtiliat grosse humors, and to mollifie all schirrhosities or hard tumors. The same are much vsed also crude and vncalcined (being reduced into powder) for the kings euill, and scellions. Moreover, in the rank of these Marcasines, some range certaine stones, which we call quicke fire-

A fire-stones, and of all others they be most ponderous: these be most necessarie for the espials belonging vnto a camp, if they strike them either with an iron spike or another stone, they will cast forth sparks of fire, which lightning vpon matches dipt in brimstone, dry puffs or leaues, will cause them to catch fire sooner than a man can say the word.

As touching the stones Ostracite, they haue a resemblance to oyster shels, whereof they took their name: vied they are much in stead of a pumish stone to smooth and slick the skin: taken in drink they stanch any flux of blood; and in forme of a liniment applied with hony, they heale the vlcers in womens breasts, and assuage their paine.

The * Amiant stone is like Alum, & being put into the fire, loseth nothing of the substance: a singular propertie it hath to resist all enchantments and forceries, such especially as Magicians do practise. As for Gades, the Greeks haue giuen it this significant name, because it containeth inclosed within the belly, a certaine earth, a medicine soueraine for the eies, as also for the infirmities incident as well to womens paps, as mens genitoirs.

The stone Melitites hath that name, because if it be bruised or braied, it yeeldeth from it a certaine sweet juice in manner of honey: the same being incorporat in wax, is good to cure the flegmatick wheales, and other pusses or specks of the body; it healeth likewise the exulceration of the throat: applied with wool, it takes away the chilblanes or angry bloudi falls called E-pinytides: also the griefe of the matrice it easeth in the same manner.

The Geat, which otherwise we call Gagates, carrieth the name of a towne and riuer both in Lycia, called Gages: it is said also, that the sea casteth it vp at a full tide or high water into the Island of Leucola, where it is gathered within the space of twelue stadia, and no where els: black it is, plaine and euen, of an hollow substance in manner of a pumish stone, not much differing from the nature of wood, light, brittle, and if it be rubbed or bruised, of a strong sauer. Looke what letters are imprinted in it into any vessell of earth, they will neuer be got out again: whiles it burneth it yeelds a smel of brimstone: but a wonderful thing it is of this jeat stone, that water will soone make it to flame, and oile will quench it againe: in burning, the perfume thereof chaseth away serpents, and recouers women lying in a trance by the suffocation or rising of the mother: the said smoke discouereth the falling sicknesse, and bewraeth whether a yong dam-fell be a * maid or no: being boiled in wine, it helpeth the tooth-ache, and tempered with wax it cures the swelling glandules called the Kings euil. They say that Physitians vse this yet stone much in their forceries, practised by the means of red hot axes, which they call Axinomantia, for they affirme, that being cast thereupon, it will burn and consume, if what we desire and wish shall happen accordingly.

As for Spunges, I mean by them in this place certain stones found in Spunges, and the same also do ingender naturally within them. Some there be who call them Tecolithos, because they are good for the bladder, in this respect, that they breake the stone, being drunk in wine.

As concerning the Phrygian stone, it beareth the name of the country where it is ordinarily found, and it groweth in hollow lumps in manner of a pumish stone: the order is to steep it well in wine before it be calcined, and in the burning to maintain the fire with blast of bellows, vntil it wax red; then to quench it again in red wine, continuing this course three times: & being thus prepared, it is good only to scoure cloth, and make it ready for the Dier to take a colour.

CHAP. XX.

¶ Of the red bloud-stone Haematites, and the fine sorts thereof: also of the blacke sanguine stone called Schistos.

The bloud-stone Schistos and Haematites both haue great affinitie one with another. As for the bloud-stone Haematites, a meere mineral it is, and found in mines of metall: being burnt it comes to the colour of Vermilion: the manner of calcining it is much after that of the Phrygian stone, but wine serueth not to quench it. Many sophisticate it with Schistos, and obtrude the one for the other: but the difference is soon known, for that the right Haematites hath red veins in it, and besides is by nature fraile and easie to crumble: of wonderful operation it is to help bloud-thotten eies: the same giuen to women to drink, staieth the immoderat flux that followes them: they also that vse to cast vp bloud at the mouth, find helpe by drinking it with the juice of a pomgranat: in the diseases likewise of the bladder it is very effectual;

Ecc

and

* It is taken for Alum de plume.

* If she drinke it fasting, presently it prouoketh vrin, if she be a pure virgin.

and being taken in wine, it is souerain against the sting of serpents. In all these cases the bloud-stone Schistos is effectual, but weaker only it is in operation: and yet among these sanguine or bloud-stones, those are taken for the best and most helpfull which in colour resemble saffron; & such haue a peculiar resplendent lustre by themselves. This stone being applied to weeping and watery eyes with womans milk, doth them much good, and is souerain also to restrain and keep them in, if they be ready to start out of the head. And this I write according to the mind and opinion of our modern writers. But *Sotacus* a very antient writer hath deliuered vnto vs five kinds of bloud-stones, besides that *Hæmatites* called *Magnes*, or the Load-stone: among which he giues the chiefe prize and principall praise to the *Æthiopian*, for that it is so souerain to be put into medicines appropriat to the eyes; as also into those which for their excellent operation be called *Panchresta*. A second sort he saith is called *Androdamas*, black of colour, and for weight and hardnesse surpassing all the rest, whereupon it took that name, and of this kind there are found great store in Barbary. He affirmeth moreover, That it hath a qualitie to draw vnto it silver, brasse, and iron: and for triall whether it be good or no, it ought to be ground vpon the touch called *Basantis*; for it will yeeld a bloody iuice, the which is a right souerain remedie for the diseases of the liver. The third kind of bloud-stone he maketh *Arabick*, for that it is brought out of Arabia: as hard it is as the other, for hardly will there any iuice come from it, though it be put to the grindstone, and the same otherwhile is of a Saffron colour. The fourth sort he saith is called *Elatites*, so long as it is crude; but being once calcined, it is named *Miltites*: a very excellent thing for burns and scaldings, and in all cases much better than any ruddle whatsoeuer. In the fift place he reckons that which is called *Schistos*: this is held to be singular for repressing the flux of bloud from the hemorrhoid veins. But generally of all these bloud-stones he concludes thus, That if they be puluerised, and taken in oile vpon a fasting stomach to the weight of 3 drams, they be right souerain for all fluxes of bloud. The same author writes of another *Schistos* which is none of these *Hæmatites*, and this they call *Anthraxes*: and by his saying, found there is of it in *Africk*, black of colour, which if it be ground vpon a whetstone or grindstone with water, yeelds toward the nether end or side thereof that lay next the ground, a certaine blacke iuice; but on the other side of a saffron colour: and he is of opinion, that the said iuice is singular for those medicines appropriat to the eyes.

CHAP. XXI.

¶ Of the foure kinds of the *Ægle-stone*, *Aëtius*: of the stone *Callimus*: of the stones *Samus* and *Arabus*: and of *Pumish* stones.

THE *Ægle-stones* called *Aëtites* be much renowned in regard of the very name they carry: found they are in *Ægles* nests, as I haue shewed already in my tenth book, & it is said that they be two together, to wit, the male and female: also, that without them the *Ægles* cannot hatch, which is the reason that they neuer haue but two young *Ægles* at one aire. Of this *Ægle-stone* there be foure kinds; for one sort thereof is bred in *Africk*, and is very small & soft, containing within it as it were in a wombe, a certaine clay which is sweet, pleasant, and white; the stone it selfe is brittle and apt to crumble, and this is thought to be the female sex. The second, which is taken for the male, groweth in Arabia, hard this is, and resembleth a gall-nut in fashion, and the same otherwhile is of a reddish colour, hauing inclosed within the belly thereof, another hard stone. The third is found in the Island *Cypros*, for colour much like to those that be engendred in *Africke*, otherwise bigger, and made more flat and broad than they: The rest be vsually round in manner of a globe. This hath also within the wombe a sweet sand and other small grauelly stones, but it selfe is so tender that a man may crumble it betwixt his fingers. The fourth kind is named *Taphiusus*, for that it is bred neere vnto the cape *Leucas*, in a place neere *Taphiusa*, on the right hand as men saile from the said *Taphiusa* toward *Leucas*: there is found of it in riuers, but the same is white and round: within the belly of it there is another stone called *Callimus*, and there is not a thing more tender than it. But to come to the properties of these *Ægle-stones*: They are commended as singular for women with childe, or four-footed beasts that are with yong; for being hung about their necks, or otherwise tied vnto any part within the skin of a beast sacrificed, they will cause them to go out their full time, but removed

A remoued they must not be but at the very time of deliuerance, for otherwise the very wombe or matrice would slip out withall; and vnlesse they be remoued then, they shall neuer be deliuered. Within the same Isle *Samos* (wherin we praised the goldsmiths earth *Tripoly*) there is a stone likewise called *Samius*, very good to burnish and polish gold: the same serueth also in physicke together with milk, for vlcers of the eyes, being applied in manner aforesaid; and in that sort it cureth also their weeping and watring which hath continued a long time: the same being taken in drinke, helpeth the infirmities and other accidents of the stomach; it cureth the dizziness of the head, & restoreth those to their right senses again who be troubled in their brain. Some are of opinion, that it is wholsome to be giuen to those that are subject to the falling sickness, or difficulty of making water: besides, it is one of the ingredients that go to the making of those medicines which be called *Acopa*: for to know whether it be good, see that it be passing white and heauy withall. It is said, that if a woman weare it hanging or tied about her, it will keep her from vntimely slips of her abortiue fruit, and withall containe the matrice though it were giuen to fall downe too low.

Touching the stone *Arabus*, like it is to *pyoric*, a proper thing for dentifrices, if it be calcined and reduced to pouder: a peculiar property it hath besides, to cure the hemorrhoids, being applied thereto in lint, so that there be fine linnen clothes laid afterwards thereupon.

I must not ouerpasse in silence, the treatise of *pumish* stones and their nature: I am not ignorant that in architecture and masonrie, they vse to call by the name of *Pumices* or *Pumishes* those hollowed stones or bricks as if they were eaten into, which hang downe from those vaulted buildings which they call *Musca*, to represent a caue or hollow vault artificially made. But to speake more properly of those *Pumishes* which are vsed by women for to smooth and slicken their skin, yea, and by your leaue by men also in these daies; also for to polish books, as *Catullus* saith, the best of them are found in *Melos*, *Seyros*, and the Islands of *Ætolia*: and those ought to be very white, and according to their proportion exceeding light: the same should bee also as spongiuous as is possible, and dry without, easie to be beaten to pouder, & in the rubbing between the fingers not apt to yeeld from them any sand. As for their medicinable vertues, they do extenuate and dry, after 3 calcinings, so that regard be had in the torrifying, that it be done with cleane charcoles that burn cleare, and that they be euery time quenched with whitewine: which done, they are to be washed like to *Cadmia* or the *Calamine* stone; and being dried again, they would be laied vp in some dry place which is in any wise dank or giuen to gather mouldinesse. The pouder of this stone is commended principally in medicines for the eyes, for a gentle mundificatiue it is, and clenseth the vlcers and sores incident to them: it doth incarnate hollow skars & maketh them euen with the rest about them. Some, after the third burning, suffer them to coole of themselves, and not by quenching: and chuse rather to beat them afterwards with some sprinkling of wine among: they enter likewise into those emollitiue or lenitiue plasters which are deuised for the sores of the head or vlcers in the priuities. The best dentifrices for to cleanse or whiten the teeth, be made of the *pumish*. *Theophrastus* writeth, that great drunkards who drink for a wager, vse to take the pouder of the *pumish* stone before-hand; for then they may, nay they must quaffe lustily indeed, for vnlesse they be filled with drinke, they are indangered by the foresaid pouder. To conclude, he saith, that so exceeding refrigeratiue it is, that if new wine do work or purge neuer so much, cast but a little *pumish* stone into it, you shall see it giue ouer immediatly.

CHAP. XXII.

¶ Of stones which be good for Apothecaries to make their mortars of: of soft stones: of the glasse-stone: of slims and the shining stone *Phengites*: of whetstones and grindstones: of other stones that serue in building, which resist the violence of fire and tempests.

OUR antient writers in old time were carefull to finde stones fit for mortars, and not onely to serue Apothecaries for to beat and puluerize their drugs, or painters to grinde their colours, but the cooks also in the kitchen for to pouder their spices: and in very truth, they preferred the *Ephesian* marbie before all others: and next to it, that of *Thebais* in high *Ægypt*, which I called before *Pyrrhopœilon*, though some there be that name it *Psaronium*: in a

third degree they place a kinde of Chalazius named Chrysites; but the Physitians make most account of that kind of whetstone which they call Bafanites, because this stone sendeth nothing from it, for all the stamping and punning that is made in it. As for such stones as yeeld a certaine moisture from them, they are supposed to be good for cie salues; and therefore in that regard the Æthiopian marble is best esteemed for that purpose. As for the marble of Tænara, of Carthage called Poenicum, and the bloud-stone Homatites, they are al good (they say) for those compositions which stand vpon safron: but that Tænarian marble which is blacke, as also the white marble of Paros, is not so good for Physitians, who rather chuse the Alabastrite of Egypt, or the white Serpentine marble: for this kind of Ophites it is whereof they make their vessells and barels. In the Island Siphnus there groweth in the quarries, a stone, which they vse to hew hollow, and by Turners craft make vessels for the kitchin good to boile viands in: also very handy for platters and dishes to serue vp meat to the table; much like to the green stone that cometh from Comus in Italy, which wee see ordinarily imploied to those vses: but this propertie hath the Siphnian stone by it selfe, that if it be once heat with oile, it beginneth to look blacke and waxes hard withal, being otherwise naturally exceeding soft: such difference there is among stones. For on the further sides of the Alps there be stones found exceeding soft: and in the province Belgica or Picardy, they haue a certaine white stone, which they slit through with a saw as they do timber, yea and with much more facility, wherewith they make plates that serue to couer their houses in manner of slates or tiles, both on the sides and also in gutter and ridge, yea and if they list, to make fine work vpon the roofs that may shine like to peacocks feathers, which they call Pauonacea: and verily this kind of stone is apt also to be clouen.

Specularis lapis

As touching * Talc (which also goeth in the name of a stone) it is by nature much more easie to be clouen into as thin flakes as a man will. This kind of glasse stone, the hither part of Spaine only in old time did afford vs, & the same not all throughout, but within the compasse of a 100 miles, namely about the city Segobrica: but in these daies we haue it from Cypros, Cappadocia, and Sicilie, and of late also it hath been found in Barbary: howbeit, the best glasse stone comes from Spaine and Cappadocia, for it is the tendrest and carrieth largest pannels, although they be not altogether the clearest, but somewhat dusky. There be also of them in Italy about Bononia, but the same be short and small, full of spots also and joined to pieces of flint; and yet it seemeth that in nature they be much like to those that in Spaine beed digged out of pits which they sink to a great depth. Moreover, there is found of this Talc betweene other stones inclosed in a rocke and lying vnder the ground, which must be hewed out if a man would haue them. But for the most part, this Talc lieth in manner of a vein in the mine by it selfe, as if it were perfectly cut already by nature; and yet was there neuer any piece knowne to be aboute five foot long. Some are of opinion, that it is a liquid humour of the earth congealed to an yce after the maner of CrySTALL. Certes, that it groweth hard into the nature of a stone, may appeare euidently by this, That when any wild beafts are chanced to fall into such pits where this glasse stone is gotten, the very marow of their bones (after one winter) will be conuerted and turned into a stony substance like to the Talc it selfe. Otherwhiles there is found of this kinde which is blacke: but the white is of a strange and wonderfull nature, for being (as it is well knowne) tender and brittle, nothing more, yet it wil indure extreme heat and frozen cold, and neuer cracke; nay you shal neuer see it decay for age, keep it so long as you wil, so that it may escape outward injuries: notwithstanding we doe see many stones in building laied with strong mortar and cement, yet subiect to age. There hath beene deuised another vse also of Talc in smaller pieces, namely, to pauer therewith the floore of the great shew-place or cirque in Rome, during the running of chariots and other feats of actiuitie there performed, to the end that their whitenesse might giue a more louely glosse to commend the place. In the daies of Nero late Emperour, there was found in Cappadocia a stone as hard as marble, white and transparent, and shining through, yea euen on that side where it hath certaine reddish streakes or spots: in which regard, (for that it is so replendent) it hath found a name to be called Phengires. Of this stone, the said Emperour caused the temple of Fortune to be built called Seia (which king Seruius had first dedicated) comprised within the compasse of Neros golden house: and therefore when the doores stood open in the day time, a man might see within, the day light, after the manner of glasse stones; yet so, as if all the light were within-forth onely, and not let in from the aire thorough the windowes. Moreover, king Tubawriteth, that in Arabia there is a certaine stone found,

which

A which likewise shineth as glasse, whereof the inhabitants of those parts do make their mirrors or looking-glasses.

It remaineth now, that I should proceed to those stones which are by workmen imploied to good and necessary vses: first of all, to those which serue to whet tools and instruments of yron, of which there be many sorts: Those of Candie, for a long time were of greatest name & most in request: in a second degree were those accounted which came from the mountaine Targetus in Laconia: but both the one and the other serue for no vse, without oile. But among the grindstones and whetstones which are occupied with water, those of Naxos were in greatest price and most commended; next to them, those of Armenia, whereof I haue already written. The stones of Cilicia wil do wel enough either with water or oile, it skills not whether: but the whetstones,

B that come from Arsinoe, are onely vled with water. There bee found in Italie whetstones, which with water will giue a wonderfull keene edge; also beyond the Alps, and such they call Passernices. In a fourth rank are to be reckoned those stones which serue for a mans spittle, and such be the bones that Barbers occupie for to sharpen their raifors; but they are of little or no vse at all because they be so soft and brittle: and of this kind, the chiefe are sent out of the higher part of Spain from the country Flamminitana. As for other stones whereof I haue not written already, they be all naught for building, so soft they be, and by that means nothing durable: and yet in some countries they haue none other to build withall, as namely at Carthage in Africk, notwithstanding the wals of the houses there are subiect to the waters of the sea, are pinched and pierced with winds, yea and beate with rain and weather; against which inconueni-

C nces the inhabitants are forced to keep their wals with pitching, for otherwise (the stones are so tender and soft) the ordinary parget of lime would fret and eat them: wherupon there goeth a pretty speech of the Carthaginians, that they do contrary to all others, in that they vse pitch to their houses, and lime to their wines; for in truth they tun vp their new wines with lime. There be found moreover about Rome other soft stones, to wit, in the territories belonging to Fidena and Alba: in Liguria likewise, Vmbria, and Venice, they haue a white free stone, which may be easily cut with a toothed saw: these are very tractable and easie to be wrought, and wil last reasonable well, but within house only, for if the weather lie vpon them, if the rain beat, and the pinching frost come, they will pill and skale, yea and break into pieces; neither be they durable against the breath and vapor of the sea. The Tyburtine stones, they will indure all other things

D well enough, only they may not abide hot vapors, for if the heat of summer take them, they will gape and be ready to cleaue in sunder. As for flints, the black, and in some places the red also, are much commended: in certaine countries, the white be very good; as namely, those in the quarries about Anicia within the territory of Tarquinij about the lake neere vnto Volfinij: also along the tract of Statona, there be good building stones that wil take no harm by fire; these are commonly vled for those monuments and memorials wherin ought to be ingraued, for they continue a long time, and are not the worse for age: Of this kind of stone, the founders make their moulds for to melt bras in. Moreover, there is a kind of Greene stone, which wonderfully cheeth and scorneth all fire, but in no place is there plenty thereof to be had: and wheresoeuer it is found, it groweth not in manner of a rock or quarrie, but lieth scattered here and there. Of the

E rest that hitherto are not named, the pale stone is not good for building, and seldome will it serue to make mortar of. The round pebbles are lasting enough, and will indure any hardnesse, but surely in building nothing trusty, vnlesse they be knit and bound with strong mortar and couched well together. Those that are gathered out of riuers make no sure building, for they seeme alwaies to relent and be moist: but for such stones as these, and generally for all those that we doubt, the only remedy is to dig them out of the ground in Summer, to let them haue two yeres seasoning in lying abroad and taking all kinds of weather before they be imploied in building; and look how much thereof hath caught harme by this means, the same will serue very well in ground works and foundations: and that which continueth still sound, you may be bold to put it in building, yea, in open works without dore. The Greekes haue a kinde of wall which they make of hard pebbles or flint couched euen and laied in order by line and leuell, like as we do in bricke wals: and this kind of building they call in Mafonrie Isodomon: but in case they be not euen laied nor ranged streight, but that some part of the wall is thicker than others, they terme it Pseudisodomon. A third manner they haue which they name Emplecton, namely, when the front onely of the wall is smooth and euen, for otherwise within they huddle & fill

one with another. Moreouer, to lay a wal artificially and to bind the stones wel, they ought in alternatiue course to ride and reach one ouer another halfe, so that the joint may fall out in the mids of a stone both aboue and vnder; a necessarie point to be considered in the very mids of a wal if it be possible: if not so, yet in any case toward the sides & ends thereof: as for the middle of the wall within, it would be well stuffed and filled with any rubbish, rammel, and broken stones. There is a kind of net-work building in Masonry called Dictyocheton, ordinarily vsed in Rome, but subiect it is to cracke and chinke. In sum, a wall would be built by rule and square, by line and leuell, and answerable to the plumb.

CHAP. XXIII.

¶ Of Cisterns, and Lime: of sundry sorts of Sand: of the tempering of Sand and Lime together for mortar: of faults in Masonrie: of Pargetting and other Rough-casting: of the proportion of Columnes and Pillars.

FOR to make good cisterns which might hold water, the mortar that goeth thereto ought to be made of fine parts of fine pure sand and grauelly together, to two parts of the most strong and binding lime that may be gotten; provided alwaies that the fragments of flint which are to be imploied herein, be small, and exceed not the weight of one pound a piece: this done, not only the bottome or pauing, but the side-walls and the ends, ought to be rammed downe hard with yron beetles: howbeit, for to keep good and cleare water, it were the better way to haue alwaies two cisterns together, that in the former the water may settle and cast down all the grounds to the bottome, and to the cleare water only passe into the other as if it were strained through a fine colander. As touching lime, *Cato Censorius* disalloweth that which is made of diuers stones, or of sundry colours: and to speake a truth, white stones are better to make lime than the hard, and such is more meet to lay stone withall in Masonrie; howbeit the lime which commeth of hollow and fistulous stones, is thought to serue better for to couer and parget walls. The lime which commeth of flint, is rejected both for the one and the other: also the lime made of stones digged out of the ground, is farre better than of pebbles gathered from riuier sides: that which commeth of millstones is most profitable, for it is more fatty and glutinous than others. A strange and wonderfull matter it is, that any thing after it hath bin once burnt and calcined, should be set on fire againe with water. And thus much of Lime.

As touching Sand, there be three kinds thereof: the one is digged out of pits in the ground, and this requireth a fourth part of lime to be put vnto it in making mortar: a second commeth out of riuier sides or the sea shore, and this would haue a third part: and if there be besides another third part of potsherd beaten to powder and put thereto, the stuffe or mortar will be the better. Between the Apennine hill and the riuier Po, there is no sand digged out of the ground, ne yet any sea sand at all. And verily, the greatest reason that cities fall to decay and be so ruinated, is this, for that the mortar being robbed of the due proportion of lime, hath not that binding as it ought, and so the walls built therewith are not fodred accordingly. Also, this would be obserued, that mortar the elder that it is, the better it is found for building. Moreouer, in the old laws which prouide for the perpetuities of houses in antient time, we find it expressly set down, that the undertaker to build a house at a certain price, shall vse no mortar vnder three yerres of age: and this was the reason that in those daies a man should not see any rough-cast or parget to rise or chawne illfaoueredly as now they do: and in truth, vnlesse there be laid vpon wals three coats or couches (as it were) of mortar made with sand and lime, and two courses ouer them of other mortar made of marble grit and lime tempered together, the wals will not be permanent nor otherwise faire and resplendent as they ought to be: and look where wals be dampish and giuen to sweat a certaine salt humor or sal-petre, it were very well to lay a ground vnderneath of mortar made of the powder of potsheds and lime wrought together. In Greece they haue a cast by themselves, to temper and beat in mortars, the mortar made of lime and sand wherewith they meane to parget and couer their walls, with a great wooden pestill. As for the mortar made of marble-grit and lime together, the true marke to know whether it haue making sufficient for building, is this, namely, if it will not sticke to the shouell that worketh it, but will come out of the heap neat and clean: but contrariwise, in whiting and fret work, the lime being foked and wet in water, ought to cleaue fast like glew; neither ought it to be tempered with water, but in the grosse

A grosse masse or lumpe. At Elis there standeth a temple consecrated to the honour of *Minerva*, wherein *Pamphus*, the brother of *Phidias*, vsed a parget (as they say) which he tempered with milk and saffron together; and therefore at this day, if a man wet his thumb with spittle, and rub it against the wall, he shall perceiue both the smell and tast of saffron to remaine still.

As touching pillars in any building, the thicker they stand one to another, the bigger & grosser they seem to be. Our architects and masons make foure sorts of them: for they say, that such pillars as beare in compasse or thicknesse toward the foot, as much as commeth to the sixt part of the height, be called Dorique: those that carry but a ninth part, are Ionique: such as haue a seuenth part, be Tuscanique. And as for the Corinthian pillars, their proportion is answerable to the Ionique; onely this is the difference, that the Chapters of the Corinthian pillars arise in height to as much as the compasse at the base taketh vp: in which regard they seem more slender than others. As for the height of the Ionick chapter, it is iust the third part of the thicknes. The proportion ordinarily in old time for the height of pillars, was answerable to the third part of the breadth of the temple. In the temple of *Diana* at Ephesus, the inuention was first practised to pitch the footfall of pillars vpon a quadrant or square below, and to set chapters vpon their heads. And as touching the proportion, it was thought sufficient in the beginning, if a columnne contained in compasse or thicknesse the eight part of the height; also, that the square of the quadrant vnder the base, should containe halfe the thicknesse of the pillar: finally, that the pillars should be smaller by one seuenth part in the head, than at the foot. Ouer and besides these pillars, there be others also of the Atticke fashion, and those be made with foure corners, and the sides are equall.

CHAP. XXIII.

¶ The medicinable properties of Lime. Also, as touching the Maltha vsed in old time, and of Plastre.

MUCH vse there is of Lime also euen in Physick: but then there must be chosen that which is quick and vnqueint. Such lime is caustick, discussive, and extractiue: the same also is proper to repress corrosiue vlcers that begin to spread and run far. If the said lime be tempered with vinegar and oile of roses, it maketh an excellent healing plastre, which will skin vp a sore clean. The same if it be incorporat with swines greafe or liquid rosin and hony together, serues also to set bones in ioint: & the same composition is likewise good for the kings euil.

Concerning Maltha, it was wont to be made of quick and new lime: for they took the Lime-stone and quenched it in wine, which done, presently they punned it with swines greafe and figs; hereof they made ordinarily two couches: and being thus tempered and laid, it was thought to be the fastest whitening that could be deuised, and in hardnesse to exceed a stone. But looke whatsoeuer is to be pargetted with this Maltha or mortar thus prepared, ought first to be rubbed thoroughly with a size of oile.

Of neare affinity to lime is plastre, whereof be many kinds: for there is a kind of plastre artificiall, and namely in Syria and about *Thurium*, made of stone calcined in manner of lime: and there is of it that is digged out of the ground naturally, as namely, in the Isle *Cyprus*, and about the *Perrhoebians*. Neare *Thymphaea*, a city in *Ætolia*, it lieth very ebbe and as it were euen with the ground: as for the stone that is to be burnt for it, the same ought to be not vnlike to the stone *Alabastrites*, or at leastwise to that which stands much vpon marble. In Syria they chuse for this purpose the hardest, and they burne the same with cow dung, that it may the sooner be calcined. But the best plastre of all other is known (by experience) to be made of the Talc or the glasse stone aforesaid, or at leastwise of such as haue the like flakes as Talc. Plastre must be wrought and driuen presently whiles it is wet and will run, for nothing in the world wil so soon thicken and dry: and yet when it hath bin vsed already, it may be beaten again to powder, & serue the turn in new workes. Plaster serueth passing wel to white wals or feeling; also for to make little images in fretwork, to set forth houses; yea, and the brows of pillars and wals, to cast off rain. To conclude, I may not forget that which befell to *C. Proculus*, a great fauorit and follower of *Augustus Caesar*, who in an extreame fit of the paine of the stomacke, dranke plastre, and so killed himselfe wilfully.

CHAP.

CHAP. . XXV.

¶ *Sundry kindes of paved floores : and when at first they began to be used at Rome. Of open terraces paved. Of Greekish pavements. And the first inuention of arched or embowed roofes.*

THe deuise of paved floores arose first from the Greeks, who made them with great art, and curiously, in regard of the painting in sundry colours which they bestowed therupon: but these braue painted floores were put downe, when pavements made of stone and quarrels came in place: the most famous workman in this kind, was one *Sofus*, who at Pergamus wrought that rich pavement in the common hall, which they call *Asaroton* cecon, garnished with bricks or small tiles enealed with sundry colours: and he deuised, that the worke vpon this pavement should resemble the crums and scraps that fel from the table, and such like stuffe as commonly is swept away, as if they were left still by negligence vpon the pavement. Among the rest, wonderfull was his handiworke there, in pourtraying a Doue drinking, which was so liuely expressed, as if the shadow of her head had dimmed the brightnesse of the water: there should a man haue seen other Pigeons sitting vpon the brim of the water tankard, pruning themselves with their bills, and disporting in the Sunshine. The old paved floores, which now also are much used especially vnder rooffe and couwert, howsoeuer they came from barbarous countries, were in Italy first parted and beaten downe with heauie rammers; as we may collect by the verie name it selfe, *Pauement*, which comes of *Pavire*, i. to ram downe hard. As for the manner of paving with small tiles or quarrels ingrauen, the first that euer was seen at Rome, was made within the temple of *Iupiter Capitolinum*, and not before the third Punicke war begun. But ere the Cimbrian wars began, such pavements were much taken vp in Rome, and men tooke great delight and pleasure therein, as may appeare sufficiently by that common verse out of *Lucilius* the Poet.

Ante Pavimenta ata emblemata vermiculata, &c.

Before the Pavements checker-wrought in painted Marquetry, &c.

As touching open galleries and terraces, they were deuised by the Greeks, who were wont to couer their houses with such. And in truth, where the country is warme, such deuises doe well: howbeit, they are dangerous and deceitfull, where there is store of rain and frost. But for to make a terrace so paved, necessary it is first to lay two courses of boords or planks vnderneath, and those crosse and ouerthwart one the other: the ends of which planks or boords ought to be nailed, to the end they should not twine or cast asofide; which done, take of new rubbish two third parts, and put thereto one third part of shards stamped to powder, then with other old rubbish mix two fiew parts of lime, and herewith lay a couch of a foot thicknesse, and be sure to ram it hard together. Ouer which there must be laid a coator course of mortar, six fingers bredth thick, and vpon this middle, couch broad square paving tiles or quarrels, and the same ought to enter at least two fingers deep into the said bed of mortar. Now for that this floore or pavement must rise higher in the top, this proportion is to be obserued, that in every ten foot it gain an inch and a halfe. After which, the pavement thus laid is to be plained and polished diligently with some hard stone: and aboue al, regard would be had, that the planks or boorded floor were made of oke. As for such as do cast or twine any way, they be thought naught. Moreouer, it were better to lay a course of flint or chaffe between it and the lime, to the end, that the said lime might not haue so much force to hurt the boord vnderneath. Requisite also it were to put vnderneath round pebbles among. After the like maner be the spiked pavements made of flat tiles & shards. And here I must not forget one kind of paving more, which is called *Grecanicke*, the manner wherof is thus. The Greeks after they haue well rammed a floore which they mean to pave, lay therupon a pavement of rubbish, or else broken tile shards; and then vpon it, a couch of charcoale well bearen and driuen close together, with sand, lime, and small cindres well mixed together: which done, they do lay their paving stuffe to the thicknesse of halfe a foot, but so euē, as the rule and square will giue it; and this is thought to be a true earthen paved floore of the best making. But if the same be smoothed also with a hard sliche stone, the whole pavement will seem all black: as for those pavements called *Lithostrata*, which be made of diuers coloured squares couched in workes,

A works, the inuention began by *Syllaes* time, who used thereto small quarrels or tiles at *Preneste* within the temple of *Fortune*, which pavement remains to be seen at this day. But in processe of time pavements were driuen out of ground-floores, and passed vp into chambers, and those were seeled ouer head with glasse: which also is but a new inuention of late deuised: for *Agrippa* verily in those baines which he caused to be made at Rome, annealed all the potterie worke that there was, and enamelled the same with diuers colours: whereas all others be adorned only with whiting; & no doubt he would neuer haue forgotten to haue arched them ouer with glasse if the inuention had bin practised before, or if from the wals & partitions of glasse which *Scaturus* made vpon his stage, as I said before, any one had proceeded also to rooffe chambers therewith. But since I am fallen vpon the mention of glasse, it shall not be impertinent to discourse somewhat of the nature thereof.

CHAP. XXVI.

¶ *The first inuention of glasse, and the manner of making it. Of a kind of Glasse, called Obsidianum. Also of sundry kindes of Glasse, and those of many formes.*

THere is one part of Syria called *Phœnice*, bordering vpon *Iurie*, which at the foot of the mount *Carmel*, hath a meere named *Cendeuia*, out of which the riuer *Belus* is thought to spring, and within fiew miles space, falleth into the sea, near vnto the colony *Ptolemais*: **C** This riuer runneth but slowly, and seemeth a dead or dormant water, vnwholesome for drinke, howbeit, used in many sacred ceremonies with great deuotion; full of mud it is, and the same very deepe ere a man shall meet with the firm ground: and vnlesse it be at some spring tide, when the sea floweth vp high into the riuer, it neuer sheweth sand in the bottom; but then, by occasion of the surging waues, which not only stir the water, but also cast vp & coure away the grosse mud, the sand is rolled too and fro, and being cast vp, sheweth very bright and cleare, as if it were purified by the waues of the sea: and in truth, men hold opinion, That by the mordacity and astringent quality of the salt water, the sands become good, which before serued to no purpose. The coast along this riuer which sheweth this kind of sand, is not aboue halfe a mile in all, and yet for many a hundred yeare it hath furnished all places with matter sufficient to make glasse. **D** As touching which deuise, the common voice and fame runneth, that there arriued sometimes certain merchants in a ship laden with nitre, in the mouth of this riuer, & being landed, minded to seeth their victuals vpon the shore and the very sands: but for that they wanted other stones, to serue as treuets to beare vp their pans and cauldrons ouer the fire they made shift with certaine pieces of sal-nitre out of the ship, to support the said pans, and so made fire vnderneath: which being once asire among the sand and grauell of the shore, they might perceiue a certaine cleare liquor run from vnder the fire in very streams, and hereupon they lay came the first inuention of making glasse. But afterwards (as mans wit is very inuentiue) men were not content to mix nitre with this sand, but began to put the Load-stone among, for that it is thought naturally to draw the liquor of glasse vnto it, as well as yron. Then they fell to calcine and burne in many other places shining grauell stones, shels of fishes, yea, and sand digged out of the ground, for to make glasse therewith. Moreouer, diuers authors there be who affirme, That the Indians vse to make glasse of the broken pieces of Crystall, and therefore no glasse comparable to that of India. Now the matter wherof glasse is made, must be boiled or burnt with a fire of dry wood, and the same burning light and cleare without smoke, and there would be put thereto brasse of Cyprus, and nitre, especially that which cometh from *Ophyr*. The furnace must bee kept with fire continually, after the manner as they vse in melting the ore of brasse. Now the first burning yeeldeth certaine lumps of a fatty substance, and blackish of colour. This matter is so keene and penetrant whiles it is hot, that if it touch or breath vpon any part of the body, it will pierce and cut to the very bone ere one be aware or do feele it. These masses or lumps be put into the fire againe, and melted a second time in the glasse houses, where the colour is giuen that they shall haue: and then some of it with blast of the mouth, is fashioned to what form or shape the workman will: other parcells polished with the Turners instrument, and some againe engrauen, chafed, and embossed in manner of siluer plates: in all which feats, the Sidonians in times past were famous artificers: for at Sidon were deuised also mirroirs or looking glasses. Thus much as touching

ching the antique maner of making glasse. But now adaies there is a glasse made in Italy of a certain white sand, found in the riuier Vulturnus for six miles space along the shore towns, from the mouth where he dischargeth himselfe into the sea, and this is between Cumes and the lake Lucrinus. This sand is passing soft and tender, whereby it may be reduced very easily into fine powder, either to be beaten in mortar or ground in mill: to which pouder the manner is to put three parts of nitre, either in weight or measure, and after it is the first time melted, they vse to let it passe into other furnaces, where it is reduced into a certain masse, which, because it is compounded of sand and nitre, they call Ammonitrum: this must be melted againe, and then it becomes pure glasse, and the very matter indeed of the white clear glasses: & in this sort throughout France and Spain the maner is to temper their sand, & to prepare it for the making of glasse. Moreover, it is said, That during the reigne of *Tiberius* the Emperor, there was deuised a certain temper of glasse, which made it pliable and flexible to wind and turne without breaking: but the * artificer who deuised this, was put downe, and his work-houie, for feare lest vessels made of such glasse should take away the credit from the rich plate of brasse, siluer, and gold, and make them of no price: and verily, this bruit hath run currant a long time (but how true, it is not to certain.) But what booteth the abolishing of glasse-makers, seeing that in the daies of the Emperor *Nero* the art was growne to such perfection, that two drinking cups of glasse (and those not big, which they called *Pterotos*) were sold for 6000 sesterces.

*It is said, that
when a supplie
to this empe-
ror came be-
fore him, and
shewed to him
a glasse whole
and found
which had bin
of purpose bro-
ken before, hee
caused him pre-
sently to be
put to death.
*Cel. Rhodig.
l. 29, cap. 30.*

There may be ranged among the kinds of glasses, those which they call *Obsidian*, for that they carry some resemblance of that stone, which one *Obsidius* found in *Aethyopia*; exceeding blacke in colour, otherwhiles also transparent: howbeit, the sight therein is but thicke and dusky. It serueth for a mirrour to stand in a wall, and instead of the image yeeldeth back shadows. Of this kind of glasse many haue made jewels in maner of precious stones: and I my selfe haue seene masseue pourtraictures made thereof, resembling *Augustus* late Emperor of famous memory, who was wont to take pleasure in the thicknes of this stone, inso much as he dedicated in the temple of *Concord* for a strange and miraculous matter, foure Elephants made of this *Obsidian* stone. Also *Tiberius Caesar* sent back again to the citizens of *Heliopolis*, a certain image of prince *Menelaus*, found among the moueable goods of one who had bin lord gouernor in *Aegypt*, which he had taken away out of a temple, among other cerimoniall reliques: and the said statue was all of the laier, called *Obsidian*. And by this it may appeare, That this matter began long time before to be in vse, which now seemeth to be renewed again and counterfeited by glasse that resembleth it so neare. As for the said *Obsidian* stone, *Xenocrates* writeth, That it is found naturally growing among the Indians, within *Samnium* also in Italy, and in *Spaine* along the coast of the Ocean. Moreover, there is a kind of *Obsidian* glasse, with a tincture artificiall, as blacke as laier, which serueth for dishes and platters to hold meat: like as other glasse, red throughout, and not transparent, called for that colour *Hæmatinon*. By art likewise there be vessels of glasse made white and of the colour of *Cassidony*, resembling also the *Iacinth* and *Saphire*, yea, & any other colors whatsoever. In sum, there is not any matter at this day more tractable and willing either to receiue any forme or take a color, than glasse: but of all glasses, those be most in request and commended aboue the rest, which be white, transparent and cleare throughout, comming as neare as it is possible to *Crysell*. And verily, such pleasure do men take now adaies in drinking out of faire glasses, that they haue in maner put downe our cups and boules of siluer or gold: but this I must tell you, that this ware may not abide the heat of the fire, vnlesse some cold liquor were put therein before: and indeed, hold a round bal or hollow apple of glasse full of water against the Sun, it will be so hot, that it is ready to burne any cloth that it toucheth. As for broken glasses, well may they be glued and soldered againe by a warme heat of the fire, but melted or cast again they cannot be whole, vnlesse a man make a new furnace of pieces broken one from another: like as we see there be made counting rundles thereof, which some call *Abaculos*, whereof some are of diuers and sundry colors. Moreover, this would be noted, That if glasse and sulphur be melted together, they will fonder and vnite into a hard stone. To conclude, hauing thus discoursed of all things that are knowne to be done by wit or art, according to the direction of Nature, I cannot chuse but maruell at fire and the operations thereof, seeing that nothing in a manner is brought to perfection but by fire; and thereby any thing may be done.

¶ The wonderfull operations of fire: the medicinable properties that it hath; and the prodigious significations obserued thereby.

Fire receiueh sundry sorts of sand & earth, out of which it doth extract and melt one while glasse, another while siluer, in this place vermilion, in that diuers sorts of lead and tin; sometime Painters colours, and another while matters medicinable. By fire, stones are resolued into brasse; by fire iron is made, and the same is tamed likewise therewith: fire burneth and calcineth stone, whereof is made that mortar which bindeth all worke in masonry. As for some things, the more they be burnt, the better they are; and of one and the same matter a man shall see one substance ingendred in the first fire, another in the second, and another also in the third. As for the coles that go to these fires, when they be quenched they begin to haue their strength and after they are thought extinct and dead they are of greatest vertue. This element of Fire is infinit, and neuer ceaseth working, inso much as it is hard to say whether it consume more than it ingendreth. The very fire also is of great effect in physick; for this is known for certain by experience, there is not a better thing in the world against the pestilence (occasioned by the darkness of the Sun, and the want of cleare light from him) than to make fires and perfumes in diuers sorts, either to clarifie or to correct the aire; according as *Empedocles* and *Hippocrates* haue testified in diuers places. *M. Varro* writeth, that fire is good for convulsions, cramps, and contusions of the inward parts: and for this purpose I will alledge the very words he useth: the Latine word *Lix* (quoth he) is nothing else but the ashes of the hearth; and hereupon comes *Lixiuum cinis*, i. Lie ashes, which being drunk is medicinable; as we may see by fencers and sword-plaiers, who after they haue done their flourishing, and be ready to enter into fight at sharpe, reftesta themselves with this potion. Furthermore it is said, That a cole of oke wood being reduced into ashes and incorporat with hony, cureth the carbuncle, which is a pestilent disease, whereof two noblemen at Rome, both Consuls in their time, died of late, according as I haue shewed already. See the wonderfull power in nature, that things despised and of no account, as ashes and coles, should afford remedies for the health of man! But before I make an end of fire, and the hearth where it burneth, I will not passe one admirable example commended vnto vs by the Roman Chronicles: in which we reade, That during the reign of *Tarquinius Priscus* king of Rome, there appeared all on the sudden vpon the hearth where hee kept fire, out of the very ashes, the genital member of a man, by vertue whereof, a wench belonging vnto *Tanaquil* the queen, as she sate before the said fire, conceiued and arose from the fire with childe; and of this conception came *Servius Tullus* who succeeded *Tarquin* in the kingdome. And afterwards, while hee was a yong childe, and lay asleep within the court, his head was seen on a light fire, whereupon he was taken to be the son of the domestical spirits of the chimney. Which was the reason, that when he was come to the crown, he first instituted the *Compitalia*, and the solemne games in honour of such house-gods or familiar spirits.





THE XXXVII. BOOKE OF
THE HISTORIE OF NATVRE,
WRITTEN BY C. PLINIUS
SECVNDVS.

The Proem.



to the end that nothing might be wanting to this historie of mine concerning Natures works, there remaine behind nothing but pretious stones wherein appeareth her Maiessty, brought into a narrow and streight roome: and to say a truib, in no part of the world is she more wonderfull, in many respects; whet her you regard their varietie, colours, matter, or beauty, which are so rich and pretious, that many make conscience to seale with them, thinking it unlawfull to engraue any print in them, or to diminish their honour and estimating on by that means. Some of them are reckoned inestimable, or valued at all the goods of the world besides, in somuch as many men thinke some one pretious stone or gem sufficient to behold therein the very perfection of Nature, and her absolute worke. Touching the first inuention of wearing such stones in jewels, and how it tooke first root, and grew afterwards to that height as all the world is in admiration thereof, I haue already shewed in some sort in my treatise of Gold and Rings. And yet I will not conceale from you that which poets fable of this matter, who would beare vs in hand, that all began at the rocke Caucasus, whereunto Prometheus was bound fast, who was the first that set a little fragment of this rocke within a peece of iron, which being done about his finger, was the ring, and the foresaid stone the gemme: whereof the Poets make much foolish moralization.

CHAP. I.

¶ Of the rich precious stones of Polycrates the Tyrant, and King Pyrrhus. The first Lapidaries or Cutters in pretious stones. And who was the first that had a case of rings and gems at Rome.



Prometheus hauing giuen this precedent, brought other stones into great price and credit, in somuch as men were mightily inamoured vpon them: and Polycrates of Samos, the puissant prince and mighty monarch ouer all the Islands and coasts thereof, in the height of his felicitie and happy estate, which himselfe confessed to be excessive, being troubled in his mind, that he had tasted of no misfortune, and willing after a sort to play at Fortunes game, one while to win, and another while to lose, and in some measure to satisfie her inconstancie, was perswaded in his minde that he should content her sufficiently in the voluntarie losse of one gem that he had, and which he set so great store by: thinking verily, that this one hearts griefe for parting from so pretious a jewell, was sufficient to excuse and redeeme him from the spightfull enuy of that mutable goddesse. Seeing therefore the world to come vpon him still, and no soure sorrowes intermingled with his sweet delights, in awearinesse of his continual blessednesse, he imbarkeed himselfe and sailed into the deep, where wilfully he flung into the sea a ring from his finger, together with the said stone so pretious, set therein. But see what ensued! A mighty fish euen made as a man would say for the king,

A king, chanced to swallow it down as if it had bin some bait, which being afterwards caught by fishers, & thought to be of an extraordinary bignes, was brought as a present into the kings palace, and so sent into the kitchen, where the cook found within the belly thereof the foresaid ring of his lords & masters. Oh the subtiltie of she Fortune, who all this while twisted the cord that another day should hang Polycrates! This stone (as it is wel known) was a Sardonyx: & if we may beleue it, the very same it is, which at Rome is shewed in the temple of Concord, where Augusta the Empreffe dedicated it as an oblation, enchased within a golden borne: and verily if it be the same, one of the least Sardonyches it is among many other there which be preferred before it.

Next to this stone of Polycrates, there goeth a royall name of the gem which Pyrrhus K. of Albanie had, him I mean, who warred against the Romans: for (by report) an Agath he had, wherein a man might see the nine Muses, and Apollo with his harpe, liuely represented, not by art and mans hand, but euen naturally imprinted: for the veins and streaks of the stone were so disposed, that a man might distinguish euery one of the Muses asunder, & ech one distinguished by their feuerall marks and ornaments. Setting aside these two gems aboue-named, we do not read in authors of any great reckoning made of such iewels; vnlesse wee speake of one Ismenias a famous minstrell, who had the name to weare many of them ordinarily about him, and those very gay and glittering: and surely his vanity that way was such, that there goeth a notable tale of him; for meeting vpon a time in a merchants hand with an Emerald in the Island Cyprus, wherein ladie Amymon was engrauen, and whereof the price was at first held at six deniers in gold, he made no more ado but cauled the mony to be paid presently: but the merchant being a man of some

conscience, and thinking indeed the price to high, gaue two of them back again vnto Ismenias: whereat being ill apaid, I do shew you, (qd. he) for this bating of the mony hath much empai- red the worth of the stone. This Ismenias (as it is thought) was the first who brought vp the order that all such musicians and minstrels as himselfe, should be known by their gems, and esteemed skilfull in that art according as they were set out therewith more or lesse. And in very truth, Diosdorus a great minstrell, who liued in those daies with him, vsed likewise to be in his change and variety of pretious stones, because he would not seeme any way to come behind Ismenias. There was a third also as vaine as the best, a musician in that age named Nicomachus, who loued to haue a number of gems about him, but no iudgement hee had in the world to chuse them.

These examples which offer themselves by fortune to me in the beginning of this my booke, may serue to pull downe their plumes who stand so much vpon the vaine ostentation of these stones, when they shal see how all the pride they take herein, smelleth but of the vain humor of some odd minstrels. But to return againe to Polycrates his gem, at this day it is to be seen within the temple of Concord, whole & found. And not only in the time of Ismenias, but also many yeres after, it should seem that Emeralds were wont to be cut and engrauen. This opinion also may be confirmed by the act & edict of K. Alexander the Great, which forbad expressely, That no man should be so hardy as to engraue his image in pretious stone, but Pyrgoteles, who (no doubt) was simply the best in that art. After him, Apollonides and Cronius were of great fame: & principally one Dioscorides, who counterfeited in stone the liuely forme of Augustus Caesar, the which serued the Emperors his successors as a signet to seale withall. Sylla Dictator was wont alwaies to signe

with a seale representing K. Iugurtha, tied & bound as he was yellected to him. We read in Chronicles also, that a certaine Spaniard of Intercatia, whose father Scipio Emilianus slew in single fight, vsed afterwards no other seale but that which represented this combat: whereupon grew this merry conceit of Stilo Praconinus, who asked, What this Spaniard would haue done if his father had killed Scipio? Augustus late Emperour of worthy memory, vsed at the beginning to seale with the image Sphinx vpon his signet: and verily in the casket of his mothers jewels, two of these he found so like one to the other, that one could not be known and discerned from the other: & as he was wont to weare one of them about him whersoever he went, so in his absence (during the ciuile wars which he leuiued against M. Antonius) his friends who managed his affairs at Rome, signed with the other Sphinx, all those letters & edicts which passed in his name,

for the performance of some demands which those times did require. And from hence it came, that those who receiued any such letters or edicts, containing some matter of difficulty, were wont pleasantly and merrily to say, That the said Sphinx came euer with some hard riddle or other that could not be expounded. Moreover, the frog, wherewith Macenas vsed to seale, was alwaies terrible to those who receiued any letters signed therewith; for euermore they were sure

fff

vpon

upon the receipt of it to make some paiement of impost or taxes leuied vpon them. But *Augustus* C
Cesar, to auoid the obloquie that arose by his *Sphinx*, gaue ouer sealing therewith, and signed
 euer after with the image of *K. Alexander* the Great.

As touching a cabinet or case for many rings and such jewels, which they call by a forreine
 Greeke name *Dactyliotheca*, the first that euer was known to haue any such at Rome, was *Scau-*
rus, whose mother *Sylla* the Dictator married: and for a long time there was no other besides;
 vntill *Pompeius* the Great met with the jewel-casket of *K. Mithridates*, which among many other
 rich oblations, he presented in the Capitoll; and by the relation of *M. Varro* and other approued
 authors of that time, it was much preferred before that of *Scaurus*: in imitation of whole exam-
 ple, *Cesar* Dictator consecrated in the temple of *Venus Genitrix*, six such like cabinets or caskets
 of rings and jewels: and *Marcellus* sonne to *Octavia*, dedicated one in the temple Palatine of *A-*
pollo. Finally, this is to be obserued, that the said victorie of *Pompeius* which he atchieued ouer
K. Mithridates, set mens teeth at Rome a watering after pearls and precious stones; like as the
 conquests obtained by *L. Scipio* and *Cn. Manlius*, brought them into loue with siluer plate curi-
 ously enchaſed and imbossed: also with rich hangings of cloth of gold, siluer, and tiffue, toge-
 ther with beds and tables of brasse; euen as the brassen statues and vessels of Corinthian brasse,
 and the curious painted tables, came in request vpon the victorie that *L. Mummius* gained ouer
Achaëa.

CHAP. II.

¶ Of Iems and precious stones that Pompeius shewed in his triumph. The nature of Crystall, and
 the medicinable properties thereof: the sumptuous and superfluous expences in vessels
 made of it. The first inuention of Cassidoine vessels, and the excess that
 way: the nature and properties of those Cassidoins. And
 what vnto the writers in old time haue
 deliuered as touching Amber.

TO the end that it may appeare more evidently, what the triumph of Pompey wrought in this
 respect, I will put downe word for word what I find vpon record in the registers that beare
 witnesse of the acts which passed during those triumphs. In the third triumph therefore
 which was decreed vnto him (for that he had scoured the seas of pyrats and rousers, reduced Na-
 tolia and the kingdom of Pontus vnder the dominion of the Romans, defeated kings and nati-
 ons, according as I haue declared in the seuenth booke of this my history) he entred Rome the
 last day of September, in the yere when *M. Piso*, and *M. Messala* were Consuls, on which day there
 was carried before him in shew, a chesse-boord with all the men, and the same boord was made
 of two precious stones, and yet it was 2. foot broad and 4. foot long: and left any man should
 doubt hereof and thinke it incredible, considering no jems at this day come neare thereto in
 bignesse, know he, That in this triumph hee shewed a golden Moone weighing thirtie pounds,
 three dining-tables also of gold, other vessell likewise of masse gold and precious stones as
 much as would garnish nine cup-boords; three images of beaten gold representing *Minerva*,
Mars and *Apollo*; coronets made of stones to the number of three and thirtie; a mountaine made
 of gold foure square, wherein a man might see red deare, Lyons, fruit-trees of all sorts, and the
 whole mountaine inuironed and compassed all about with a vine of gold: moreouer, an oratorie
 or cloſet consisting of pearle, in the top or lower whereof there was a clocke or horologe: Hee
 caused also to be borne before him in a pompous shew, his owne image made of pearles, the
 pourtraiture (I say) of that *Cn. Pompeius*, whom regall maiestie and ornaments would haue bet-
 ter beſeemed; and that good face and venerable visage so highly honoured among all nations
 was now all of pearles; as if that manly countenance and ſeueritie of his had bene vanquished
 and riotous excess and superfluitie had triumphed ouer him, rather than hee ouer it. O Pompey,
 ô *Magnus*, how could this title and surname *Le-grand*, haue continued among those nations,
 if thou hadst in thy first victorie triumphed after this manner! What, *Magnus*, were there
 no means else but to seek out pearles (things so prodigal, superfluous, and deuised for women,
 and which it had not beſeemed Pompey once to weare about him) and therewith to pourtray
 and counterfeit thy manly visage! And was this the way indeed to haue thy selfe ſceme pre-
 cious: doth not that pourtraiture come nearer vnto thee and resemble thy person farre liker,
 which

A which thou didst cause to be erected vpon the top of the Pirænean hills? Certes, a foule shame
 and ignominious reproch it was to be shewed in this manner, nay, to say more truly, a wonderfull
 prodegie it was, presaging the heauie ire of the gods; for so men were to belecue and evidently
 to conceiue thereby, that euen then and so long before, the head of Pompey made of orient pearle,
 euen the richest of the Leuant, should be so presented without a bodie. But setting this aside,
 how manlike was all the rest of his triumph, and how answerable to himselfe! For first and fore-
 most, giuen freely by him vnto the chamber of the citie, there were a thousand talents, second-
 ly, vpon his lieutenants and treasures of the campe, who had performed to good seruice in de-
 fending the sea-coasts, he bestowed two thousand Sestertia apiece: thirdly to euery souldiour
 who accompanied him in that voiage, he allowed fiftie Sestertia. Well, this superfluitie yet of
 Pompeius triumph, serued in some sort to excuse *Caius Caligula* the Emperour, and to make his
 delicacie and excess to be more tollerable, who ouer and besides all other effeminate tricks and
 womanly deuises, whereof he was full, vsed to draw vpon his legs little buskins or slippers made
 of pearle: Pompeius precedent (I say) in some measure justified Nero the Emperour, who made of
 rich and faire great pearles, the scepters and maces, the visors also and masks which players
 vied vpon the stage, yea and the very bed-roumes which went with him as hee trauielled by the
 way: So as wee seeme now to haue lost that vantage and right which we had to find fault with
 drinking-cups enriched with pearles, yea and much other household stufte and implements gar-
 nished therewith, since that whereſoeuer we go from one end of the house to the other, we seeme
 to passe through rings, or such jewels at leastwise which were wont to beautifie our fingers on-
 ly: for is there any superfluitie els, but in regard and comparison hereof it may seeme more tol-
 lerable and lesse offense? But to return vnto the triumph of Pompey: this victorie of his, brought
 into Rome first our cups and other vessels of Cassidoine, and Pompey himselfe was the first who
 that very day of his triumph presented vnto *Iupiter Capitolinus*, six such cups: and presently
 from that time forward men also began to haue a mind vnto them, in cupboords, counting ta-
 bles, yea and in vessell for the kitchen, and to serue vp meat in: and verily, from day to day the
 excess herein hath so far ouergrowne, that one great Cassidoine cup hath been sold for * four-
 score sesterces, but a faire and large one it was, and would containe well three sextars [*id est*,
 halfe a wine gallon.] There are not many yeres past, since that a noble man who had been Con-
 ſull of Rome, vsed to drinke out of this cup, and notwithstanding that in pledging vpon a time
 a lady whom he fancied, he bit out a piece of the brim thereof (which her sweet lips touched)
 yet this iniurie done to it, rather made it more esteemed and valued at a higher price, neither
 is there at this day a cup of Cassidoine more pretious or dearer than the same. But as touching
 other excess of this personage, and namely how much he consumed and deuoured in superflu-
 ities of this kind, a may may estimat by the multitude of such Cassidoine vessels found in his ca-
 binet after his death, which *Nero Domitius* tooke away perforce from his children: and in truth,
 such a number therewere of them, that being set out to the shew, they were sufficient to furnish
 and take vp a peculiar theatre, which of purpose he caused to be made beyond the Tyber in the
 gardens there: and enough it was for Nero to behold the said theatre replenished with people at
 the plaies which he exhibited there in honor of his wife the Empreſſe *Poppæa*, after one child-
 bed of hers, where among other musiciens, he sung voluntary vpon the stage before the plaies
 began. I saw him there my selfe to make shew of many broken pieces of one cup which he cau-
 sed to be gathered together full charily, as I take it, to exhibit a spectacle wherat the world
 should lament and cry out in detestation of Fortune, no lesse ywis, than if they had bin the bones
 and reliques of king *Alexander* the Great his corps to be laid ſolemly in his sepulchre; and
 herein he pleased himselfe not a little. *Titus Petronius*, late Conſull of Rome, when he lay at the
 point of death, called for a faire broad-mouthed cup of Cassidoine, which had cost him before-
 time three hundred thousand sesterces, and presently brake it in pieces in harred and despight
 of Nero, for feare lest the same prince might haue seized vpon it after his disease, and therewith
 furnished his own boord. But Nero himselfe (as it became an Emperour indeed) went beyond
 all others in this kind of excess, who bought one * drinking cup that stood him in three hun-
 dred thousand sesterces, a memorable matter (no doubt) that an Emperour, a father and patron
 of his country, should drinke in a cup so deare. But before I proceed any farther, it is to be noted,
 that we haue these rich Cassidoine vessels [called in Latine *Murrina*] from out of the Leuant:
 for found they be in many places of the East parts, and those otherwise not greatly renowned,

* That is to
 say, columns &
 pillars, wherein
 were engrauen
 the names of
 cities and na-
 tions subdued
 by him in
 those voyages
 into Spaine.

* *Officina se-
 steris*: where
 you must
 thinke that he
 vses *sestertia*
 in the neuter
 gender, which
 is a thousand
 sesteris: for o-
 therwise 80 se-
 sterces come
 but to 20 den-
 aries Roman,
 and that is a-
 bout 12 sh 6 d.
 sterling: too
 much vnder
 the price of
 such a Jewell:
 and yet some
 read for *sesteris*,
 [*talentis*]
 and that is as
 much above
 the proporti-
 on, for one talent
 was esteemed
 at some se-
 sterces.

* The value
 of 8 talents.
 * *Tremula se-
 steris cupis*.
 I suspect this
 place, for hee
 should haue
 mented a
 greater sum-
 than that be-
 fore of *Tre-*
monizor esse-
 capis is a final-
 piece than
Tremula: & that
 should not
 seeme, if it be
 der u. d. capi-
 end, & so cal-
 led for the ca-
 pacitie, but ra-
 ther of the
 ease, & eibra
 may take
 hundred 600

but most within the kingdom of Parthia: howbeit, the principall come from out of Carmania. G
The stone whereof these vessels be made, is thought to be a certaine humour thickened and baked as it were within the ground by the naturall heat thereof. In no place shali a man meet with any of these stones larger than small tablements of pillars or counting-boards; and seldom are they so thicke as to serue for such a drinking cup as I haue spoken of already: resplendant they are in some sort, but that brightnesse is not pearcing, and to say a truth, it may be called rather a polishing glosse or lustre, than a radiant and transparent clearenesse: but that which maketh them so much esteemed, is the variety of colours; for in these stones a man shall perceiue certaine vains or spots, which as they be turned about resemble diuers colours enclining partly to purple and partly to white: he shall see them also of a third colour composed of them both, resembling the flame of fire: Thus they passe from one to another as a man holdeth them; in so much as their * purple seemeth to stand much vpon white, and * their milkie white to beare as much vpon the purple. Some esteemed those Cassidoine or Murrhene stones richest, which represent as it were certain reuerberations of sundry colours meeting all together about their edges and extremities, such as we obserue in rainbowed: others are delighted with cerataine fatterie spots appearing in them; and no account is made of them which shew either pale or transparent in any part of them, for these be reckoned great faults and blemishes. In like maner if there be scene in the Cassidoine any spots like corns or graines of salt: if it containe resemblances of werts, although they beare not vp but lie flat as they doe many times in our bodies: finally, the Cassidoine stones are commended in some sort also for the smell that they do yeeld.

As touching Cryfall, it proceedeth of a contrary cause, namely of cold; for a liquor it is congealed by extreame frost in maner of yce; and for the prooffe hereof, you shall find cryfall in no place els but where the winter snow is frozen hard: so as we may boldly say, it is very yce and nothing els, whereupon the Greeks haue giuen it the right name Crytallos, i. Yce. We haue this cryfall likewise out of the East-parts, but there is none better than that which India sends to vs. Ingendred it is also in Asia, and namely about Alabanda, Ortosia, and the mountains adioyning, but in request it is not no more than that which is found in Cyprus: howbeit, there is excellent cryfall within Europe, and namely vpon the crests of the Alps. King *Tuba* writeth, that in a certaine Island lying beyond the red sea ouer-against Arabia, named *Neron, there growes cryfall: as also in another thereby, which yeeldeth the *Topaze precious stone; where, *Pythagoras* (lieutenant or gouernour vnder king *Ptolome*) digged forth a piece which carried a cubit in length. *Cornelius* * *Bocchus* affirmeth, that in Portugall vpon certaine exceeding high mountaynes, where they sinke pits for the leuell of the water, there be found great cryfall quarters or masses of a wonderfull weight. But maruellous is that which *Xenocrates* the Ephesian reporteth, namely, that in Asia and Cyprus there be pieces of cryfall turned vp with the very plough, so ebb it lieth within the ground; an incredible thing, considering that before-time no man beleeued that euer it could be found in any place standing vpon an earthly substance, but only among clifffes and craggs. It soundeth yet more like a truth, which the same *Xenocrates* writeth, namely, that oftentimes it is carried down the streame running from the mountaynes. As for *Suides*, hee saith confidently, that cryfall is not engendred but in places exposed onely to the South: and verily this is most true, for you shall neuer meet with it in waterish countries lying Northerly, be the climat neuer so cold, no though the riuers be frozen to an yce euen to the very bottome. Wee must conclude therefore of necessity, that certaine coelestiall humours, to wit, of raine and some small snow together, do concurre to the making of cryfall: and hereupon it comes, that impatient it is of heat, and vnlesse it be for to drinke water or other liquor actually cold, it is altogether reiected: but strange it is, that it should grow as it doth, six angled: neither is it an easie matter to assigne a sound reason thereof, the rather for that the points be not all of one fashion; and the sides betweene each corner are so absolute euen and smooth, as no lapidarie in the world with all his skill can polish any stone so plain. The greatest & most weightie piece of cryfall that euer I could see, was that which *Livia Augusta* the Emperresse dedicated in the Capitoll, which weighed about fiftie pounds. *Xenocrates* mine authour aboue-named, affirmeth, that there was scene a vessell of cryfall as much as an Amphore: and some besides him doe say, that there haue beene brought out of India, cryfall glasses containing foure sextars a piece. Thus much I dare my selfe auouch, that cryfall groweth within certaine rockes vpon the Alps, and those so steep and inaccessible, that for the most part they are constrained to hang

* *Parpura can-*
descende.
* *Aut latte ri-*
bescende.

* Some read
Necipin.
* Which some
take for Chry-
solite.
* Or *Nepos.*

A by ropes that shall get it forth. They that be skilfull and well experienced therein, go by diuers markes and signes which direct them to places where there is crystall, and where also they can discerne good from bad; for this you must think, there be many imperfections and faults therein; as namely, when it is rough or rugged in hand, rustie like yron, cloudie and full of speckes: otherwhiles there is a secret hidden fistulous vicer as it were within: there lieth also in it a certain hard knurre, which is brittle and apt to breake into small crumbs, besides the corn or grain therein called Sal. Some pieces of crystall you shall haue which carry a certain red rust: others be full of hairy strakes, a man would imagin they were fo man rists; but cunning artificers can hide this last imperfection when they cut and engrave the piece that hath it: for in truth, if a crystall be pure and cleare of it selfe, much fairer it is plain, than so wrought and engrauen; and such crystals the Greeks call Acenteta; but about all, when they look not like the froth of clear water: last of all, this is to be considered, that the heauier crystall is in proportion, the better account there is made of it. Moreover, I read of certaine Phyticians who are of opinion, that there is not a better and more wholesome cautery for any part of the body that requireth cauterising or burning, than a ball or pomander of crystall held opposit between the member and the Sun beams. But will you heare of another notorious example of folly and madnesse in these crystals as well as in Cassidouns? There are not many yeres since a dame of Rome, and thence none of the richest, who bought one boll or drinking cup of crystall, and paid 150000 sesterces for it. As for Nero the Emperour (of whom I spake erewhile) when vnhappy news was brought vnto him of a great ouerthrow and a field lost to the danger of his owne state and the common-wealth, in the height of his rage and a most furious fit of anger, caught vp two crystall drinking cups and past it them all to pieces: his spight was belike at all the men liuing in that age, & better means he could not deuise to plague and punish them, than to preuent that no man else should drinke out of those glasses: and in very truth, a crystall being once broken, cannot by any deuise whatsoever be reunited and made whole againe as before. We haue at this day cups and vessels of glasse that come passing neere vnto crystall: but wonderfull it is, that notwithstanding our glasses be so like, yet they haue not abated and brought downe the price of crystal, but rather caused it to be far dearer.

In the next degree to cryſtall wee are to place Amber, a thing that hitherto I heare women only ſet daintie ſtore by, and adorne themſelues withall: ſtrange it is, that l'Amber, Caſſidoine, and Cryſtall, ſhould thus be in equall requeſt with ſine pretious ſtones; marie for Caſſidoine and Cryſtall, in ſome reſpects verily they may ſeeme to deſerue a higher rounge, and namely, in regard that both of them are ſo appropriat for to drink water or cold liquor out of ſuch cups: but as for Amber, our delicates and wantons haue not yet deuifed any probable reaſon why there ſhould be ſuch a reckoning made of it: but ſurely it is the folly and vain curioſity of the Greeks that hath giuen acceaſion thereof, and brought it into ſo great a name. And here I muſt beſeech the readers to beare with me in this my diſcourſe as touching the firſt originall of Amber; for I thinke it not impertinent to deliuer what marueiles and wonders the Greeks haue broached as touching this thing, that the age and poſterity enſuing may yet be acquainted with their fabuloſities: firſt and formoſt therefore, many of their Poets, yea, and as I ſuppoſe, the chiefe and principall of them, to wit, *Aſchylus, Philoxenus, Nycander, Euripides*, and *Saſyrus*, tell vs a tale of the ſiſters of young price *Phaëton*, who weeping piteouſly for the miſerable death of their brother who was ſmitten with lightning, were turned into Poplar trees, which in ſtead of tears yeelded euery yere a certain liquor called Electrum [*id eſt*, Amber] which iſſued from them where they grew along the riuier Eridanus, which we call Padus, *id eſt*, the Po: and the reaſon why the ſame was named Electrum, is this, becauſe the Sun in old time was vually called * Elector in Greeke. But that this is one of their loud lies, it appears evidently by the teſtimony of all Italie. But ſome of theſe Greek writers and ſuch as would ſeem to be more ſpeculatiue and better ſcene in the works of Nature than their fellowes, haue told vs of certain Iſlands that ſhould lie along the coaſt within the Venice gulfe, called Electrides, forſooth becauſe that amber is there gathered, by reaſon that the foreſaid riuier Po falls into the ſea among them: howbeit wel known it is, that there were neuer yet Iſlands ſo named within that tract; no nor any Iſlands at all neere to that place, into which the riuier Padus could poſſibly bring any thing at all down his ſtreames: As for *Aſchylus* the foreſaid Poet, who ſaith that the riuier Eridanus is in Iberia, that is to ſay, Spaine, & otherwiſe that it is called Rhodanus, as alſo for *Euripides* and *Apollonius*, who ſay that

Π * *Alamē, quē*
- *nos alantur fa-*
Γ *ciat, B cause*
e *herouseth and*
e *raiseth vs in a*
e *morning out*
e *of our beds.*

Rhosne & Po both meet in one, and discharge themselves together into the said Venice gulfe, G they shew their grosse ignorance in Cosmography, and description of the world, and therefore they would be rather pardoned if they knew not what Amber was. Those that write more modestly than the rest (and yet can lie as well as the best) beare vs in hand, that about the sides of the foresaid Venice gulfe or Adriatick sea, vpon rockes otherwise inaccessible, there grow trees which yerey at the rising of the Dogstar do yeeld forth this Amber in manner of a gum. *Theophrastus* contrariwise affirmes, that Amber is digged out of the ground. As for *Chares*, he saith, that *Phaeton* died in *Aethyopia* neere vnto the temple of *Iupiter Ammon*, which is the reason of a chappell there wherein hee is shrined, as also of an oracle much renowned; in which quarters (quoth he) amber is engendred. *Philemon* would make vs beleue, that Amber is minerall, and that within Scythia in two places it is gotten forth of the earth, in the one it is found white & of the colour of wax, which they call *Electrum*; in the other it is reddish or tawny, and that is named *Sualternicum*. *Demosthenes* calls Amber, *Lyncurion*, for that it commeth of the vrine of the wild beaft named Onces or Lynxes: the which is distinct in colour, for that which proceedeth from the male is reddish and of a fiery colour; the other which passeth from the female, is more weake in colour, and enclineth rather to whitish. Some giue it the name *Langurium*, and make report of certaine beasts in *Italie* named *Languria*. *Zenobemus* teacheth the same beasts *Langas*, and by his saying, they liue about the Po. *Sudines* talketh of a tree in *Liguria*, which should beare this Amber: of whose opinion also was *Metrodorus*. *Sotacus* was verily persuaded, that it run downe from certaine trees in *Brittaine*, and those he thereupon called *Electrides*. *Pitheas* affirmeth, that in *Almaine* there is the arme of the Ocean called *Mentonomon*, along which there inhabit certaine people named *Gutti*, for the space of six thousand *stadia*; from which, within one daies sailing, there lyeth an Island called *Abalus*, into which at euery Spring tide, there is cast vp by the waters of the sea at a high water, a great quantitie of Amber; and it is taken for nothing else but a certain excrement congealed and hardened, which the sea in that season purgeth and sendeth away. The inhabitants of those parts (saith he) vse it for their ordinarie sewell to burne, and doe sell it to the Saxons and other Dutch, their next neighbours. *Timaeus* accorded with him, saue only that he would haue the said Island to be called *Baltia*. *Philemon* was of this mind, that Amber would neuer flame if it were set on fire. *Nicas* would haue vs conceiue, that it should be a certaine iuice or humour proceeding (I wot not how) from the raies of the Sun, and yet he maketh a reason thereof, imagining that the said beames should be exceeding hot toward the Sun-setting, which rebounding from the earth, leaue behind them a certain fatty sweat in that part of the Ocean; and the same afterwards is cast vp with tides into the Sea-shore and sands of the Germanes. He writeth also, that in *Egypt* it is engendred after that manner, where it is called *Sacal*: as also among the Indians, who make more account of it than of frankincense. Semblably in *Syria*, the women (saith hee) make wherues of it for their spindles, where they vse to call it *Harpax*, because it will catch vp leaues, straws, & fringes hanging to cloaths. *Theophrastus* reporteth, that the ocean casteth vp amber at tides, to the capes of the *Pyrenæan hills*: which *Xenocrates* also beleue, who is the last that hath written of Amber, and such like. There is at this day liuing, *Asarubas*, who hath reported, that neer vnto the *Atlanticke* sea there is the lake *Cephisis*, which the *Mores* call *Electrum*, and the same being chased and heat throughly by the Sun, casteth vp from the mud thereof, Amber, floating aloft vpon the water. *Ancistras* maketh report of a place in *Affrike* named *Cicyone*, as also of the riuer *Cratthis*, which floweth out of a lough and runneth into the sea; in which lake or lough, there liue certain kinds of foule which he names *Meleagrides* and *Penelopes*: herein amber is engendred (by his saying) after the same manner as before I shewed in the lake *Electris*. *Theomentes* saith, that neere vnto the great *Syrtis* where the hort-yard and garden of the *Hesperides* lieth, a man shall find, that amber falleth out of the said garden into a lake beneath, and then the virgins attending vpon that place, come ordinarily to gather it. *Ctesias* affirmeth, that among the Indians there is a riuer called *Hypobarus*, (which word signifies as much, as bearing all good vessels) it runneth out of the North and falleth into the East sea, neere vnto a wild mountain, full of trees that beare amber. He addes moreouer & saith, that those trees are called *Aphytacon*, by which denomination is meant, most delightfom sweetnes. *Mithridates* writeth, that toward the coast of Germany there lies an Island, and the same named *Oseriæta*, replenished with woods of Cedar trees yeelding Amber, which runs from them into rocks. *Xenocrates* is of opinion, That Amber

* or Banomania.

* *aphibus*, some read *aphibus*, in Summer.

* or rather *Electris*, as appeareth in literature.

A was called in Italy not only *Succinum*, but also *Thieum*: whereas the Scythians name it *Sacrium* (for there also it is engendred); also he saith, that others think it is engendred in *Numidia*. But I wonder most at *Sophocles* the Tragicall Poet (a man who wrote his Poësies, with so graue and lofty a stile, and liued besides in so good reputation; being otherwise borne at Athens, and descended from a noble house, emploied also in the managing of state affaires, as who had the charge & conduct of an army) that he should go beyond all others in fabulous reports, as touching Amber: for he sticketh not to auouch, That beyond *India* it proceedeth from the tears that fall from the eies of the birds *Meleagrides*, wailing & weeping for the death of *Meleager*. Who would not maruell, that either himselfe should be of that belife, or hope to persuade others to his opinion? For what child is there to be found so simple and ignorant, who will beleue, that birds should keep their times to shed tears euery yere so duly, and especially so great drops and in such quantitie, sufficient to engender Amber in that abundance? Besides, what congruities are there, that birds should depart as far as to the Indians and beyond, for to mourn and lament the death of *Meleager* when he died in Greece? What should a man say to this? Are there not many more as goodly tales as these, which Poets haue sent abroad into the world? And their profession of Poetry, that is to say, of faining and deuising fables, may in some sort excuse them. But that any man should seriously and by way of history deliuer such stuffe, as touching a thing so rife and common, brought in euery day in abundance by merchants which were ynough to conuince such impudent lies, is a meere mockerie of the world in the highest degree; a contempt offered vnto all men, and argueth an habit of lying, and an impunitie of that vice intollerable.

CHAP. III.

¶ Of the true originall and generation of Amber. The sundry kinds thereof. The excessse and superfluitie of people, as touching Amber. The medicinable properties that it affordeth. Of *Lyncurium*, and the vertues that it hath in *Physicke*.

B Vt to leaue Poets with their tales, and to speake resolutely and with knowledge, of Amber, D knowne it is for certain, That engendered it is in certaine Islands of the Ocean Septentrio-nall, where it beateh vpon the coasts of Germany: and the Almanes call it *Glessum*. And in very truth, in that voyage by sea which *Germanicus Cesar* made into those parts, our countrymen named one of those Islands *Glessaria*, by reason of the Amber there found; which Island the Barbarians call *Austraia*. It is engendred then in certaine trees, resembling Pines in some fort, and issueth forth from the marrow of them, like as gum in *Cherrie* trees, and rosin in Pines. And verily, these trees are so full of this liquor, that it swelleth & breaketh forth in abundances which afterwards either congealeth with the cold, or thickeneth by the heat of Autumn. Now if at any time the sea rise by any extraordinary tide, and catch any of it away out of the Islands, then verily it is cast a shore vpon the coast of Germany, where it is so apt to roule, that it seemeth (as it were) to hang and settle lightly vpon the sands, whereby it is the more easily gotten. E And for that our ancestours heretofore in old time beleueed that it was the iuice of a tree, they called it therefore in Latine *Succinum*. That it comes from trees of a Pine kind, may appeare by this, That if a man rub it, he shall find the smell of Pine-wood: also, for that when it burneth, the flame, and fume (both) resembleth that of Torch-wood. The Germanes make great traffick thereof, and bring it into *Pannonia*, and so from thence vnto vs, through our prouinces [of *Istria* and *Venice*]; for from *Pannonia*, the Venetians first (who confine next vpon the marches thereof, and whom the Greekes call *Heneri*) receiued it by way of merchandise in the maritime port townes along the *Adriaticke* sea, and so by that means brought it into name and request: which ordinary traffick may be the reason which gave occasion to the foresaid tale that runes of the Po and the *Poplars* about it, that should weep Amber. And euen at this day the country dames F of *Lumbardie*, and those parts beyond the Po, vse to weare faire carkanets & collers of Amber-beads to adorne themselves especially, and in some sort for the health also of their bodies: for persuaded they are, that it withstands the inflammation of the Amygdals & other accidents of the throat and chawes: for that the people of that country are subject to poghes vnder their throat, about those fleshie parts neere vnto it, by reason of sundry kinds of waters which breed those

* For the perspicuitie and brightness, like unto glasse.

* This disease is called *Bronchitis* or *Hernia gutturalis*, ordinary in Sauiuy and those parts about Geneva.

those infirmities. The foresaid coast of Germany is almost six hundred miles from Carnuntum in Pannonia, and yet of late daies much frequented by merchants from all quarters. Certes, a Gentleman of Rome discouered those parts, by occasion that he was sent thither by commission from *Julianus* (who had the charge vnder *Nero* for furnishing of the solemne plaies and fights of sword-fencers) to buy vp good store of amber. This gentleman I say surueied diligently all those coasts, & saw the maner of the whole traffick for that commodity, yea & brought into Rome such plenty thereof, that the great nets and cordage (which for defence of the outstanning and open gallerie within the Theatre were opposed against the wild beasts, there to be baited and to fight) were buttoned & set out with Amber, the armour likewise, the bieres, & other furniture for burial of those fencers which should happen there to be killed, yea, & in one word, all the apparel and prouision for one day to the setting out of those pastimes and disports, stood most of Amber. The greatest piece of Amber that he brought ouer, weighed 13 pounds. Moreover, it is held for certain, That it is to be found among the Indians. *Archelaus*, who sometime reigned as king in Cappadocia, writeth, That from thence it is brought rude and vnclean, with pieces of bark sticking within it: but the way to scoure and polish it, is to seeth it in the grease of a sow that sucketh pigs. That it doth destil and drop at the first very clear & liquid, it is euident by this argument, for that a man may see diuers things within, to wit, Pismires, Gnats, and Lizards, which no doubt were entangled and stuck within it when it was green and fresh, and so remained enclosed within as it waxed harder. Many kinds there be of amber. The white is most redolent and smells best: but neither that, nor yet those pieces which are coloured like wax, be of any price. The high coloured Amber, namely that which is of a deepe yellow enclining to red, is much more esteemed, and the rather if it be cleare and transparent, provided alwaies that the glittering thereof be not too ardent. Commendable it is in Amber, and sheweth it to be rich, if it represent fire in some sort: but it must not be too too fiery. But the excellent Amber is that which is called *Falerum*, for the colour which it carrieth, resembling the wine *Falerum*: and the same is cleare and transparent, with a gay lustre that pleaseth & contenteth the eye very well. And yet some there be, who delight more in that Amber which looks with a mild yellow like to boiled and clarified hony. But this I am to giue you to vnderstand, That there may be giuen vnto Amber what tincture or colour a man will: but commonly they vse thereto the suet of Kids and the root of Orchanet: and no maruaile, since that some haue deuised also to enrich it with a purple dye. To come vnto the properties that Amber hath, if it be well rubbed and chaufed between the fingers, the potentiall facultie that lies within, is set on work, and brought into actual operation, whereby you shall see it to draw chaffe strawes, dry leaues, yea, and thin rinds of the Linden or Tillet tree, after the same sort as the load stone draweth yron. Moreover, take the shavings scraped from Amber, and put them into lamp-oile, they will burne and maintaine light both longer and also more cleare than weekes or matches made of the very tire and best of flax. As touching the estimation that our delicats and wantons make thereof: Some there be, who for their pleasure will giue more for a puppet or image made of Amber to the likenes and proportion of man or woman, be it neuer so little, than for the liuely and lusty body indeed of a tall man and valiant souldior. But what should I say to such? Certainly they deserue to be well chastised for their peruers iudgment, & one rebuke is not sufficient. Yet can I hold better with them who take pleasure in other things, & me thinks they haue some reason therof: for Corinth vnsell, there is good cause that a man should set his mind therupon, in regard of the singular temper of the brasse, with some proportion of siluer and gold: in pieces of metall ingrauen, enchaufed and embossed, the curious art and the witty deuise seen vpon the worke may well rauish the spirit of the buyer, and draw him on to giue a round price: Touching the cups made of Cassidonic and Crystal, I haue shewed already, wherein lies their grace, and what may enamour a chappman and cause him to bid well and offer frankly for them: Faire pearles and goodly vniones are commended, for that our braue dames enrich their borders therewith, and set out the attire of their heads: gems and pretious stones adorne and beaurifie our fingers: in sum, there is no superfluitie that we haue, but grounded it is either vpon some colourable vse that wee may pretend, or els vpon some gallant shew that it makes: As for this Amber, I see nothing in the world to commend it; only it is a mind that folk haue to take affection to it, they know not wherefore, euen of a delicat and foolish wantonneffe. And in truth, *Nero Domitianus*, among many other fooleries and gauds wherein he shewed what a monster he was in his life, proceeded so far, that he made

A made a sonnet in praise of the hair of the Empreffe *Poppaea* his wife, which he compared to Amber, and as I remember, in one staffe of his dittie he tearmed them *Succina*, i. Ambre: and from that time our dainty dames and fine ladies haue begun to fet their mind vpon this colour, and haue placed it in the third ranke of rich tincture: whereby we may see there is no superfluitie and disorder in the world, but it hath a pretence or cloake of some pretious name or other. And yet I will not disgrace Amber too much: for why? there is some good vse thereof in Physicke. But I must tell you againe, our women regard not that one whit; that is not it wherfore they take so great a liking to Ambre. True it is that a collar of Ambre beads worne about the neck of yong infants, is a singular preseruatiue to them against secret poyson, & a countercharme for witchcraft and forcerie. *Callistratus* saith, That such collars are very good for all ages, and namely to preferue as many as weare them against fantastickall illusions and frights that driue folke out of their wits: yea and Amber, whether it be taken in drinke, or hung about one, cures the difficulty of voiding vrin. This *Callistratus* brought in a new name to distinguish yellow Ambre from the rest, calling it *Chryselestrum*, which is as much to say as gold Ambre. And in very truth, this Amber is of a most louely and beautifull colour in a morning. This property it hath besides by it selfe, that it will catch fire exceeding quickly, for if it be neer it, you shall see it will soon be of a light fire. He saith of this yellow Amber, that if it be worn about the neck in a collar, it cures teauers, and healeth the diseases of the mouth, throat, and jawes: reduced into powder and tempered with hony and oile of roses, it is soueraign for the infirmities of the ears. Stamped together with the best Artick hony, it makes a singular eie-salue for to help a dim sight: puluerized, and the powder thereof taken simply alone, or els drunk in water with masticke, is soueraign for the maladies of the stomacke. Furthermore, Amber is very proper to falsifie many pretious stones which are commended for their perspicuity and transparent clearenesse, but specially to counterfeit Amethysts, by reason that I haue already said, it is capable of any tincture that a man would giue it. The froward peeuishnes of some Authors who haue written of *Lyncurium*, enforceth me to speak of it immediately after Amber: for say that it be not *Elestrum* or Amber, as some would haue it, yet they stand stiffly in this, that it is a pretious stone; many they hold, that it commeth from the vrine of an Once, by reason that this wild beast so soon as it hath pissed, couereth it with earth, vpon a spight and enuie to man, that he should haue no good thereby: They affirme moreover, That the Once stone or *Lyncurium* is of the same colour that Ambre. D ardent which resembleth the fire, & that it serueth well to be engrauen: neither by their saying doth it catch at leaues only and strawes, but thin plates also of brasse and yron: and of this opinion was *Dimacles* and *Theophrastus*. For mine own part I hold all to be mee re vntruths: neither do I think, that in our age there hath been a man who euer saw any pretious stone of that name. What euer also is written as touching the vertues medicinable of *Lyncurium*, I take them to be no better than fables, namely, that if it be giuen in drinke, it will send out the stone of the bladder: if it be drunk in wine, it will cure the jaundise presently, or if it be but carried about one, it will do the deed: but ynough of such fantastickall dreames and lying vanities, and time it is now to treat of those precious stones, wherof there is no doubt made at all, and to begin with those that by all mens confession are most rich and of highest price. In which discourse I will not prosecute this theame only, but also (for to aduance the knowledge of posterity in those things that may profit this life) I meane estfoones to haue a sling at Magicians for their abominable lies and monstrous vanities, for in nothing so much haue they ouerpasted themselves as in the reports of gems & pretious stones, exceeding the tearms and limits of Physick, whiles vnder a color of faire and pleasing medicines, they hold vs with a tale of their prodigious effects and incredible.

CHAP. IIII.

¶ Of Diamants and their sundry kinds. Their vertues and properties medicinable. Of Pearles.

THE Diamant carrieth the greatest price, not only among pretious stones, but also aboue all things els in the world: neither was it knowne for a long time what a Diamant was, vnlesse it were by some kings and princes, and those but very few. The only stone it is that we find in mines of metall. Very seldome it is, and thought a miracle to meet with a diamant in a veine of gold, & yet it seemes as though it should grow no where but in gold. The writers of ancient time

time were of opinion that it was to be had in the mines only of Æthiopia, and namely between G the temple of *Mercurie* and the Island *Meroë*, affirming moreover, that the fairest Diamant that euer was found, exceeded not in bignesse a Cucumber seed, whereunto also it was not vnlike in color. But in these daies there be known six sorts of Diamants. The Indian is not engendred in mines of gold, but hath a great affinity with Cryfall: and groweth much after that manner; for in transparent and cleere color it differeth not at all, neither yet otherwhiles in the smooth sides and faces which it carrieth between six angles, pointed sharpe at one end in manner of a top, or els two contrary waies lozengewise (a wonderful thing to consider) as if the flat ends of two tops were set and joined together: and for bignesse it hath bin knowne of the quantity of an Hazel-nut or Filbard kernill. The Diamants of Arabia be much like to the Indian, only they are lesse; H they grow also after the same order: As for the rest, they are of a more pale and yellow color, te- stifying out of what country and nation they come, for they breed not but in mines of gold, and those the most excellent of all others. The triall of these Diamants is vpon a smiths Anuill: for strike as hard as you will with an hammer vpon the point of a Diamant, you shall see how it scorneth all blowes, and rather than it will seeme to relent, first flieth the hammer that smiteth, in pieces, and the very anuill it selfe vnderneath cleaueth in twaine. Wonderful and inenarrable is the hardnesse of a Diamant: besides it hath a nature to conquer the fury of fire, nay, you shall neuer make it hot, doe what you can: for this vntameable vertue that it hath, the Greekes haue giuen it the name *Adamas*. One of these kinds the said Greekes call *Cenchron*, for that it is as big ordinarily as the miller seed: a second fort they name *Macedonicum*, found in the mine of gold near *Philippi*; and this is that Diamant, which for quantity is compared to the Cucum- I ber seed: After these, there is the *Cyprian Diamant*, so called because it is found in the Isle *Cy- prus*; it enclineth much to the color of brasse, but in cases of Physick (as I will shew anon) most effectual: Next to which I must range the *Diamant Sideritis*, which shines as bright as Steele, whereupon it tooke that name: in weight it passeth the rest, but in nature it is farre vnlike; for it will not abide the hammer but breake into pieces; besides, another adamant will pierce it, and bore a hole quite through it: which also may be said of the *Cyprian Diamant*: so as to speak in one word, these two last rehearsed, may go only vnder the name of Diamants: for otherwise they are but bastards, and not true Diamants. Moreover, as touching the concord and discord that is R between things naturall, which the Greekes call *Sympathia* and *Antipathia* (whereof I haue so much written in all my bookes, and endeauored to acquaint the readers therewith) in nothing throughout the world may we obserue both the one & the other more euidently, than in the Di- amant: For this inuincible mincral (against which neither fire nor Steele, the two most violent and puissant Creatures of natures making, haue any power, but that it checketh & despiseth both the one and the other) is forced to yeeld the ganteler and giue place vnto the bloud of a Goat, this only thing is the means to break it in sunder, howbeit care must be had, that the Diamant be sleeped therein whiles it is fresh drawn from the beast before it be cold: & yet when you haue made all the sleeping you can, you must haue many a blow at the Diamant with hammer vpon the anuill: for euen then also, vnlesse they be of excellent prooffe & good indeed, it wil put them to it, and break both the one & the other: But I would gladly know whose inuention this might be to soake the Diamant in Goats bloud, whose head deuised it first, or rather by what chance I was it found out & known? What coniecture should lead a man to make an experiment of such a singular and admirable secret, especially in a goat, the filthiest beast one of them in the whole world? Certes I must ascribe both this inuention, & all such like to the might and beneficence together of the diuine powers: neither are we to argue & reason how and why nature hath done this or that: sufficient it is that her will was so, & thus she would haue it. But to come againe to the Diamant, when this prooffe taketh effect to our mind, so that the Diamant once crack, you shall see it break & crumble into so small pieces, that hardly the eie can discerne the one from the other. Wel, lapidaries are very desirous of Diamants & seek much after them: they set them into handles of yron, & therby they with facility cut into any thing, be it neuer so hard. More- into L over, there is such a naturall enmity between Diamants & Loadstones, that if it be laid neere to a piece of yron, it will not suffer it to be drawn away by the loadstone: nay, if the said loadstone be brought so neere a piece of yron, that it haue caught hold thereof, the Diamant, if it come in place, will cause it to let goe the hold. The Diamant hath a property to frustrate the malicious ef- fects of payson; to drine away those imaginations that set folke besides themselves; & to expell

vaine

A vaine feares that trouble and possesse the mind: which is the reason that some haue called it *A- nachites*. *Merodorus Scepheus* affirmeth, That the Diamant is found in Germanie and the Island *Baltia*, wherein Amber is ingendred: but as far as euer I could reade, he is the onely man that saith so. This Diamant also of *Almaine* he preferreth before those of *Arabia*, howbeit no man doubteth that he lieth stoutly. After the precious Diamants of *India* and *Arabia*, wee in these parts of the world esteeme most of pearles: but as touching them, I haue written sufficiently in my ninth booke, where I discoursed of such matters as the seas do yeeld.

CHAP. V.

B ¶ Of the Emeraude, and the sundry sorts thereof. Of greene gems or precious stones, and such as be light some and cleere all shorow.

E Emeraude for many causes deserue the *third place: for there is not a colour more pleasing to the eie. True it is, that we take great delight to behold greene herbes and leaues of trees, but this is nothing to the pleasure wee haue in looking vpon the Emeraude, for compare it with other things, be they neuer so green, it surpasseth them all in pleasant verdure. Besides, there is not a gem or precious stone that so fully possesseth the eie, and yet neuer contenteth it with facietie. Nay, if the sight hath bin wearied and dimmed by intenuie poring vpon any thing els, the beholding of this stone doth refresh and restore it againe, which lapidaries well know, that cut and ingraue fine stones; for they haue not a better means to refresh their eies than the Eme- C raude, the mild green that it hath doth so comfort and reuiue their wearines and lassitude. More- over, the longer and farther off that a man looketh vpon Emeraude, the fairer and bigger they seeme to the eie, by reason that they cause the reuerberation of the aire about them for to seeme green: for neither Sun nor shade, ne yet the light of candle, causeth them to change and lose their lustre: but contrariwise, as they euer send out their own raies by little & little, so they en- D tertain reciprocally the visual beams of our eies; and for all the spissitude and thicknesse that they seeme to haue, they admit gently our sight to pierce into their bottome: a thing that is not ordi- nary in water. The same are shaped many times hollow, thereby to gather, vnite, and fortifie the spirits that maintain our eie-sight. In regard of these manifold pleasures that they shew to our eies, by generall consent of all men spared they are, and lapidaries be forbidden expressely D to cut and ingraue them: and yet the Emeraude of *Scythia* and *Ægypt* be so hard, as they cannot be pierced or wounded by any instrument: moreover, when you meet with a table Emeraude hold the flat face thereof against any thing, it will represent the said object to the eie, as well as a mirroir or looking glasse. And verily, *Nero* the Emperor was wont to behold the combats of fen- cers and sword-plaiers in a faire Emeraude. Now this first & foremost is to be noted, that of Eme- raude there be 12 kinds. The fairest and richest of all other, be those of *Tartarie* and called they are *Scythick*, of the nation *Scythia* from whence they came: and in truth, there be none fuller and higher in colour or haue fewer blemishes: and looke how far Emeraude goe beyond other precious stones, so far do the *Scythian Emeraude* surpass all others. The *Bactrian Emeraude*, as they are the next neighbors, so they come nearest in goodnesse to the *Scythicke*: found these be in chinks and joints (as it were) of rocks in the sea, and gathered (by report) about the dog daies, E when the North-east Etesian winds do blow: for then they glitter and shine within the earth that is grown about them, by reason that the said winds (which in those parts are strong) remoue the sand away from them, and cause them to be seen: but these by report be far lesse than those of *Scythia*. In a third place follow the Emeraude of *Ægypt*, & they be gotten out of certain crag- gy hills and cliffes about *Coptos*, a towne in high *Ægypt*. As for all others, they be found ordi- narily in brasse mines: that is the reason that the Emeraude of the Isle *Cypros* be held for chiefe and principall among those nine: and yet their singular commendation lieth not in any clear or mild colour that they haue, but their onely grace consisteth herein, that they seeme moist with a certaine fattinesse, and on which side soeuer a man do view them, they resemble the liquid wa- F ter of the sea, for transparent they be and shining withall, that is to say, they send out a colour of their own, & withall, through their perspicuity receiue the penetrant beams of our eies. It is reported, That in the same Isle *Cypros*, about the sepulchre of *Hermias* a pety king there, and near vnto the sea sides where were pooles and stewes of great fishes kept to be salted, there stood in old time a lion of marble, in the head of which Lion were set certain faire Emeraude in stead of eies,

* To wit, after
Diamant and
Pearles.

eyes, looking opposit into the sea but they glittered and pierced so deep into the water, that the G
 Tunies vpon that coast were affraid therat, & fled from the nets and other instruments that the
 fishers laid to take them withall: who maruelled a long time at this strange accident: but in the
 end knowing what the matter was, they changed the eies of the foresaid Lion, and remoued the
 Emeralds. But requisit it is that I should set down the imperfections & defaults of Emeralds,
 for that a may so easily be deceived and beguiled in the choise of them: First therefore all
 Emeralds be subiect to some blemishes, and yet as we obserue in men, they haue their parti-
 cular defects by themselves, according to the nation where they be found; for those of Cypr
 haue not an vniforme verdure, but you shal see in one and the same stone a mixture (as it were) of
 diuerse greenes, more or lesse in sundry parts: neither keep they euer that rich greene after one
 tenour, which we see in the Scythian Emeralds.ouer and besides, in some you shal meet with H
 a cloud or shadow running between, which doth impeach the cleare color: neither is the same
 commendable, if it be ouer bright. These faults are the cause that Emeralds are distinguisht by
 diuers names and kinds: for some be darke, and those be called blind: others be thicke, without
 any clearnesse or perspicuity at all. And some again are discommended and rejected for diuers
 little clouds, which also are different for the shade aforesaid: for this little cloud wherof I speak,
 is a fault in whitenesse, when as in viewing of an Emerald it looketh not green all through, but
 either the eiesight meeteth with some white in the way, or else at leastwise in the bottom. And
 thus much as touching the faults in colour. But in the very body and substance of the Emerald
 there be others obserued, to wit, when there appear either hairy streaks, or congealed specks re-
 sembling cornes of salt, or els spots of lead. Next to the Cyprian Emeralds, there is reckoning I
 made of the Æthyopian, which as king *Iuba* mine authour doth report, are found in Æthyopia,
 from Coptos in Egypt three daies journey: These be of a chearefull and liuely green, but hardly
 shal you find any of them clear, pure, and of one colour. Among these, *Democritus* raungeth the
 Hermionian Emeralds and the Persian: of which, the former seeme to swell out as if they were
 embossed and fattie withall: the Persian are not transparent, & yet of a pleasant greene and vni-
 forme, contenting the eie-sight well enough, though it cannot pierce and enter into them; and
 much like they be to the glowing eies of cats & panthers, for we may perceiue them to glitter
 and shine, and yet they be not translucent. These Emeralds in the Sun lose their lustre and be-
 come dim, but in the shade they shine gallantly, yea, and cast from them their beautifull raies
 farther than any other. And yet the general fault in all these, is this, if they shew the color either K
 of gall or the skie; likewise if in the Sun they glitter and shine cleare, but yet appear not green:
 These imperfections are perceiued ordinarily and most of all in the Atticke Emeralds, found
 in siluer mines at a place called Thoricos, yet are not these so grosse and fattie as others, and al-
 waies they seeme more beautifull afar off than neer at hand: these are subiect ordinarily to the
 fault called Plumbago, that is to say, in the Sun they looke with a leaden hew: Moreouer, this
 peculiar quality they haue by themselves, that some of them wear & decay with age, in so much
 as by little and little their liuely green decaie; and besides, in the Sun they lose their lustre.
 After the Atticke Emeralds, those of Media be accounted the greenest, and otherwhiles they L
 resemble the green Sapphire. These seem to be ful of waues, and to containe within them diuers
 shapes and figures of many things, as for example, poppie heads, birds, wings, and finnes, *locks
 of haire, and such like. Such Emeralds as are not found naturally greene, may be made better
 and receiue their perfection, by washing them in wine & oile. In one word, there is not a greater
 Emerald to be found than those of Media. As touching Carchedonian Emeralds, I wor not wel
 whether they be now out of al request & knowledge, since their mines of brasse haue failed them;
 and yet were they alwaies (at their best) the smallest of all others, and bare the lowest price: the
 same were brittle & easie to be broken, their color also was not settled but vncertain & change-
 able, resembling for all the world the greene feathers in Peacockes tails, or the downe of Pige-
 ons neckes; as a man held and turned them one way or other they shined more or lesse, being
 otherwise of themselves full of veines and skales. A speciall fault there was, wherto these Eme-
 rauds were subiect, which lapidaries called Sarcion, that is to say, a certain carnosity or fleshi-
 nesse incident vnto gems. Gathered they were in a certaine mountaine neere vnto Carchedon,
 which thereupon was named Smaragdites. K. *Iuba* hath left in writing, That the Emerald cal-
 led Cholos, serued the Arabians much in their buildings: for to adorn and beautifie their hou-
 ses, they were wont to enclose & set the same in the wals like as the white marble, which the Æ-
 gyptians

* Capillorum,
not carminum

A gyptian name Alabastrites. He reporteth moreouer, that there be many other Emeralds neere
 by, taken forth of the mountain Taygetus in Laconia, and those therefore be named Laconick,
 and much like they are to those of Media. He speaketh likewise of others in Sicilie. Reckoned
 there is in the ranke of Emeralds, a certain gem brought from Persia, named Tanos; howbeit of
 an vnpleasant green it is, and foule within: as also the stone Chalcosmaragdos, that comes out
 of the Isle Cyprus, which hath in it certain veins of brasse that trouble the green colour. *Theo-
 phrastus* reporteth, that he hath read in the books and records of the Ægyptians, That a king of
 Babylon sent as a present to one of their kings, one entire Emerald foure cubits long and three
 broad. Also, that there had bin within the temple of *Iupiter* among them, an Obeliske made of
 foure Emeralds, which obelisk notwithstanding was forty cubits long, & caried in bredth four
 cubits in some places, and two in others. He addeth moreouer, that while he wrote his historie,
 there was at Tyros within the temple of *Hercules*, a pillar standing of one Emerald, vnlesse hap-
 ly it were some bastard Emerald; for such (quoth he) are found, and namely in Cyprus there was
 seen naturally growing, a stone, whereof the one halfe was a plaine Emerald, the other a Iasper,
 as if the humor had not bin fully transformed and conuerted into an Emerald. *Apion* the Gram-
 marian, synnamed * Plitkonices, wrote not long before, who hath left recorded, That there remai-
 ned still within the labyrinth of Ægypt, the gyant-like image of their god *Serapis* nine cubits
 tall, and of one entire Emerald.

* Content-
ous, or Vicio-
rious.

Moreouer, many are of opinion, that Berils are of the same nature that the Emerald, or at
 leastwise very like: from India they come as from their native place, for seldome are they to be
 found elsewhere: lapidaries by their art and cunning know how to cut them into six angles, and
 to polish them smooth; for otherwise their lustre, which is but sad, would be dull and dead in-
 deed, vnlesse it were quickened and reuiued by the repercussion of these angles: for be they poli-
 shed neuer so much any other way, yet haue they not that liuely glosse which those six faces giue
 them. Of these Beryls those are best esteemed which carry a sea-water greene, and resemble the
 greenesse of the sea when it is cleare. Next to them are those called Chrysoberylli: these be
 somewhat paler, and their lustre tendeth to the colour of gold. A third kind there is approaching
 neere to this, but that it is more pale (how soeuer some do think it is no kind of Beril, but a gem
 by it self) and this they call Chrysoprasos. In a fourth degree are placed the Berils named Iya-
 cinthozontes, because they incline somewhat to the Iacinth. And in a fift such as are much of a
 D sky colour, wherupon they are named Æcroides. After them be the Beryls Cerini, for that they
 seem like wax: then the Oleagini, that is to say, of an oile colour. And in the last place bee the
 Crystalline, which are white, and come very neere to crystals. All the sort of these Beril stones
 haue these faults, to wit, white hairy streaks or lines in them, yea and other filthy ordure; being
 of themselves without these imperfections apt to shed their colour, which soon fadeth. The In-
 dians take a wonderfull pleasure in long Beryls, and commend them for the only stones & gems
 in the world; as if they cared not to be set in gold, but chose rather to be worn without it: and
 in truth in that regard their maner is to bore holes through them, and then to file them vp into
 chains and collars with haire of elephants: howbeit when they meet with some excellent Be-
 ryls indeed, which are come to their absolute goodnesse and perfection, they think it not good
 E to pierce such, but presently they tip them with gold, that is to say, they set vnto their heads cer-
 tain knobs in maner of bosses which comprehend and inclose the same. And in very truth, they
 delight to cut their Berils into long rolls or pillastres in maner of cylindres, rather than after
 the maner of other gems, because their principal grace and commendation lies in their length.
 Some are of opinion, that the Beril groweth naturally cornered and with many faces; and they
 hold those Beryls to be richest, which being bored through along, haue their white pith taken
 forth, for to giue them a better lustre of gold put vnto them; by the reuerberation wherof the
 ouermuch perspicuitie of the stone may seem more corpulent and in some sort corrected.ouer
 and about the faults already noted, subiect they are also to those imperfections which be inci-
 dent to the Emeralds, yea and besides to certain specks called Pterygia. It is thought, that Be-
 ryls be found likewise in these parts of the world, to wit, about the kingdome of Pontus. As for
 F the Indians, after that crystal was once found out, they deuised to sophisticate and falsifie other
 gems therewith, but Beryls especially.

Ggg

CHAP.

CHAP. VI.

¶ Of the pretious stone Opalus, and all the sundry kindes. The faults in them, and the means to try which be good. Also diuers sorts of other gems and pretious stones.

THe stones called Opales differ little or nothing otherwhile from Beryls, and yet the same sometimes are nothing at all like them, neither is there a gem that they will giue place to, vnlesse it be the Emeraud : India is the only mother of them : lapidaries therefore & those who haue written books of pretious stones, haue giuen vnto them the name and glory of greatest price ; but especially for the difficultie in finding them out and chusing them, which is inenarrable : for in the Opal you shal see the burning fire of the Carbuncle or Ruby, the glorious purple of the Amethyst, the Greene sea of the Emeraud, and all glittering together, mixed after an incredible manner. Some Opals cary such a resplendant lustre with them, that they are able to match the brauest and richest colours of painters ; others represent the flaming fire of brimstone, yea and the bright blaze of burning oile. The Opal is ordinarily as big as a silberd Nut. And here comes to my mind an historie among vs as touching the Opal, worth remembrance : for there is at this day to be seene one of these Opals, for the which gem *Marcus Antonius* proscribed and outlawed one *Nonius* a Senator of Rome, the sonne of that *Struma Nonius* (at whom the stomack of *Catullus* the Poet did rise so much, seeing him as he did, sit in a stately chaire of Ivory called *Curulis*) and grandfather to that *Servilius Nonianus* whom I my selfe haue seene Consul. Now the said Senator when he was driuen to fly vpon this proscription, took no more of all the goods which he had, but onely a ring wherein this Opall was set, which (as it is well known) had bin valued sometime at 20000 Sesterces. But as the cruell and inordinate appetite of *Antony* (who for a Jewell onely outlawed and banished a Roman Senator) was wonderfull on the one side, so the peeuishnesse and contumacie of *Nonius* was as strange on the other side, who was so far in loue with that gem which cost him his proscription, and rather than to part with it suffered himselfe to be turned out of house and home : and yet the very wild beasts are better aduised than so, who are content to bite off those parts of their bodies and leaue them behinde for the hunters, seeing themselves in danger of death for them. In the Opall there be obserued also diuers blemishes and imperfections, as wel as in other stones ; namely, if the colour resemble the floure of that herb which is called *Heliotropium*. Turnsole : also if it look like crystal or haile, likewise if there be a spot comming between in maner of a grain or kernel of salt : if it be rough in handling, or if there be certain small pricks or spots represented to the eyes : neither is there any pretious stone that the Indians can counterfeit so well by the meanes of glasse, as this ; inso much as hardly a man shall discerne the naturall Opal from the false, when they haue done withall. But the only triall is by the Sun, for if a man hold an Opall betwixt his thumbe and finger, against the beams of the Sun, if it be a counterfeit, he shall find those diuers colours which shewed therein, to runnall into one and the same transparent colour, and so to rest in the body of the stone ; whereas the brightnesse of the true Opal oftfoons changeth, and sends forth the lustre to and fro more and lesse, yea and the glittering of the light shineth also vpon the fingers. This gem, for the rare and incomparable beauty and grace that is in it, most Writers haue called *Pederos*.

There is also another kind of Opalos apart by it self, according to the opinion of some, who say it is called by the Indians *Sangenon*. It is said that that there be Opals in Egypt and in Arabia, like as in the kingdom also of Pontus ; but such of all other beare the lowest price. In *Galatia* likewise, and in the *Illes Thrasos* and *Cyprus* : for albeir they haue the lovely beaurie of the Opalus, yet their lustre is nothing so liuely and lightsome, and seldome shal you meet with any of them that is not rugged : their chief colours stand much vpon brasse and purple ; the fresh verdure of the green Emeraud is away, which the true Opal doth participate. This is generally held, that they are more commendable which be shadowed as it were with the colour of wine, than delaid with the cleannesse of water.

Thus far forth haue I written of gemmes and pretious stones which be esteemed principall and most rich, according to the decree generally set downe and pronounced by our nice and costly

A costly dames : for we may conclude vpon this point more certainly, going by their sentence, than grounding vpon the iudgement of men : for men (kings especially and great men) make the price of each gem according to their feuerall fancies. *Claudius Caesar* the Emperour made no reckoning of any but the Emeraud and the Sardonyx, and these ordinarily he wore vpon his fingers : but *Scipio Africanus* (as saith *Demosthenes*) tooke a liking to the Sardonyx before him, and was the first Roman that vsed it ; and euer since, this gem hath bin in great request at Rome : in regard of which credit, I will range it next to the Opall. In old time the Sardonyx, as may appeare by the very name, was taken for the pretious stone which seemed to be a * *Cornalline* vpon white, that is to say, as if the ground vnder a mans naile were flesh, and both together transparent and cleare : and in very truth, the Sardonyx of India is such, according to *Ismenias*, *Demosthenes*, *Zenathemis*, and *Sotacus*. As for these two last named, they verily doe name all the rest that are not cleare and shew not through them, Blind Sardonyches, such as the Arabian be ; and these haue carried away the name of Onyx, without any mention or apparence at all of the Sarda or Cornalline : and these stones haue begun of late to be knowne and distinguished by their sundry colours ; for some of them haue their ground blacke or much vpon azure and the naile of a mans hand : for it hath bin generally thought and beleueed, that such hath a tincture of white, and yet not without a shew of purple, as if the said white enclined to a vermillion or Amethyst. *Zenathemis* writeth, that these stones were not set by among the Indians ; notwithstanding otherwise they were so large and bigg, as thereof they made ordinarily sword handles and dagger halts : and no maruaile, for certaine it is, that in those parts land flouds comming downe with a streame from the hills, haue discovered such and brought them to light. He saith also, that they were at the beginning highly accepted of in those parts ; for that there is not in maner a stone engrauen, that will imprint the seale vpon wax cleanly without plucking the wax away, but it ; and through our persuasions, the Indians also grew into a good conceit of them, and tooke pleasure in wearing the same : and verily, the common people of India make holes through them, and so weare them enfiled as carkans and collars about their neckes only. And hereupon it commeth, that those are taken to be Indian Sardonyches or Cornallines which be thus bored through. As for the Arabick, excellent they are thought to be which are environed with a white circle, and the same very bright and most slender : neither doth this circle shine in the concavities or in the fall of the gem, but glittereth onely in the very bosses ; and besides, the very ground thereof is most blacke. True it is, that the ground of these Sardons is found in the Indian stones to resemble wax or horne, yea within the white circle, in so much as there is a resemblance in some sort of a rainbow, by means of certain cloudie vapors seeming to proceed from them ; and verily the superficial face of this stone is redder than the shels of Lobsters. As touching those that be in colour like to hony or lees (for this is taken to be an imperfection and fault in Cornallines) they be all rejected ; likewise if the white circle that girderth it about spread and do not gather round and compact together : semblably, it is counted a great blemish in this gem, if it haue a veine of any other colour (but that which is naturall) growing out of square : for the nature of this stone is such, like as of all things els, not to abide any strange thing to disturbe the feat therof. There be also Armeniacke Cornallines, which in all respects else are to be liked, but for the pale circle that claspeth them.

By occasion of this stone Sardonyx, I am put in mind for the names sake, to write of the gem Onyx also : for notwithstanding there be a stone so called in *Carmania* (which is the *Cassidoin*) yet there goeth also a gem vnder that name. *Sudines* saith, that the pretious stone Onyx hath a white in it resembling the naile of a mans finger : it hath likewise (quoth hee) the colour of a Chrysolith, otherwise called a Topase, of a Cornalline also, and a Iasper. *Zenathemis* affirmeth, that the Indian Onyx is of diuers and sundry colours ; to wit, of a fiery red, a blacke, a * *horne* grey ; hauing also otherwhiles certaine white strakes or veines in fashion of eies compassing it about ; and in some of them you shall see white streaks or veines likewise to goe crosse and by as betweene them. *Sotacus* maketh mention moreouer of an Arabian Onyx, but it differeth from others (saith hee) in this respect, That the Indian Onyx hath certaine sparkes in it, and the same enuironed and compassed about with white circles either single or many fold, farre otherwise than the Indian Sardonyx ; for in the former, the white seemed to be pointed pricks, but in these they bee compleat circles. As for the Arabian Onyches, there bee found of them blacke, with white circles. *Satyrus* reporteth furthermore, that the Indian Onyx is fleshie ; that in one

* Whereof haply they be called Cornallines.

part it resembleth a Rubie otherwise called a Carbuncle, in another a Chrysolith, and an Amethyst, yet he maketh no account of such: but the true Onyx indeed (quoth hee) hath very many veins, and those of sundry colors; garnished also it is with circles as white as milk: and albeit the colors of the veins be inexplicable as a man casteth his eie vpon them feuerally, yet meeting as it were all in one, they make a good confort and yeeld a lustre most pleasing to the sight. Now that I haue treated of the Onyx, I must not deferre to say somewhat also of the nature of Sarda, which maketh the other half of the stone Sardonyx, and so by that means (as it were by the way) to discourse of those gems that are of an ardent and fiery colour.

CHAP. VII.

¶ Of Carbuncles or Rubies, and their sundry kinds: of their defaults and imperfections: of the meanes to trie them. Of other precious stones resembling the fire.

* For the Greeks call them *σφαιρα*.

* These are called yet by Lapidaries, Alabandines, or Almadines.

* As one would say, more like some ordinary stone than a precious gem.

Among these red gems, the Rubies otherwise called Carbuncles, challenge the principall place, and are esteemed richest: they haue their name in Greeke of the * likenesse vnto fire, and yet fire hath no power of them, which is the reason that some call them *Apyroti*. As touching their kinds: there be Rubies of India, and Rubies of the Garamants, which carry the name also of *Carchedonij*, i. Carthaginian, in regard of excellency, by reason of the wealth and puissance of the city Carthage the Great. In this ranke, some doe place the Ethiopian Rubies and the Alexandrian, which are found indeed among the cliffes of the hill Orthosia, but trimmed & brought to their perfection by the * Alabandians. Moreouer, in all sorts of Rubies, those are taken for the male which shew a quick red more fire-like than the rest; and contrariwise female, such as shine not so bright but after a faint manner. In the male it is obserued, that some seeme to flame more cleare and pure, others are darker and blacker: there be againe that shine brighter than the rest, yea, and in the sun giue a more ardent and burning lustre: but the best simply be those which are called *Amethystizontes*, that is to say, that in the end of their fire resemble the blew violet color of the Amethyst. The next in goodnesse to them, are those which they call *Syrticæ*; and such do glitter and shine of their own nature: by reason whereof, they are discovered soon wheresoeuer they lie, by the reuerberation of the sun-beams. As touching the Indian Rubies, *Satyrus* saith, they are not found cleare, but for the most part foul; howbeit, after they be scoured, their brightnesse is most fiery. He affirmeth moreouer, that the Ethiopian Rubies are greasie and shine not out, but seeme to haue a fire burning within as if it were infolded in some thing about it. *Callistratus* holdeth opinion, that if a Carbuncle or Rubie be laid vpon a thing, it ought to yeeld certain white clouds, in the edges and extremities of the glittering that it makes; but if it be held vp or hung in the aire, it flameth & burneth out fire red: and hereupon it is, that most men haue called it the white Carbuncle; like as they haue named those Indian Rubies * *Lithizontes*, which shine more faintly & with a brownish or dusky flame. As for the Carchedonian Rubies, *Callistratus* saith, they be far lesse than others, whereas of the Indians some are so big, that being made hollow they wil contain the measure of one sextar. *Archelaus* writes, that the Carchedonian rubies be blacker than others to see too, but if they be quickened as it were with fire or sun, or be held bowing forward, they are more ardent and fiery than any other: the same in a shady house, seeme purple; in the open aire, flaming; against the raies of the sun, sparkling: he auoucheth moreouer, that the fiery heat thereof is so actual, that if a man seal with them, though it be in a shadowie and coole place, they will melt the very wax that is stamped therewith. Many authors haue written, that the Indian Rubies be whiter than the Carchedonian; and contrarie to the nature of the Carchedonian, if they be bended forward, they lose much of their viuacitie, and be dimmer and more dull by that means: also, that in the Carchedonian Rubies which be male, there are seene certain raies as it were of starres twinkling within; whereas the female contrariwise, sparckle all their fire without-forth: that the Alabandines be more darke and blackish than others, and withall rough in hand. It is said moreouer, that there be certaine stones growing in Thracia, of the same colour that Rubies, and which will not be chafed and made hot in the fire. *Theophrastus* writeth, that there be Rubies found about *Orchomenus* in the country of Arcadie, as also in the Isle Chios: and as for the Orchomenian, they be of a blacker kinde, and serue to make mirrors of. The Trezenian Rubies (by his saying) are

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A of diuers colours and spotted with white specks comming in among: and the Corinthian Rubies be more pale and whiter than the rest. *Bocchus* writeth, that there be brought Rubies from Maris and Lisbon in Portugall; but with much adoe and great difficultie they are found, by reason of the clay wherein they be inlapped, in certain deserts and Forrests burnt with the Sun. In sum, there is not a harder thing than to discern these sundry kinds of Rubies one from another; they are so easie to be counterfeited and falsified by the art and skill of lapidaries & goldsmiths, who haue a cast to lay some foile vnder, to make them for to shine and glitter like fire. Men say, that the Ethiopians haue a deuise to steep their dusky and dark Rubies in vinegar; for in 14 daies they will be pure and glister, yea, and continue so 14 moneths after. There is a way to counterfeit Rubies with false glasse stones, which they will make seem Rubies as like as is possible; but the grinding vpon a mill soone discovereth the fraud, like as it doth in any other artificiall and sophisticated gems whatsoeuer; for their matter is more soft and brittle withall than the fine and pure stones indeed: also the false Rubies are detected by the hardnesse of the powder that is fetched from them, & the weight; for these glasse Rubies be farre lighter: and otherwhiles a man shall see in these falsified Rubies certaine little risings in manner of blisters or bladders, which shinelike siluer. Moreouer, there is found in Thesprotia a certaine minerall Rubie called *Anthraxitis*, resembling coles of fire: but whereas some authors haue written, that such grow in Liguria, I take it to be a meere vntruth, vnlesse haply in times past such might be found there. It is said also, that there be of these kind of Rubies, which are compassed about with a white veine, and their colour is ferie as well as of the rest before named: but this peculiar property they haue by themselves, That being cast into the fire, they seeme dead and doe lose their lustre: contrariwise, if they be well sprinkled and drenched with water, they seeme to glow, yea and to flame out againe.

There is a stone much like to this, called *Sandaistros*, which some name *Garamantires*, growing among the Indians in a place likewise so named. It is engendred also in that part of Arabia which regardeth the South Sun. The chiefe grace and commendation of *Sandaistros*, is to bee cleare, and to haue certaine drops as it were of gold like stars shining within, that is to say, alwaies in the body of the stone, and neuer in the coat or out side: in regard of which starre-like specks, there is attributed some religious matter to these stones, for that they represent in some sort to them that behold them, the seuen stars called *Hyades*, both in number and also in order and manner of disposition: which is the reason, that the wise men of Assyria named *Chaldei*, doe obserue them with much deuotion. Moreouer, these *Sandaistros* are distinguished by the tex, for the male seeme to haue a more sad and deep colour, and by the reuerberation of their fire within giue a tincture to those things that they touch or lie neer to: and the Indian verily of this kind are said to dim the eie-sight. As for the female *Sandaistros*, they carry not such an ardent shew of fire, but are more pleasant to the eie, as beeing attractive rather than burning. Some writers there be, who prefer the Arabian *Sandaistros* before the Indian, saying that the Arabian are like to the Chrysolithes that be somewhat smokie. As for *Ismerius*, he affirmeth, that the *Sandaistros* are so tender that they cannot bee polished: in a great errour therefore bee they who call this stone *Sandaresos*: but all authors herein accord, That the more stars do make apparence in them, so much better is the price. Furthermore, this is to be noted, that the nearnesse in name, otherwhiles is the cause of errour; as we may see by *Sandafer*, which *Nicander* called *Sandaterion*, others *Sandaferon*: and in truth, this *Sandafer* some take to bee *Sandafter*, and the *Sandafter* indeed, *Sandaresos*, which is found likewise amongst the Indians, bearing the name of the place where it groweth: in colour it resembleth an apple, or else Greene oile: and in truth, no account is there made of it.

As touching *Lychnites*, so called for the resemblance that it hath to the blaze of a candle lighted, which giueth a singular grace to it, and maketh it very rich, it may be ranged wel among these ferie and ardent stones: found this is about *Orthosia* and throughout all *Caria* and the places adjoining, but the most excellent come from the Indians, which some haue thought and said to be the milder kind of Carbuncle or Rubie balais. In a second degree of worth and account vnto this *Lychnites*, is *Ionis*, so called of the March violet which in colour it doth very much resemble.

Ouer and besides, I find other sorts of Rubies different from those aboue named; for some of them hold of the fresh and glorious purple of *Lac*, others stand as much vpon the Scarlet or Crimseu:

Crimsen: which being chaufed in the sun, or otherwise set in a heat by rubbing with the fingers, will draw to them chaffe, straws, threads, and leaues of paper. The common Grenat also of Carhedon or Carthage, is said to do as much, although it be inferior in price to the former. These Grenats are found vpon the hills amongst the Nasamons, and as the inhabitants are of opinion, are ingendred by means of a certaine diuine dew or heauenly showre: found they are twinkling against the moon-light, and especially when she is in the full. In times past, all the trafficke of the Grenats was at Carthage, whereupon they took the name of Carhedon. But *Archelaus* saith, that there be of them in Egypt also about the city Thebes; howbeit, such are brittle, full of veins, and like to a cole going out and ready to die. I find, that drinking cups haue been made of this stone, as also of the former, called Lychnites. Generally, all rubies be very hard for to be cut; and this ill quality they haue, That they neuer do scale cleane, but ordinarily plucke some of the wax away with the signet: contrariwise, the Cornalline or Sarda, signeth very faire without any of the wax sticking to it: this Sarda giueth part of the name to the Sardonyx: the gem it selfe is very common, found first about * Sardis; but in truth, the principall is that which commeth from about Babylonia, out of certaine quarries of stone, where it was found sticking within another stone in manner of the heart. After this manner, it is said, that the Persians had sometime minerall Cornallines, but the mine now doth fade: howbeit, there be of them in many other places besides, to wit, in Paros and Assos. The Indians send vnto vs three feuerall kindes, to wit, the red, the fatty (called therupon Demium) & the third which ordinarily haue a ground of siluer-foile laid vnder them to giue a lustre. The Indian Sardes or Cornallines are transparent and carry a through light with them: the Arabian be more thicke: there be found of them also about Egypt, but they haue commonly a ground of gold-foile. These gems likewise are distinguished by the sex, for the male haue a more bright and orient lustre; the female are not so resplendent, but shine as it were through a grosse & fatty matter. In old time, there was not a precious stone in greater request, than the Cornalline: & in truth, *Menander* & *Philemon* haue named this stone in their * Comedies, for a braue and proud gem: neither can we find a precious stone that maintaineth the lustre longer than it, against any humor wherein it is drenched; and yet oile is more contrary to it than any other liquor. To conclude, those that be of the colour of honey, are rejected for nought; howbeit, if they resemble the colour of earthen pots, they be worle than those.

* A city, whereupon it tooke the name, and now of Sardinia the Isle, as some thinke.

* *Menander* & *Philemon* in their Comedies: speaking of the Emerald and Cornalline.

CHAP. VIII.

¶ Of the * Topaze, and the sundry kinds of it. Of * Callais: and of other Greene precious stones not transparent.

* Some take it for our Chrysolith.

* It is thought to be our Turquois.

THE Topaze or Chrysolith, hath a singular green colour by it selfe, for which it is esteemed very rich; and when it was first found, it surpassed all others in price: they were discovered first in an Isle of Arabia called Chiris, wherein certaine rouchers (Troglydytes) being newly landed, after they had bin driuen thither by tempest and vrged with famine, began to feed vpon herbs and dig for roots; and by that meanes met with the Topaze stone: This is the opinion of *Archelaus*. But *K. Iuba* reporteth, that there is an Island within the red sea called Topazas, distant from the continent 300 stadia, the which is oftentimes so mistie, that sailers haue much ado to find it; whereupon it tooke that name: for in the Troglydytes language (saith he) Topazin is as much to say, as to search or seek for a thing. It is said, that the first that tooke a liking vnto the stone, was queene *Berenice* the mother of *Ptolome* the second, and that by the meanes of *Philemon* (lieutenant generall to her son in those countries) who presented one of them to the said queen. Of which Chrysolit, *Ptolomeus Philadelphus* K. of Egypt, caused the statue of his wife *Arfinoe* to be made, 4 cubits long; and in the honour of the said queene his wife, dedicated it in a chappell named the Golden temple. The moderne writers do report, that there be found of these Chrysolits about Alabastrum a towne in Thebais, a prouince in high Egypt; and two kinds they make thereof, to wit, *Prasoides*, and *Chrysopteros*: which later commeth neare to that golden Berill called *Chrysoprasson*, for that the colour thereof resembleth fully the juice of *Porret*; and of all precious stones it is the largest: this property it hath aboue all other gems, That only it comes vnder the file to be polished for noble men; whereas all other be scoured by the grindstones coming out of *Naxos*. This stone will weare with vsage.

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A This stone in regard of colour may be accompanied with the Turquois called Gallais, for a certain green it hath inclining to yellow. It is found beyond the farthest parts of India among the inhabitants of the mountaine Caucasus, to wit, the Phicarians and Afdates; they grow vnto a very great bignesse, but the same is fistulous and full of filth. The purest and richest of this kind be those of Carmania. But in both countries they be found in ycie clifles hardly accessible, where you shall see them bearing out after the manner of bosses like vnto eies: they stick to those crags & rocks so lightly, that a man would say that saw them, how they grew not naturally out of the rocke, but were onely set too by mans hand. And for that the place where they doe grow, is so steep that a horseman is not able to ride vp to them, and because the people of that country be loth to climb so high with their feet, being otherwise acquainted ordinarily to the horseback, besides, in regard of the danger in venturing to climb for them, therefore they reach them a far off with slings, and so driue them down, with all the hard mosse about them: and in very deed, a commodity this is of great reuenue, & besides, the rich men know not the like Jewell to weare about their necks. By a collar or chaine of these Turquoises, men are judged wealthy more or lesse; and this is the glory that they take from their childe hood, to be able to say, that thus many Turquoises they haue pulled and cast downe by that manner of slinging. And yet in the practise of this feat, all sped not alike; for some you shall haue to throw downe many faire Turquoises at the first sling; and many for it again who weary their armes and course after them, & yet cannot get one Turquois. This (I say) is the maner of chasing or hunting Turquoises: and when they be gotten, they must come into the lapidaries hands to be cut and formed to what fashion you will; and in truth they be otherwise brittle and easie to be wrought vpon. The best Turquois is that which approacheth nearest to the grasse green of an Emerald, howbeit, all the grace that they haue, seems to come from outward help: being set in gold, they looke most beautifull; neither is there a precious stone that becommeth gold better. The fairer that a Turquoise is, the sooner loseth it the colour by oile, ointment, or wine: contrariwise, the baser that they be, the better do they hold their own and maintain their lustre. Neither shall you meet with any precious stone more easie to be falsified and counterfeited with glasse, than a Turquoise. Lastly, some writers affirme, That they be found in Arabia, within the nest of certain birds called Melacoryphi, which is as much to say as blacke-cops.

D As touching green stones, there be many more kinds: but of the baser sort we reckon one of a Porret colour, which we call *Prasius*, and the first kind of it is all green, whereas the second hath vpon the green, certaine red spots like bloud, which cause it to seem vnpleasant to the eie, and rough in hand: the third is Greene, but yet parted with three white strakes.

The stone *Chrysoprassus*, i. the sea water or Horehound green, is preferred before the other: in some sort it resembleth the green juice of a Leek, but it declineth somewhat from the Topaze, as if it were between it and gold. Some of these are so great and big, that there be drinking cups made thereof, after the fashion of boats: but pilastres or round staues in manner of cylindres or rolls, are very quickly framed of such stones. These be found among the Indians: like as another stone, which is called * Nilios: A weak lustre it hath, and will not long continue, for looke but a while wisely vpon it, you shall perceiue it soone to fade. *Sudines* saith, That there be of them found in Syverus, a riuer that passeth through the country of Attica: in colour it resembleth a smokie Topaze, or otherwhiles that of a honny colour. *K. Iuba* reporteth, That it is bred in Ethiopia, and namely about the bankes and sides of a riuer which we call Nilus, whereupon it commeth to be named Nilios.

There is a stone called *Molochites*, for that the Greene colour which it hath, commeth neare vnto a Mallow, and is more mild than the rest whereof I haue spoken. Commended it is highly in signets to scale faire: and besides it is supposed to be by a naturall vertue that it hath, a countercharme to preserue little babes and infants from all witchcrafts and sorceries.

A kind of Iasper likewise there is of a Greene colour, and the same oftentimes is transparent: and although there be many other stones go beyond it in riches, yet it retaineth still the ancient glory and honor that it had. A gem it is, common to many other countries: India yeeldeth it vnto vs like to an Emerald. That of Cyprus is very hard, and of a greyish fatty colour, betweene white and Greene. The Persians send vs a Iasper like vnto the skie or aire, and thereupon it is called *Aerizusa*: and such a one is that which commeth from the Caspian hills. The Iasper about the riuer *Thermodoon* is blew as Azure. In Phrygia you shall haue it purple: in Cappadocia

* Thought to be the Almain Chrysolit.

Cappadocia partly purple and partly blew, but no kind of lustre hath it at all. Out of Amisus, a city in Pontus, we haue Iaspers brought, much like to the Indian: and the Iasper of Chalcedon is muddy and troubled. But it were better to set downe their degrees in goodnesse, rather than to stand vpon the countries from whence they are transported. The best Iasper then is that esteemed which standeth much vpon purple or Lac: the second is incarnat, or of a rose colour: the third resembleth the Emerald in greenesse. To euery one of these seuerall kinds, the Greekes haue imposed significant names. And in a fourth place the Greekes haue ranged another called Borea, like to the morning skie in the time of Autumne; and this may well be called Aerizufa. There is a Iasper in colour like to the Sarda, the Cornalline, as also resembling much the violets: there be as many more sorts behind, which I haue not touched, but subject they be al to blemishes, as namely being blew or like to Cryстал or *waterie steame. Last of all, we haue a Iasper called Terebinthizufa by the Greekes, but as I take it very vnproperly, as if it were compounded of many gems of one and the same kind; and therefore the better sort of such are inclosed within a circle of gold, yet so as they be open both aboue and beneath, neither is any thing but the edges only compassed with gold. The faults or imperfections of the Iasper be these, If the lustre indure not long, notwithstanding it glitter a far off; also if it shew a spot like vnto a graine of salt, besides all other which I haue already named in the rest. Moreouer, Iaspers may be falsified by the meanes of glasse: and this is soone detected, namely, when they cast a reuerberation of their lustre outwardly, and hold it not within. To conclude with the stones called Sphragides, they are not much vnlike to the Iaspers. And this gift they haue aboue all the rest, that they make the best signets, and seale fairest.

CHAP. IX.

¶ Sundry kinds of Iaspers.

OF diuers sorts of Iaspers, al the East part (by report) are most affected to that which is like the Emerald, and they carrie it ordinarily about them as a countercharme. The same if it be compassed round about with one white crosse line in the midst, is called Grammatias; if with many Polygrammos. And here by the way I can hold no longer, but my mind serues me very well to challenge the Magitians, who haue giuen it out, That this stone is very good for those to haue about them who are to make some publick speech or solemne Oration to the people. Moreouer, we haue a Iasper called Onychopuncta & Iasponyx, which seemeth to inclose a cloud within it, & in some sort to resemble the snow. This Iasper is fashioned like to a Star, and beset with diuers reddish points: a man that saw it, would say it were a kind of Megarian salt. There is besides a Iasper which seemeth as if it were infected with smoake, and this is called Capnias. Concerning the bignesse of the Iasper, I haue seene one of them nine inches long, which serued for to represent the visage of Nero the Emperour, standing ready armed with a cuirace.

As touching the precious stone Cyanos, I must speake of it apart, notwithstanding I haue of late mentioned and applied it to one of the names of the Iasper, to wit, that with the blew colour. The best Cyanos is that of Scythia; the next commeth from Cypros: and in the last place we are to reckon the Egyptian. This stone is very apt to be counterfeited, and especially by tincture: the inuention whereof is ascribed to a king of Egypt, who was highly honoured for being the first that gaue a colour to it. Distinguished these stones also are by the sex, for there be of them both male and also female. Otherwhiles you shall perceiue a certaine powder in them as it were of gold, and yet not like to that of Saphires: for the Saphire also glittereth with marks and pricks of gold. Saphires are likewise sometime blew: mixed also with purple, although that be very seldome: the best are among the Medes, yet in no place be they transparent. Moreouer, they are vntoward for to be cut and engrauen, by reason that the lapidaries shall meet with certaine hard knots of Cryстал comming here and there betweene. The blewest are thought to be the male.

Next after these, I am to range those stones that bee of a purple colour, and such as decline somewhat from them, and yet seem to depend of them: of which, I must place in the first ranke as principally, the Amethysts of India: and of them there be found in a part of Arabia, which bordereth vpon Syria, and is called Petra: also in Armenia the lesse, in Egypt, and in France:

A but the foulest and of most base account, be those of Thasos & Cyprus. The reason of the name Amethyst, is generally thought to be this, that notwithstanding it approach very neer to the colour of wine, yet before it thoroughly tast therof, it turneth into a March Violet color: and that purple lustre which it hath, is not altogether fiery, but declineth in the end to the color of wine. There is not one of these Amethysts, but it is transparent with a violet colour. Easie they are al to be cut and engrauen. And as for the Indian Amethysts, they haue the full and rich colour of the Phoenicean purple die; and in truth, the diers wish that they may but giue a tincture aspleurable to it. Verily this purple colour is pleasing to the eie, neither doth it strike or pierce the sight so forcible as the Rubies do. In a second ranke are to be ranged the Amethysts inclining to the Iacinths, the color of which stone the Indians call Sacon, like as the gem it selfe Sacodian. B Now if the color be more weak and feeble, they call it Sapinos: and this Amethyst in a third degree is named Paranites in the marches of Arabia, which name it taketh of the people. The fourth kind resembleth the colour of wine. The fifth declines neer to Cryстал, saue only that toward the bottom thereof, it standeth of a certaine whitish purple: but this is nothing esteemed, for the excellent Amethyst indeed being held vp in the aire, ought to shine in manner of a Ruby, and to carry a certain purple lustre, mildly participating of the incarnat rose color. Such Amethysts as these some chuse rather to call Pæderotes, like as a kind of Opale; others, Aærotetes: many giue them the name of Venus gems, for the great grace that they haue, & decent loueliness which they seem to shew both in fashion and colour, especially without forth. The Magitians, as vain herein as in all other things, seem to bear vs in hand that they haue a special vertue to withstand drunkenesse, whereupon they should be called Amethysts: neither stay they so, but tel vs, that if the name of the Moon and the Sun be engrauen in them and so worn about the neck hanging, either with the hairs of a Cynocephalus head, or els swallows feathers, they are a souveraigne remedy against charms and forceries that be practised, with poisoning. Nay they would make vs beleue that there is a way to vñe them, which wil cause men to be gracious with princes who haue any negotiation with them, and that by the means thereof they shal find easie access to their presence, and fauor in their eies. Also, by their saying, they are offorce to auert haile and such like distemperature of the weather, yea, and to turn away Locusts, so there bee a charm in maner of a praiser said withall, the form whereof they also do prescribe & shew: and no maruell, for they haue promised the like of Emeralds, if there were inchafted in them the forme either of Eagles, or the flies named Beetils. In setting down which toies and vanities, they shew well enough in what contempt they haue mankind, and how they are disposed to mocke the world.

It followeth now by good order to speak of the Iacinths, which, albeit they differ much from Amethysts in some respect, yet in lustre they approach very neare: and this is only the difference between them, that the braue violet colour, which in the Amethyst is full and rich, in the Iacint is delaied and weaker. The Iacint also at the first sight is pleasant and acceptable, but the louely beauty therof vanisheth away before it haue giuen a man enough. And so far is it off from contenting the eie fully and satisfying the pleasure therof, that it fades sooner than the dainty flour of that name, Hyacinthus, so quickly doth the lustre passe away, in manner before it come to the eie. Aethyopia furnisheth vs with Iacinths & Chrysolithes both, which are transparent and carry the colour of gold: howbeit those of India bee preferred before them; they of Baetria likewise, if they be not spotted and flecked with diuers colors. The worst of all others, be the Arabian: for they be not only skewed in colour, but also foule and troubled: and look what radiant lustre they haue, interrupted it is with a cloud of spots: and if any chance to be clear otherwise, yet a man that looketh on them, would say they were full of their owne dust. The best are those, which being laid to gold, cause it to looke whitish in manner of silver, in comparison to them. Such as be cleare and transparent, Goldsmiths vse to set within a hoope of gold, so as they may be seen both beneath and aboue. The rest had need of a ground of Latton soile to giue them a lustre: howbeit, now adaies those that are not skilfull lapidaries haue taken vp a custome to call some Iacints Chryselestri, which incline to the color of a base gold called Electrum, the which in a morning are more beautifull and glorious to the eie, than all the day after. Those Iacints that come from Pontus, are knowne by their lightnesse: some of them be hard and of an Orange red, others be soft and foule. Barchus mine author reports, That they be found in Spaine also, in that place where he saith they sink pits for to leuel water, and out of which the peasants doe

*or Citrine Iacynth.

take forth crystal. He affirmeth also, That he hath seen a *Chrysolith of twelue pound weight. G Moreover, there be certain Iacincts which haue a white veine comming between, and those are called Leucocrysi. And of this kind some be named Capnia, because they be smokie. You shall find of them like vnto glasse beads, and yet of a shining yellow in manner of Saffron. And verily false Iacincts there be counterfeited by glasse so artificially, that a man shall hardly discern them by the eie: howbeit handle and feele them, you shall soone find the deceit; for the fine Iacincts indeed are colder naturally than those that be counterfeited. Among these Iacincts, I may range wel ynough those stones which are called Melichrysi, which shew as if cleare hony shone through gold. These we haue from India: but of all other they are most subiect to injurie and will soonest breake. The same country yeeldeth also a gem called Xystion, whereof there is such plentie, that the very common people doweare them.

*Of which name there is Opalus & the Amethyst.

If we should speake of white stones, the principall of them all is the gem named Pederos; H And yet considering that vnder this name there passe other *fair & beautiful stones (such a prerogative hath the word to signifie some excellencie of louelines) there may be question made, how it can be properly vsed for one gem, or one colour; yet surely there is a kinde of pretious stone by it selfe called Pederos, and the same worth the looking on; and there seem to meet together a skie color, and the same in his manner greenish vpon a cleare and transparent Crystal: accompanied therewith a purple and a certain yellow and bright gold colour of Muskadel, and the same is alwaies the last colour that appeareth outwardly and giueth the lustre: and yet a man that beheld this stone, would say that the head thereof were crowned with a chaplet of purple: and as it appeareth to haue these colours confounded all together, so it seemeth as if euery one had a seuerall lustre by it selfe. A more pure and clearer gem there is not againe: comfortable to the head & pleasing to the eie. The best simply of this kind we haue from the Indians, who call it Argenon. In a second degree to it is that of Egypt, where it is called Senites. Of a third sort there be in Arabia, but those are rough. Those of Natolia and the kingdome of Pontus, are not so radiant and quicke as the others: and yet from Galatia, Thracia, and Cyprus, we haue such as be more feeble than they. If you would know what faults be incident to these Pederotes particularly: they carry otherwhiles a languishing lustre; troubled they be with vnaturall colours; and generally subiect they are to all the defects and imperfections of others.

*Gira sole.

In the second place of white gems, is *Asteria to be counted: a wonderfull propertie it hath in Nature, for which it deserues to be chiefe; for that it keepeth enclosed within a certain light K in manner of the apple in the eie: which according as a man doth hold or turne, hee shall see how it will send and transfuse it from the owne place; one would thinke that it walked within and shifted from place to place. And the same, if it be opposed against the beames of the Sun, casteth forth bright and white raies of the owne, in manner of a starre, whereupon it tooke the name Asterias: and very hard it is to be engrauen. Those which come out of India be preferred before them of Carmania.

In like manner a white pretious stone there is called Astrios, approaching neer to Crystal: this is engendred among the Indians and along the coasts of Pallene: From the verie centre within, there shineth a kind of star in manner of a full Moone in the height of her brightness. Some giue this reason of the name, that being held against any stars, it receiueeth from them a L light and sendeth the same from it againe in manner of beams. And they hold that the best be in Carmania, and there is not another gem againe lesse subiect to blemishes and imperfections than it. As also that a worse kind thereof is called Ceraunias: and the worst of all other resembleth the blase or flame of lampes and candles.

As touching Astroites, many make great account of it: and such as haue written more diligently thereof, doe report, That Zoroastres hath highly commended it and told wonders thereof in art Magicke.

Sudines speaketh of another gem called Astrobolos, and saith it is like vnto a fish eie, and casteth forth white glittering raies against the Sunne.

Among white pretious stones may be reckoned that which they call Ceraunia, which is apt M to receiue light and lustre both from Sunne and Moone and other starres. It selfe looketh like Crystal cleare, howbeit, the lustre that commeth from it seemeth to be of a blue Azure color: and Carmania is the natieue place thereof. Zenas hemis confesseth, That it is a white gem, and hath within a starre-like fire, which seemeth to run too and fro and change place, according as a man turneth

A turneth it. He affirmeth also, that the foresaid Ceraunia will become dull and dusky; which if they be foked for certain daies together in vinegar and sal-nitre, will recouet their light and conceiue a new fire in manner of a star, which will continue for so many months as they lay daies infused, & after that lose their lustre again. Sotach hath set down two kinds more of Ceraunia; to wit, the black and the red, saying, that they resemble halberds or ax heads. And by his saying, the black, such especially as be round withall, are endued with this vertue, that by the means of them cities may be forced, and whole naues at sea discomfited; and these (forsooth) hee called Betuli, whereas the long ones be properly named Ceraunia.

It is said there is one more Ceraunia yet, but very geason it is; and hard to be found, which the Parthian Magitions set much store by, and they only can find it, for that it is no where to be B had but in a place which hath bin shot with a thunderbolt.

Next after the Ceraunia, there is a stone named Iris: digged out of the ground it is in a certain Isle of the red sea, distant from the city Berenice 60 miles. For the most part it resembleth Crystal; which is the reason that some haue termed it the root of Crystal. But the cause why they call it Iris is, That if the beams of the Sun strike vpon it directly within house, it sendeth from it against the wals that be near, the very resemblance of a rainbow both in form and colour, and oftsoons it will change the same in much variety, to the great admiration of the beholders. For certain it is known, that six angles it hath in manner of Crystal; but they say that some of them haue their sides rugged, and the same vnequally angled, which if they be laid abroad against the Sun in the open aire, do scatter the beams of the Sun that light vpon them to & fro; C also that others do yeeld a brightness from themselves, and thereby illuminat all that is about them. As for the diuers colours which they cast forth, it neuer hapneth but in a dark or shadowy place: whereby a man may know, that the varietie of colours is not in the stone Iris, but comes by the reuerberation of the wals. The best Iris is that which represents the greatest circles vpon the wall, and those which be likest to rainbowed indeed. There is another gem called Iris, like to this in all respects, but that it is exceeding hard. Horns saith, that if it be calcined and puluerised, it is a singular remedie against the biting of Ichneumones: also, that naturally it is to be found in Persis.

Much like in form and shape to Iris, but not of the same effect, is there another stone called Zeros: a man that sees it would take it to be a crystal, with a black strake parting it ouerthwart. D Thus hauing laid abroad the pretious stones & jewels which are distinguished by sundry kinds of principal colors, I wil proceed to the rest, and discourse of them alphabetically.

CHAP. X.

¶ Of certaine gems digested in order according to the Alphabet.

T He Agat was in old time of great estimation, but now it is in no request. Found it was first in Sicily neere to a riuer called likewise Acharis, but afterwards in many other places. It exceeds in bignesse, and is full of varietie in colours, whereby it hath gotten many names; E for called it is Phasachates, Cerachates, Sardachates, Hamachates, Leucachates, and Dendrachates, as if the veins thereof resembled a little tree. As touching the Agath, called Antachates, as it burneth you shall haue it to smel like vnto Myrrh. Also there is an Agath of a reddish colour resembling coral, and thereupon called Coralloachates: and the same is beset with certain spots or drops of gold in manner of the Saphyr: of which kind there is passing great plentie in Candy, where they call it the holy or sacred Agat; for people are persuaded that it auaileth much against the sting of venomous spiders and scorpions: which propertie I could very well beleue to be in the Sicilian Agaths, for that so soone as Scorpions come within the aire and breath of the said prouince of Sicilie, as venomous as they be otherwise, they die thereupon. The Agats likewise found among the Indians haue the same operation, and besides doe represent many other miracles; for you shall find imprinted naturally in them the forme and proportion of riuers, woods, and laboring horses: a man shall see in them coaches and little Chariots or horse-litters, together with the furniture and ornaments belonging to horses. As for physicians; they make their grinding stones thereof for fine pouders. And it is holden for a truth, that only to behold and looke vpon an Agath, is very comfortable for the eies. If they be but held

in the mouth, they quench and allay thirst. The Phrygian Agats haue no part of green in them. G Those that be found about Thebes in Egypt are without red and white veins: howbeit, these also be effectually against scorpions. Of the same credit likewise are the Cyprian Agats. Some hold opinion, that the singular grace and commendation of an Agat, is to be clear and transparent like glasse. There be found of them in Thrace, & about the mountain Oeta, in the hill Perassus, in Lesbos and Messene, and such haue floures imprinted in them like those which grow in the highwaies and paths by the fields: also in the Island of Rhodes. But the Magitians observe diuers other sorts; and as for those that be like vnto a Lions skin, they haue the name to be powerfull against scorpions. In Persia they are persuaded, That a perfume of such Agaths turneth away tempests and all extraordinarie impressions of the aire, as also stayeth the violent streame and rage of riuers. But to know which be proper for this purpose, they vse to cast them H into a cauldron of seething water; for if they coole the same, it is an argument they be right, but to be sure that they may do good, they must bee worne tied to the haire of a Lions mane: for as touching those Agates which seeme to haue the print of an Hyenes skin, the Magitians cannot abide them, as causing discord in an house. But they hold, That the Agath of one simple colour causeth those wrestlers to be inuincible who haue it about them. And a proof hereof they take by seething it in a pot full of oile, with diuers painters colours; for within one two houres after it hath siuered and boiled therein, it will bring them all to one entire colour of vermilion. Thus much of Achates or the Agath. The stone which is named Acopis resembleth Sal-Nitre: hollow and light it is in manner of the pumish stone, howbeit spotted with golden spots or drops in manner of starres. Seeth this gently in oile, and therewith anoint the body, it I ridderth away all wearinesse and lassitudes, if wee may beleue the Magitians. The stone Alabastrites is found about Alabastrum a city in Egypt, and Damasco in Syria, white of colour it is, and intermeddled with sundry colours. This beeing calcined with Sal-gem and reduced into powder, is said to correct a stinking breath and strong sauer of the teeth. In the gessiers of cocks there be found certaine stones, called thereupon Alestorix, which in shew resemble Cryfall, and be as big as beans. Milo that great Wrestler of Croton vfed to carry this stone about him, whereby he was inuincible in all the seats of strength or aitiuitie that hee tried, as Magitians would seem to persuade vs. Androdamas is a stone of a bright colour like siluer, and in manner of a Diamant, square, and alwayes growing in a table Lozenge-wise. The Magitians suppose, that it tooke that name of repressing the anger and furious violence of men. As touching K Argyrodamas, whether it be the same or another stone, Authors haue not resolved. Antipathes is a stone all blacke, and nothing at all transparent. You shall find whether it bee a true stone or no by seething it in milke, for no sooner is it put in, but it causeth the milke to look like Myrrh. The Magitians would haue vs to thinke, That it is good against Witchcraft and eye-biting especially. Arabica is passing like vnto Ivoire, and for Ivoire might it go, but that it is so hard, which bewraith it to be a stone. It is thought, that as many as haue it about them shall finde ease of the paine of the sinues. The stone Aromatites is thought principally to grow in Arabia, and yet it is found in Egypt about Pyra: but wherefoeuer it is to be had, a hard stone it is, in colour and smell both resembling Myrrhe: in which regard it is much vfed of queenes and great ladies. Asbestos is ingendred within the mountaines of Arcadia, and is of an iron gray L colour. As for Aspilate, Democritus saith, that it is bred in Arabia, and of a fiery colour: which by his saying, ought to be tied with camels haire, and so hung fast about them that be troubled with the schirrosities of the spleen: also (if he say true) it is found in the nest of certain Arabian birds. Another also of that name groweth there in the cape Leucopetra, but it is of a siluer colour, and glittereth withall: excellent to be worne about one against the phantastickall feares and imaginations in the night season. The same Democritus saith, That in Persis, India, and the mountaine Ida, there is a stone found named Artizoe, glistering bright as siluer, three fingers thicke, formed in manner of a Lentil, and of a pleasant and delectable sauer: The Sages of Persia neuer go about the election and ordering of a King, but they thinke it necessarie to haue it about them. As for the Augites, many be of opinion, that it is no other stone than Callais, to M wit, the Turquois. Amphirane is a stone knowne by another name also, Chryfocolla: found it is in that part of India where the Pismires-Volant do take out gold; where it resembls gold, and is in fashion four-square. It is reported constantly, that it hath the same force naturally that the Loadstone hath, but that it draweth gold to it as well as iron. Aphrodisiace is partly white, and

A and partly reddish. Asyros being once heat at the fire, will continue a seuen-night after hot: blacke it is and ponderous, hauing certaine veins that diuide it: it is thought to be good against cold. As touching Egyptilla, Tacchus taketh it for a white stone, with a veine partly of a Sard or Cornalline, and partly blacke, passing through it ouerthwart: howbeit the common sort take Egyptilla to be blew, with a black mote in the bottome.

As for the stone Balanites, there be two kinds thereof; to wit, of a greenish colour, and resembling Corinth brasse: the former commeth from Coptos, the other out of the region Troglodytica; and they haue a fierie vaine cutting them just in the mids. The same Coptos sendeth other stones to vs besides, to wit, those which be called Batrachitæ; the one like in colour to a frog, a second to * yvory, the third is of a blackish red. * Baptes, howsoever otherwise it be soft and tender, yet an excellent odor it hath. The stone called Belus eie is white, and hath within it a black B apple, the mids wherof a man shall see to glitter like gold: this stone for the singular beautie that it hath, is dedicated to Belus the most sacred god of the Assyrians. There is another stone named Belus, growing (as Democritus saith) about Arbela, to the bigesse of a wall-nut in manner and forme of glasse. As for Baroptenus or Baroptis, it is black, interlaced as it were with certain knots, both white and also of a sanguine red, after a strange and wonderfull manner. Botrytes is found sometime black, otherwhiles red, & like it is to a cluster of grapes when it beginneth first to knit. As for it which is more like to the hair of women, Zoroastres calleth it * Botrychites. * Bucardia resembls an oxe heart, and is to be found onely about Babylon. Brotia is shaped in manner of a Tortoise head: it fallieth with a crack of thunder (as it is thought) from heaven: and if we wil beleue it, quencheth the fire of lightning. Bolæ are found after a great storm or tempest, resembling a clod.

Cadmitis were the very same which they call Ostracitis, but that otherwhiles it is compassed about with certain blew bubbles. Callais comes very neere to the Saphir, but that it is whiter, and resembls rather the water of the sea about the shore. Capnites (as some thinke) is a kind of stone by it selfe, beset with many wreaths, and those seeming to smoke, as I haue said already in due place: the naturall place of it is Cappadocia and Phrygia: in some sort it is like yvory. As touching Callainæ, it is commonly said, that they be found alwaies many joined together. Catochites is a stone proper to the Island Corsica in bignes it exceedeth ordinary precious stones; a wonderfull stone, if all be true that is reported thereof, and namely, That if a man lay his hand thereupon, it will hold it fast in manner of a glewie gum. Catopyrites groweth in Cappadocia. D Cepites or Cepocapites, is a white stone, and the veins therein seem to meet together in knots; and so white and cleare withall, that it may serue as a mirrour to shew ones face. Ceramites in colour resembls an earthen pot. As for Cinædiæ, they be found in the braine of a fish named Cinædus: white they be and of a long fashion, and of a wonderfull nature, if wee may beleue that which is reported of the euent which they signifie; and namely, that according as they bee cleare or troubled in colour, they do presage either storms or calm at sea. Cerites is like to wax; and Circos, vnto wreaths or circles. Corfoides, is made in manner of a gray peruke of haire: Corallo-achates, vnto a Corall set with gold spots: Corallis, to Vermillion, and is ingendred in India and Syene. Craterites hath a colour betwene the Chrysolith and the base gold Electrum, E of an exceeding hard substance. Crocallis doth represent a cherry. Cyssites is engendred about Coptos, and is of a white color: it seemeth as it were to be with childe, for something stirs and ratleth within the belly if it be shaken. Calcophonos is a blacke stone: if a man strike vpon it, he shall perceiue it to ring like a piece of brasse: and the Magitians would persuade those that play in Tragœdies to carry it about them continually. As for the stone Chelidonia, there be two sorts of it: in colour they do both resemble the Swallow, and of one side which is purple, you shall see black spots intermingled here and there among. Chelonia is no more but the very eie of an Indian Tortoise: of a most strange nature by the Magitians saying, and working great wonders, but they will lie most monstrously: for they would promise and assure vs, That after one hath well rinsed or washed his mouth with hony, and then lay it vpon the tongue, hee shall presently haue the spirit of prophesie, and be able to foretell of future things all a day long, either in the full or change of the Moon: but if this be practised in the wane of the Moon, he shall haue this gift but onely before the Sunne-rising: vpon other daies, namely while the moone is croissant, from six of the clock or sun-rising six houres after. Moreover, there be certaine stones called Chelonitides, because they be like to Tortoises, by which these Magitians would seeme F

to tell vs by way of prophesie and reuelation, many things for to allay tempests and stormes: G but especially the stone of this kinde which hath golden drops or spots in it, if together with a flie called a beetle it be cast into a pan of seething water, it will auert tempests that approach. Chlorites is a stone of a grasse green colour, according as the name doth import; and by the saying of Magitians, it is found in the gester of the bird called Motacilla or Wagtaile, yea and is ingendred together with the said bird. They giue direction (forsooth as their manner is) to in-chafe or inclose it with a piece of yron, and then it will doe wonders. Choaſpites taketh that name of the riuer Choaſpes, green it is and reſplendent like burniſhed gold. Chryſolampis is found in Æthiopia; all the day long of a pale colour, but by night it glowes in manner of a cole of fire. Chryſopis is ſo like to gold, as a man would take it for no other. The ſtones called Cepionides, grow in Æolis about Atarne, a little village now, but ſometimes a great town: they haue H many colours, and be transparent; ſometimes in manner of glaſſe, otherwhiles like Cryſtall or the laſper: ſuch alſo as be not cleare through, but ſoule and thick within, are notwithstanding ſo pure and neat without, that they will repreſent a man or womans viſage as wel as a mirrour or looking glaſſe.

D Daphnias is a ſtone, whereof Zoroaſtres writeth, and namely that it is good againſt the falling ſickeſſe. Diadochus is like to Berill. Diphris is of two kinds, the white and the black, the male and the female; wherein may be perceiued very diſtinctly, thoſe members that diſtinguiſh the ſex, by reaſon of a certain line or vein of the ſtone. Dionyſias is a blacke ſtone and hard withall, hauing certain red ſpots intermingled: if it be ſtamped in water, it giueth the taſt of wine, and is thought to withſtand drunkenneſſe. Draconites or Dracontia, is a ſtone ingendred in the brains L of ſerpents, but vnleſſe it be cut out whiles they be aliue, namely after their heads be chopt off, it neuer grows to the nature of a precious ſtone, for of an inbred malice and enuie that this creature hath to man, if perceiuing it ſelfe to languish and draw on toward death, it killeth the vertue of the ſaid ſtone: and therefore they take theſe ſerpents whiles they be aſleepe, and off with their heads. Sotacus (who wrote that he ſaw one of theſe ſtones in a kings hand) reports, that they who go to ſeek theſe ſtones ſe to ride in a coach drawn with two ſteeds, and when they haue eſpied a dragon or ſerpent, caſt in their way certain medicinable drugs to bring them aſleepe, and ſo haue means and leiſure to cut off their heads: white they are naturally & tranſparent, for impoſſible it is by any art to poliſh them, neither doth the lapidary lay his hand to them.

E Encardia is a precious ſtone, named alſo Cardifca: one fort there is of them, wherein a man K may perceiue the ſhape of an heart to beare out: a ſecond likewiſe there is ſo called, of a greene colour, and the ſame doth repreſent alſo the forme of an heart: the third ſheweth the heart only black, for all the reſt is white. Enorchis is a faire white ſtone; the ſame being diuided, the fragments thereof do reſemble a mans genetours, whereof it took that name. As touching Exhebenus the ſtone, Zoroaſtres ſaith, that it is moſt beautifull and white, and therewith goldſmiths ſe to burniſh and poliſh their gold. As for Eriſtalis, being of it ſelfe a white ſtone, ſeemes as a man holdeth it to wax red. Erotulos, which ſome call Amphicoe, others Hieromnemnon, is commended much by Democritus, for ſundry experiments in prophesying and foretelling fortunes. Eumeces groweth in the Baſtrians country, like to a flint; being laied vnder a mans head lying aſleep vpon his bed, it repreſenteth by viſions and dreams in the night all that hee is deſirous to L know, euen as well as an oracle. As for Eumetres, the Aſſyrians call it the ſtone or gem of Belus the moſt ſacred god among them, & whom they honor with greateſt deuotion: as green it is as a leeke, and ſerueth very much in their ſuperſtitious inuocations, ſacrifices, and exorcifms. Eupetalos hath foure colors, to wit, of azur, fire, vermillion, and an apple. Euteros is like the ſtone of an oliue, chamfered in manner of winkle ſhells, but very white it is not. Eurotias ſeemeth to haue a certain mouldines that couers the black vnderneath. Eufebes ſeemeth to be that kind of ſtone whereof (by report) was made the ſeat in Hercules temple at Tyros, where the gods were wont to appear and ſhew themſelues. Merouer, any precious ſtone is called Epimelas, when being of it ſelfe white, it is ouercaſt with a blacke colour aloft.

G The gem Galaxias, ſome call Galaſtites, like vnto thoſe laſt before-named, but that it hath M certain veins either white or of a bloud color running between. As for Galaſtites indeed, it is as white as milk, and therupon it took that name. Many there be who call the ſame ſtone Leucas, Leucographias, & Synnephites, which if it be bruifed yeeldeth a liquor reſembling milk, both in color and taſt; & in truth, it is ſaid, that it breeds ſtore of milke in nources that giue ſuck: alſo that

A that if it be hung about the necks of infants, it cauſeth ſaliuation; but being held in the mouth, it melteth preſently. Merouer, they ſay, that it hurteth memory and cauſeth obliuion: this ſtone cometh from the riuer Achelous. Some there be, who call that Emeraud Galaſtites, which ſeemeth as it were to be bound about with white veins. Galaicos is much like to Argyrodamus, but that it is ſomewhat ſouler: commonly they are found by two or three together. As for Gaſidanes, we haue it from the Medians, in colour it reſembleth blades of corne, and ſeemes beſet here and there with ſoures: it groweth alſo about Arbelæ: this gem is ſaid likewiſe to be *conceiued with young, and by ſhaking to bewray and confeſſe a child within the wombe, and it doth conceiue euery three moneths. Gloſſi-petra reſembleth a mans tongue, and groweth not vpon the ground, but in the eclipse of the Moone falleth from heauen, and is thought by the B magicians to be very neceſſary for pandors and thoſe that court faire women: but we haue no reaſon to beleue it, conſidering what vaine promiſes they haue made otherwaies of it: for they beare vs in hand, that it doth appeaſe winds. Gorgonia is nothing els but Coral: the name Gorgonia groweth vpon this occaſion, that it turneth to be as hard as a ſtone: it aſſuageth the trouble of the ſea and maketh it calme: the magicians alſo affirme, that it preſerueth from lightning and terrible whirlewinds. As vaine they be alſo in warranting ſo much of the hearbe Guniane, namely, that it will worke reuenge and puniſhment vpon our enemies.

The pretious ſtone Heliotropium, is found in Æthiopia, Affricke, and Cyprus: the ground thereof is a deepe green in maner of a leeke, but the ſame is garniſhed with veins of bloud: the reaſon of the name Heliotropium is this, For that if it be throwne into a pale of water, it chan- C geth the raies of the Sun by way of reuerberation into a bloudie colour, eſpecially that which cometh out of Æthiopia: the ſame being without the water, doth repreſent the body of the Sun, like vnto a mirrour: and if there be an eclipse of the Sun, a man may perceiue eaſily in this ſtone how the moone goeth vnder it, and obſcureth the light: but moſt impudent and palpable is the vanity of magitians in their reports of this ſtone; for they let not to ſay, that if a man carrie it about him, together with the herbe Heliotropium, and beſides mumble certaine charmes or prayers, he ſhall goe inuiſible. Semblably, Hephæſtites is of the nature of a looking-glaſſe, for although it be reddiſh or of an orange colour, yet it ſheweth ones face in it: the meanes to know this ſtone whether it be right or no, is this: in caſe being but into ſcalding water, it preſently cooleth it; or if in the Sun it will ſet on fire any dry wood or ſuch like fewel: this ſtone is D found growing vpon the hill Corycus. Horminodes is a ſtone ſo called, in regard of the greene colour that it hath reſembling the herbe Clarie; for otherwhiles it is white, and ſometime againe blacke, yea and pale now and then; howbeit hooped about it is with a circle of golden colour. Hexecontalithos, for bigneſſe is but ſmall, and yet for the number of colours that it hath, it got this name: found it is in the region of the Troglodytes. Hieracites changeth colour all whole alternatiuely by turns; it ſeemeth to be blackiſh among kites feathers. Hamnites reſembleth the ſpawne of fiſhes: and yet ſome of them be found as it were compoſed of nitre, and otherwiſe it is exceeding hard. The pretious ſtone called Hammons-horne, is reckoned among the moſt ſacred gems of Æthiopia: of a gold colour it is, and ſheweth the forme of a rams horne: the magicians promiſe, that by the vertue of this ſtone, there will appeare dreames R in the night which repreſent things to come. Hormeſion is thought to be one of the loweſt gems that a man can ſee, for a certaine fiery colour it hath, and the ſame ſpreadeth forth beams of gold, and alwaies carrieth with it in the edges a white and pleaſant light. Hyenia tooke the name of the Hyens eie: ſound they are in them when they be aſſailed and killed: and if we may giue credit to Magitians words, if theſe ſtones be put vnder a mans tongue, hee ſhall preſently prophesie of things to come. The bloud-ſtone Hamatites is found in Æthiopia principally, & thoſe be ſimply the beſt of al others, howbeit there are of them likewiſe in Arabia and Affricke: in colour it is like vnto bloud, and ſo called: a ſtone that I muſt not ouerpaſſe in ſilence, in regard of my promiſe that I made to reprove the vanities and illuſions of theſe impudent & barbarous magicians who deceiue the world with their impoſtures: for Zacharias the Babylonian, in thoſe books which he wrote to king Mithridates, attributeth vnto gems all the deſtinies and fortunes that be incident vnto man: and particularly touching theſe bloud-ſtones, not contented to haue graced them with medicinable vertues reſpectiue to the eies and the liuer, he ordained it to be giuen vnto thoſe ſor to haue about them, who carry any Petition to a king or great prince, for it would ſpeed and further the ſuit: alſo in caſe of law matters it giueth good iſſue

and sentence on their side, yea and in wars, victory ouer enemies. There is another of that kinde, called by the Indians Henui, but the Greekes name it Xanthos: of a whitish colour it is vpon a ground of a yellow tawnie.

I The stones called Idæi. Daçtily, be found in Candy: of an yron colour they be, and resemble in forme the thumb of a mans hand. As touching Icteria, there be foure kinds thereof, to wit one like to a pale coloured bird called the Lariot, and therefore is thought to be good against the jaundise: a second there is of the same name, but more enclining to a swert color: the third resembleth a green leafe, broader than the former, weighing little or nothing, and is besides full of pale and wan veins: the fourth is of the same colour, but it hath blacke veins running too and fro. The stone called *Impiters* gem, is white, light, and tender. The stone *Indico* taketh name of those nations from whence it commeth; the colour outwardly is somewhat reddish, and if it be rubbed, there commeth from it a certain purple humor in manner of a sweat. There is another of that name, but it is white, and sheweth like vnto dust or powder. The same Indians haue another gem called Ion, for that it resembleth the colour of the March violet; but seldome shall a man see it with a fresh and gay blew indeed.

L The stone *Lepidotes* doth represent scales of fishes in sundry colours. *Lesbias* taketh name of the Isle *Lesbos* the native place thereof: howbeit they are found in India likewise. *Leucophthalmos*, is otherwise reddish or tawnie, howbeit in that colour it carrieth the forme of an eie, both for white and blacke. *Leucopetalos* sheweth white in manner of snow, and yet the same is garnished with a lustre of gold. *Libanocrus* in colour resembleth frankincense, but a liquor or moisture it yeeldeth answerable to hony. *Limoniates* seemeth to be all one with the *Emeraud*. **I** As touching the vntuous stone *Liparis*, I find this only written of it, That a stinke or perfume thereof fetcheth forth any venomous vermine. The stone *Lysimachus* is like vnto the marble of *Rhodes*, and hath in it certaine veines or streakes of gold: This stone must be polished vpon marble: and when all the superfluities be fetched off, it is found to grow narrow pointwise. *Leucochrysos* seemeth to be made of a *Chrysolith*, hauing white veins or streakes betweene.

M A gem there is called *Memnonia*, but I haue not read the description thereof. As for *Media*, it is a blacke stone, and found it was first by that famous *Atedea*, of whom the Poets write so many fables, yet certaine veins it hath of a golden colour: a kind of sweat issueth from it yellow as saffron, and in tast much resembling wine. *Meconites* doth represent expressly, poppy heads. The stone *Mitras* we had from the Persians, and the mountains along the red sea: many colours **K** it hath, and against the Sun it glittereth diuersly. *Meroctes* is green like vnto a lecke, and yet if you rub it, you shall see a humour come from it like to milke. The Indian stone *Morion* (which is most blacke and yet transparent) They call *Pramnion*: if it be intermingled with the fiery red of the Carbuncle or Rubie, they call it *Alexandrinum*; like as the Cyprian, *Morion*, which hath a shew of the *Sarda* or *Cornalline*: found there be of them in *Tyrus* and *Galatia*. *Xenocrates* reporteth, that vnder the *Alpes* also they be gathered. These be the gems that be fitted for to engraued the forme of any thing from a pattern. As for *Myrrhites*, it hath the colour of *Myrrhe*, and the forme of a fine pretious stone: it yeeldeth the smell of a sweet perfume or ointment, and being rubbed giueth a saour also of *Nard*. As touching *Myrmecias*, it is blacke, and hath certain risings in it like to werts. *Myrsinites* in colour resembleth hony, and in odour the myrtle. **I** *Mesoleucos* is a gem diuided just in the mids with a white line: contrariwise, *Mesomelas*, when there is a blacke line cutteth through any other colour in the midst.

N *Nasamonites* is in colour like to bloud, howbeit certaine blacke veins it hath. *Nebrites* is a stone consecrate to god *Bacchus*: it tooke that name of the resemblance which it hath to those skins of deere that he was wont to weare: there be others of the same kind, but blacke they are. The gem *Nympharena* keepeth the name of a city and nation in *Persia*, and it resembleth the teeth of a water-horse.

O *Orca* is the barbarous name of a certaine pretious stone, which is very pleasant vnto the eie: wherein concur together blacke, yellow, Greene, and white. *Ombria*, which some call *Notia*, is said to fall from heauen in formes, showers of raine, and lightening, after the manner of other stones, called thereupon *Ceraunia* and *Brontia*: and the like effects are attributed to it, as be reported of *Brontia*: and thus much moreover, That so long as it lieth vpon the hearth of an altar, the * libaments will not burne that be offered thereupon. *Orites* is in forme round as a globe: some call it *Siderites*, it will abide the fire and feele no harme thereby. *Ostracias* or *Ostracites* is made

* As the haire growing in the forehead, and such things, whereof assay was giuen first to the fire.

A made in manner of a shell, and is exceeding hard. A second kind there is of it resembling an *Agath*, but that an *Agath* in the polishing seemeth to looke greasily, which the *Ostracias* doth not. And the harder kind of this stone is of that power, that the fragments thereof will serue to engraued other gems. As for *Ostracites*, it took the name of an *Oystre* shell, which it doth represent. The Barbarians haue a pretious stone, which they call *Ophicardelos*, blacke of colour, and the same enclosed with two white lines or circles. As touching the stone *Obsidianus*, I haue written sufficiently in the book going next before: and yet there be certain gems of that name, and carrying the same color, not only in *Ethiopia* and *India*, but also in *Samnium*, as some are of opinion, yea, and in the coasts of the Spanish Ocean.

Panchrus, according to the name, seemeth to consist (in manner) of all colours. *Pangonius* is **B** no longer than a mans finger: it differeth from *CrySTALL* in this onely, that it hath more angles in number, whereupon it got the name. As for *Paneros*, what manner of stone it is *Metrodorus* hath not set down, howbeit he reciteth an elegant verse of queen *Tamaris*, which together with the stone she consecrated to *Venus*: whereby is giuen to vnderstand, That by the meanes thereof she became fruitfull and bare children: Some there be who call this gem *Pansebaston*. Now concerning the gems of *Pontus*, knowne by the name of *Pontica*, there be many sorts of them. One is full of stars, garnished with bloody or blacke specks in maner of drops; and this is counted among the sacred stones: another in stead of starres hath strakes and lines onely of the same colours: and there be of them again which represent the forme of mountaines and vallies. The gem *Phloginos*, which is called likewise *Chrysites*, is found in *Egypt*, and is likened vnto the **C** *Ostracias* of *Attica*. *Phoenicites* tooke the name of the similitude that it hath to a *Dart*. And *Phycites* was so named, because of the likenes it hath to the sea weed or le^guice, named *Phycos* in Greeke. *Perileucos* is a stone, so called by occasion of a whitish lace that seemeth to go from the mouth of the gem downe to the very bottome. The gems *Pæantides*, which some name *Gemonides*, are said to conceiue and to bring forth other little stones: but a singular vertue they haue to help women that be in trauell of child-birth. Such be found in *Macedonie*, neere vnto the monument or sepulchre of *Tiresias*, and that which they bring forth, seemeth like vnto water growne to be congealed into yce.

The Sunnes gem is white, and after the manner of the Sunne, whose name it beareth, it casteth forth shining raies round about on euery side. *Sagda* is a stone, which the *Chaldeans* find **D** sticking to ships, and they say it is Greene as *Porrets* or *Leekes*. *Samothracia* the Island yeelds vs a pretious stone of the owne name, blacke of colour, light in hand, and like to [rotten] wood. As for *Saurites*, it is found (by report) in the belly of a green Lizard, slit open with the edge of a cane or reed. *Selenites* is a pretious stone, white & transparent, yeelding from it a yellow lustre in manner of hony, and representing within it the proportion of the Moone, according as she groweth toward the full, or decreaseth in the wane against the change: This admirable stone is thought to be found in *Arabia*. *Siderites* is much like to yron: and supposed it is, That if it be brought among them that are at some variance or controuersie already in law, it will breed discord and maintain dissention still. Of this *Siderites* is made another stone, which is engendered in *Ethiopia*, called *Sideropœcilos*, for the sundry spots therein. *Spongites* is like vnto a **E** sponge, euen as it carrieth a name respectiue vnto it, *Synodontites* commeth from the braine of certaine fishes called *Synodontes*. The stones *Syrtitæ* be found in the shore of the *Syrtes* in *Barbary*, yea, and in *Lucania*, shining with the colour mixt of saffron and hony, but within they containe certaine starres, which haue but a dim and dusky light. The stone *Syringites* is hollow throughout in manner of a pipe, and is like vnto a straw betweene two joints.

Trichrus that commeth out of *Affricke* is blacke, howbeit if it be rubbed it yeeldeth three kinds of humours from it; to wit, from the root or bottome blacke, out of the mids like bloud, and in the head white. *Telirrhizos* is of an ash colour or reddish, and yet the bottome thereof is a louely & slightly white. *Telicardios* is much esteemed in the realme of *Persia*, where it is engendered: in colour it resembleth the heart, and they call it there in their language, a Spot. The stone *Thracia* is of three kinds; the first green, the second more pale, and the third full of spots of bloud. *Tephritis*, although otherwise it be of the color of ashes, yet it represents a new Moon croissant and tipped with hornes. *Tecolythus* seemeth like to the stone or kernell of an Olive: It is not raunged in the number of pretious stones, but whosoever licke thereof, shall find, That it will breake the stone and expell it. The stone called *Venus* haire, is exceeding black and shining; **F**

how it maketh a shew of red haire sprinkled among.

Veientana is a gem proper vnto Italie, found about Veij, a citie in Tuscane: this stone is blacke and crossed through the middest with a white path.

Zanthenes (as *Democritus* writeth) is found ordinarily in Media: in colour it resembleth base gold Elestrum: and if a man doe stampe it in Date wine and Saffron together, it will relent in manner of wax, and cast a most sweet and pleasant smell. Zmilaces is a stone which the riuer Euphrates yeeldeth, like to the marble of Proconnesus, but that in the middest it hath a grenish colour. Finally, Zoronifos is engendered in the riuer Indus: commonly it is called the Magicians gem: more of it I find not written.

CHAP. XI.

¶ Of certaine pretious stones, taking their names from the members of mans body, from beasts also and other things.

* It taketh the name of the kidneys.

BESIDES those gems comprehended vnder the Alphabet, there be more pretious stones also comprised after other sorts of distinction, according to diuers significant varieties: for some there be which bear the names of certain members of the body; as for example, Hepatites, of the liuer, Steatites, of the sundry sorts of fat, grease or tallow of each beast. Adad * Nephros is a stone worshipped among the Egyptians, so is Theudaetylos also. As for Adad, hee is the chiefe god among the Assyrians. The stone Triophtha^mos groweth together with the Onyx stone, and representeth three eies of a man together.

* Hyopis balmo

There be gems take their names likewise of beasts, to wit, Carcinias of the colour which the sea-crab hath; Echites, of a Viper; Scorpites, either of the color or form of a Scorpion; Scarites, of the fish Scaurus; a Gilthead; Triglites, of the Barble; Agopththalmos, of a Goats eye; like as another, for the resemblance that it hath to the * eie of a swine. Geranites tooke name of a cranes color, euen as Hieracites of the Hawkes of Faulcons color. Astitites resembles the color of that Ægle which hath a white taile. Myrmerites sheweth the forme of a Pismire creeping within the stone; so doth Cantharias, of Beetles. Lycophthalmos hath the resemblance of a Wolves eie, and consists of 4 colours; the outward parts are tawnie, enclining to a blood red, in the middest there is a black, enclosed within a white circle, as like to the said eie as possibly can be. The stone Toas is like to a Peacock, euen as the gem Chelonia to the Tortoise. In Hammo-chrysos there is a resemblance of sand, as if sand & gold were entermingled. Cenchrites is made like to the graines or seeds of Millet scattered here and there. Dryites hath a great affinity with the stock of a tree: and the same will burn after the manner of wood. Cissites is white, and in that white shining seemeth to be clasped euery where with leaues of yvie. Narcissites likewise is distinguished and parted with veines of yvie. Cyamea is black, but being broken, it yeelds out of it a resemblance of a Beane. Pyren is so called by reason of an oliue stone or keruill which it resembleth: within this stone there appeare otherwhiles as it were fish bones. Chalazias as it carrieth the name of haile, so it representeth as well the color as the shape thereof; but as hard it is as the Diamant: It is reported also, that if it be put into the fire, yet it wil continue cold & not alter a whit. The fire stone Pyrites is verily black: but rub it with your finger, you shal find it to burne. Polyzonos is a black stone of it selfe, but many white fillets it hath about it. Astrapias is white or blue like Azur, yet from the middest thereof iheir seeme to shoot raies of lightening. In the stone Phlegontis there appeare a burning flame within, and neuer commeth forth. In the Granat named Authracitis, there is a shew otherwhiles of sparkles running to & fro. Enhydros is euermore absolutely smooth and white, containing within a certain liquor that moueth too and fro if a man shake it, as he may perceiue in egges. Polytrix is a greene stone, bedecked with fine veines in manner of the haire of ones head: but (by report) it will make the haire to shed off as many as carry it about them. Of a Lions skin, Leontios beareth the name: like as Pardalios of a Panther. The golden color in the Topaze gaue it the name Chrysolith: so the grasse green of a Leeke was occasion of the name Chrysoprasos: and of hony was deuised the colour and name Melichrus, although there be many kinds of it. As for Melichloros it is of two colours, partly yellow, and partly resembling hony. Crocias is yellow as Saffron: and Polia sheweth a certaine greynesse in manner of Spart. As for Spartopolios the blacke, it sheweth like gristly veins to the other, but much harder. Rhodites took name of the Rose: Melites of the apple, the colour wher-

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A of it shews: Chalcites of brasse; and Sycites of a fig. I see no proportion or reason at all between the stone Borsycites and that name; this stone is blacke and branching, and the leaues are white, or red like blood; no more than I do in Gemites, which representeth (as it were) engrauen in the stone, white hands clasped one within another. As for Ananchitis, it is said, That spirits may be raised by it in the skill of Hydromantie: like as by Synochitis, the ghosts which are raised, may be kept about still. What should I speake of the white Dendritis, which if it be buried in the ground vnder a tree that is to be fallen, the edge of the axe that heweth it, will not turne or wax blunt. There be a number of other, and those in nature more prodigious than the rest: for which the Barbarians haue deuised strange names, professing to vs, that they were stones indeed. for mine owne part it shall suffice that I haue disproued their lies in these abouenamed.

B

CHAP. XII.

¶ Of new stones, and those naturall. Of such as be counterfeit and artificiall. Of diuers formes and shapes of gems.

THESE grow still precious stones vnlooked for euery day, that bee new and haue no names, such as that in Lampfacus, where one was found in the gold mines so faire and beautifull, that it was thought a present worth sending to K. Alexander the Great, as *Theophrastus* writeth. As touching the stones Cochlides, which now are most common, they seeme rather artificial than naturall: and verily it is said, That in Arabia there be found of them huge masses which are sodden in hony 7 daies and nights together continually; by which means, after that all the earthy and grosse refuse of this stone is taken away, the stone it selfe remaineth pure and fine: and then comming vnder the lapidaries hand, they be diuided into sundry veines, and reduced into drawne or inlaid worke of Marquetage, as he will himselfe. And herein is seen the cunning of the cutter, for that it is so vendible, & euery mans mony. In old time they were made of that bignesse, that the KK. of the East had their horses set out therewith, not only in their frontals, but also in the pendants of their caparisons. And verily, al other precious stones being decocted in hony, look faire and neat with a pleasant lustre: but principally the Coricks, which abhor all things els that are more eager than hony. Moreover, this is to be noted, that our lapidaries haue a tearme for those stones which are of diuers colors, and they call them Physes, as if they had not another vsuall name for them: & this they do in the subtilty of their wit, to make them seem more wonderful by these strange words of art, as if they would vendit them for their very wonders of Natures worke: whereas indeed there be an infinit number of names, deuised all by the vain Greeks, who knew not how to make an end, which I purpose not to rehearse; and verily, after I had discoursed of the noble and rich stones, I contented my selfe in some sort to specifie those of a baser degree, such I mean as were more rare than others, & to distinguish them that were most worthy to be treated of. But this eftsoons would be remembered, that one & the selfe same stone changeth the name, according to the sundry spots, marks & werts that arise in them: according also to the manifold lines drawn in them, the diuers veins running between, and the variety of colors therein obserued. It remains now to set downe some generall obseruations indifferent to all sorts of gems, and that after the opinion of the best approoued and experienced authors in this kind. Any stones that be either hollow & sunk in, or bearing out in bosse or belly be nothing so good as those which cary an euen and leuell table. The long fashioned gems are most esteemed: next to them such as be formed like to lintil seed: after them those that beround in manner of a targuet: and as for such as be made with many faces & angled, they be of a other least accounted of. To discern a fine & true stone from a false and counterfeit, is very difficult, forasmuch as there is an inuention to transform true gems into the counterfeit of another kind. And in truth men haue deuised to make Sardonches by setting and glewing together the gems named Ceraunia, & that so artificially, that it is vnpossible to see therein mans hand: so handsomely are couched, the black taken from this, the white from that, & the vermilion red from another, according as the riches of the stone doth require, & all those in their kind most approued. Moreover, there be in my hands certain books of authors extant, whom I wil not nominate for all the good in the world, wherein is deciphered the manner and means how to giue the tincture of an Emeraud to a Crytall, & how to sophisticat other transparent gems; namely, how to make a Sardonyx of a Cornalline, & in one word, to transform one stone into another: & to say a truth, there is not any fraud or deceit in the world turneth to greater gain and profit than this.

CHAP.

LEt other writers teach how to deceiue the world by counterfeiting gems, for mine own part I will take a contrary course, and shew the means how to find out false stones that be thus sophisticat: for surely, wanton and prodigall though men and women bee in the excessive wearing of these jewels, yet meet it is they should be armed and instructed against such counsellers. And albeit I haue already touched somewhat respectiue as I treated of the chiefe & principall gems, yet I will adde somewhat more to the rest: first and formost therfore this is obserued, That all stones which be transparent, ought to haue their triall in a morning betimes, or at the farthest (if need so require) within foure hours after morning light, but in no wise later. Now there be diuers experiments that serue for this purpose, to wit, the weight of a ston, for commonly the fine gem indeed is heauier than the other: secondly, the very body and substance is to be considered; for it is an ordinary matter to see in the ground and bosome of falsified stones certain little pushes as it were rising out; to feele them rough in hand outwardly; also to perceiue their filaments not to continue their lustre surely, and to beare it out to the very eie, but commonly in the way to vanish and be spent. But the most effectiual prooffe of all, is to take a little fragments, to be ground afterward vpon a plate of yron: but lapidaries wil not indure this triall; they refuse also the experiment made by the file: furthermore, the fragment of the black Agath or Geat, wil not rase or skarifie true gems. Item, False stones if they be pierced or ingrauen, will shew no white. Such difference there is moreouer in stones, that some scorne all ingrauing with an yron punson: others likewise cannot be cut but with the instrument or grauer bent & turned back: but there is not one but may be ingrauen with the Diamant. And verily, the most material thing herein, is to heat the grauing Steele or punson.

As touching riuers that afford precious stones, Acesines and Ganges are the chiefe; and of all lands, India is the principall.

And now hauing discoursed sufficiently of al the works of Nature, it were meet to conclude with a certain general difference between the things themselves, and especially between country and country. For a finall conclusion therefore go through the whole earth and all the lands lying vnder the cope of heauen, Italy wil be found the most beautiful & goodliest region vnder the Sun, surpassing all other whatsoeuer, and worthily to be counted the chiefe and principall in euery respect: Italy (I say) the very lady and queen, yea, a second mother next to dame Nature of the world: chiefe for hardy men, chiefe for faire and beautifull women, enriched with captaines, souldiers, and slaues: flourishing in all arts and sciences, abounding with noble wits and men of singular spirit; scituate vnder a climat most wholesome and temperate, seated also commodiously (by reason of the coasts so full of conuenient hauens) for traffick with all nations, wherein the winds are most comfortable (for it extendeth it selfe and lieth to the best quarter of the heauen, euen in the midst just between East and West;) hauing waters at command, large forests & faire, and those yeelding most healthful air; bounded with mighty rampiers of high mountains, stored with wild beasts, and those harmlesse: finally, the ground so fertile for corn, the soile so battle for herbage, as none to it comparable. In summe, whatsoeuer is necessary and requisit for the maintenance of this life is there to be had, in no place better: all kind of corne and grain, wines, oile, wooll, linnen, woollen & excellent beoufs, as for horse-flesh, I haue alwaies heard, euen from the mouth of those that be professed runners in the race with horse and charriot, That the breed of Italy passeth al others: for mines of gold, silver, brasse, & yron, it gaue place to no country whatsoeuer, so long as it pleased the state to imploy it that way; and in lieu of those rich commodities which it hath still within her womb, she yeeldeth to vs variety of good liquors, plenty of al sorts of corn, and abundance of pleasant fruits of all kinds. But if I should speake of a land after Italy (setting aside the monstrous and fabulous reports that go of India) in my conceit Spaine is next in all respects, I meane those coasts which are inuironed with the sea.

FINIS.

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An Aduertisement.

WHereas in the former edition this page was stuffed full of Errata, which were occasioned by reason of the various matter and words used in this Historic, not common obvious in other Authors; such care in this second Edition hath beene taken, as that they have all beene amended, whereby the Readers paines to mend, or be offended with them, is taken away. This I thought good to give notice of, least any should thinke them omitted, not amended.

